Disintermediation and re-intermediation in the music business. The effect of Multimedia technologies and E-commerce.

A Doctoral Thesis Presented
by

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Abstract

Advances in e-commerce and multimedia technologies are becoming inextricably more closer related to society and business. Theoretical insight into these new areas is scarce and that is the gap that this thesis aims to cover. The study uses the music industry as a test-bed for the propositions developed.

The literature review summarises and criticises the theories on E-commerce which centre around the "transaction cost economics" branch of management literature. Other theories used to develop the frameworks include "network externalities" and "increasing returns" from economics, "value chain" from industrial organisation and theories on "search costs" and "quality uncertainty" from the economics of information. Special mention is given to the literature on the music industry dealing with the production and commercialisation of music, the resulting and changing structure of the industry, as well as various research approaches to understanding consumer involvement in the industry (cultural/subcultural analyses of user behaviour).

The methodology followed is qualitative in nature and concentrates on the case study method. Besides the secondary data, primary data is collected via interviews with key informants in the music industry. Executives in other relevant to e-commerce / multimedia industry firms such as telcos and software firms are also interviewed to give a broader perspective to the study. The data are analysed using the pattern matching method.

The data analysis process can be summarised as follows:

A primer is offered on the recording and music industry which serves to develop the research questions and propositions. This stemmed from the pilot research and coupled with the theory allows the formation of patterns that are expected to match the data if the theory stands. Three patterns emerged from the literature review:

Pattern1: Labels sell music content directly to the consumer

Pattern 2: Artists sell content directly to the consumer.

Pattern 3: E-commerce between content owners and consumers will be facilitated by intermediaries.

A case study is then built detailing the events in the music industry concerning Music on Demand during the period 1995-1998. The case study is "partitioned" in chapters detailing each of the technological players examined. Other significant events relevant to the study, are included in vignettes in the main body of the analysis. The analysis matches the data in the case studies with the relevant patterns and incorporates interview quotes.

Concluding the thesis offers some explanations for the failure of matching theory with data. It also goes one step further by developing a new value system and patterns that can be used to guide further academic research on the subject. The chapter ends with the development and analysis of four scenarios, proposing their value for practitioners such as managers and investors seeking insight into the future of the music industry in a multimedia environment, as well as policy makers interested in the relationship between creativity and economic technological factors. The main conclusion is that

concentration of copyright in the hands of the few is hindering rather than promoting new multimedia and e-commerce industries.

MICHAEL SERRES: ...that means that we're going to come back to the question of time. If there is symmetry there can be reversibility...

IANNIS XENAKIS: No, because there can be order in non-temporal things. That's why it is absolutely indispensable to distinguish between what is *in* and what is *outside* of time.

Dialogue between Professor Michael Serres and the mathematician, architect and composer Iannis Xenakis quoted in the latter's "Arts/Sciences: Alloys. The thesis defense of Iannis Xenakis"

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1. Introduction

Multimedia and Electronic Commerce (e-commerce) in particular, have been the topics of many books and articles since the mid-90s. Various authors predict a new digital economy (Tapscott 1996), based on bits rather than atoms (Negroponte1995) which will result in friction free capitalism (Gates et al 1995) to lead us into a networked society with significant consequences for the human race (Castells 1996). Books such as "Third Wave" (Toffler 1980) and "Global Village" (McLuhan1964, 1989) have resurfaced and became popular again on the strength of the jargon they had once initiated.

The logarithmic growth of the Internet is by now well documented and unchallenged and there is hardly an issue of magazines such as the Economist, or Business week without at least a reference to it. E-Commerce has consequently become a focal topic, and a plethora of special surveys (e.g. Economist 1997) as well as consultancy reports have begun to emerge. Such is the importance of the Internet that bodies such as the Information Infrastructure Task Force (IITF), set up by the Clinton administration, use the term as all- encompassing for data networks (IITF 1996). The same body proposes to "advocate the World Trade Organisation (WTO) and other appropriate international fora [to] declare the Internet a duty-free environment whenever products or services are delivered across the Internet."

There are few academic studies that deal specifically with e-commerce, not least because this area represents such a volatile mixture of possibilities, predictions and hype. A plethora of articles, expert documents and consultancy reports exist which deal with the more speculative aspects. Assessing something as complex and new as

the Internet, or even multimedia in general, seems, at the beginning, to be a futile exercise. Its ever-changing nature and the fact that it is still in the embryonic stage of development, makes the propensity to speculate very tempting, a trend that other authors have trouble avoiding as well (Castells 1996). This thesis hopefully contributes to a greater understanding of the subject.

1.1 Objectives of the study

Given the recency of e-commerce, it is only natural that there is a dearth of research on the subject. As others researchers have noticed (Watson, Akselsen & Pitt 1998), observation and classification are common features of initial endeavours.

The primary goal of this study is to explore the applicability of the Electronic Market Hypothesis (Malone et al. 1987), in the music industry. This theory is an appropriate starting point for the development of new theories concerning the Internet and e-commerce. It has its theoretical foundation in Transaction Cost Economics, and various theories on vertical integration from which this study will draw insight. The ultimate goal though, is to generate valuable insight through the research process. This will generate further propositions and hypotheses than can be further tested in other studies, by the same or other researchers.

Therefore this thesis will serve two roles in the theoretical realm. One as a test bed for theory and two, through that process, as an exploratory study of the role of Electronic Commerce in general and in the music industry specifically. The latter role is closely related to the ongoing ESRC funded project titled "Globalisation, Technology and Creativity: Current Trends in the Music Industry" for which the author was a researcher at the same period (December 1995-1998).

Besides this theoretical contribution, this thesis aims to be of practical use to the industry as well. The practical objective is to generate insights in the form of possible scenarios that will enable industry practitioners as well as a variety of local, national and international decision makers to build robust strategies for the future.

1.2 Contribution

As it was stated in the introductory chapter, the contribution of this study will primarily be the advancement of theory and secondly the development of useful insights for practice.

From the academic point of view the study will contribute by testing an otherwise little tested theory. As already stated a deep understanding of the EMH is felt to be needed if an integrated theory of "e-commerce" and "Strategy" in Multimedia is ever to emerge.

The industry that comprises the testbed, i.e. the music industry, is under-researched in business studies, this study will hopefully make a useful contribution from that aspect as well. It is expected that the insights generated by the study will be useful for other disciplines, primarily communication studies and economics, but also the area of cultural theory in sociology.

Further extensions to the EMH will also be developed through the study in an emergent way, in the exploratory part of the study. These will be generalisable for other industries, so that the study will also contribute towards a coherent theory of e-commerce and Multimedia.

The contribution to best practice is also of interest to this study. The author recognises the impossibility of accurately predicting the future, especially in a hyper-turbulent

and unstable environment such as multimedia. The goal will be to enable practitioners and managers to develop a portfolio of options (Bowman and Hurry 1993) for the future and enable them to make better decisions for their respective firms.

1.3 Limitations of the study and expectations

A potential difficulty confronting the research process resulted from the uncertainty that has surrounded the industry during the period examined (late 1995- early 1998). Thus, as was expected, executives frequently demonstrated difficulty in expressing their views and articulating their strategies, and that presented a problem when quantifying some of the answers.

Considering this last problem, it was felt that the greatest limitation of this study was time. As recognised by Hess and Kamerer (1994) there is a possibility that the results predicted by the specific theory (EMH) "require a longer gestation period" than that which was available to their own study. Nevertheless, the insights generated by their study and it is hoped by this one, are very important to justify the endeavour. The exploratory part of the study will make a positive contribution and thus is expected to advance the knowledge of the subject considerably.

As was also expected, the researcher encountered some difficulties in getting access to potential information sources. The reason for that is thought to be the secrecy that surrounds this closed industry in general, and also the character of the people that work in the higher echelons of management. The music industry is a creative and glamorous industry and executives in higher places are difficult to approach.

On the other hand the researcher had less difficulty in interviewing executives in telecommunication firms, banks etc.

Useful insights were generated from the pilot research (see Appendix A for a detailed account) and elaborated further by analysing subsequent interviews.

1.4 Structure of the report

The report begins with a literature review in Chapter 2. The underlying theories that support the frameworks and the hypothesis to be developed are reviewed and criticised. Theories on E-commerce centre around the "transaction cost economics" branch of the literature. Other theories summarised are "network externalities" and "increasing returns" from economics, "value chain" from industrial organisation and theories on "search costs" from the economics of information.

Chapter 3 details the actual methodology followed in the research. It gives the rationale behind choosing qualitative methods in collecting and interpreting the data. It concentrates on the case studies method and describes how data is collected via interviews and analysed using the pattern matching method.

The section that follows the methodology, Chapter 4 defines and analyses the research context by offering a primer on the recording and music industry. The analysis serves to develop the research questions and propositions. Patterns are then developed that are expected to match the data if the theory stands.

Chapter 5 deals with the analysis of the data gathered, incorporating vignettes and interview quotes. The analysis is based on the case studies in Appendix D and follow the patterns developed in the previous chapter.

The Discussion and Conclusion Chapter 6, offers some explanations for the failure of matching theory with data. It also goes one step further by developing a new value

system and patterns that can be used to guide further academic research on the subject. The chapter ends with the development and analysis of four scenarios, proposing their value for practitioners such as managers and investors seeking insight into the future of the music industry in a multimedia environment, as well as policy makers interested in the relationship between creativity and economic/technological factors.

Appendix A includes significant events associated with the study such as publications and conferences.

Appendix B includes the pilot research questionnaire, and Appendix C research protocol followed in the interviews.

Appendix D includes the case studies that comprise the data collected as well as general observations on the new multimedia technologies. A separate chapter is devoted on the economic importance of copyright and details the latest developments internationally.

2. Literature Review

A seminal work on Electronic Commerce is Malone et al's (1987) article on Electronic Markets. Since that publication, the literature on Electronic markets has been growing, and now it encompasses empirical studies (Hess and Kamerer 1994), amendments and extensions (Clemons and Row 1992 Clemons et al. 1993) and redefinition of the principles and assumptions of the Electronic Market Hypothesis (Bakos And Brynjolfsson 1993). Although the concept appears to be new, the theory behind it is not and any review of the literature requires at least a brief mention of Transaction Cost Economics theory (TCE). This is precisely the starting point in this literature review. After reviewing the relevant literature on TCE this chapter continues with a review of Electronic Market Hypothesis and Electronic commerce literature. A brief review of other relevant theoretical insights for the economics of information and other fields follows.

2.1 Transaction Costs Economics

The Transaction Costs Economics theory has a long history beginning with Coase (1937) and continuing with Williamson (1971, 1985) as its main proponent.

Coase tried to explain the basis on which allocation of resources is dependent either on the price mechanism or on the entrepreneur co-ordinator (Coase 1937). He postulated that there are transaction, co-ordination and contracting costs of using the price mechanism and these can explain the extent of vertical integration of a firm. His analysis gave economists and management scholars alike a theory of the firm enabling them to move away from the "black box" models of the neo-classical economics. The firm was seen as a nexus of contracts.

Williamson (1975,1985) extended the theory and developed it into an important branch of economic thinking which became central in academic fields such as Strategic Management (Rumelt, Schendel and Teece 1991, Teece 1984) and Information Technology and Strategy (Malone, Yates and Benjamin 1987, Bakos and Treacy 1986). The theory is also increasingly being adopted as a valuable tool for predictions by consulting practices, as recent publications have shown (e.g. Butler et al. 1997).

The TCE theory complements previous theories of complex forms of business organisations by adding efficiency explanations besides the, by then, monopoly power factors (Rumelt et al 1991, Perrow 1986, Williamson 1975, 1985). The new theory was crucial in presenting an alternative view that could potentially "ease" anti-trust policies by claiming that efficiency and not monopoly power was the raison d'être of vertical integration. Nevertheless the theory presents a good starting point for examining Electronic commerce since the unit of analysis is the transaction and thus it enables the examination of the structure of exchange relationships.

According to the theory, a transaction occurs "when a good or service is transferred across a technologically separable interface, such as when a firm buys an input from an independent supplier" (Teece 1984). Recently researchers have noted that commercial transactions, which are of interest in this research, are assumed to be organised so as to minimise costs. Costs are assumed to consist of two parts: production costs and transaction costs. A definition of transaction cost is given by Ouchi(1980) who names thus "any activity which is engaged in to satisfy each party to an exchange that the value given and received is in accord with his or her

expectations". Therefore according to that definition, transaction costs are necessary to create a perception of equity among all parties to the transaction.

Two behavioural characteristics, bounded rationality and opportunistic behaviour, are assumed to be part of the human nature that makes contingent claims contracting to fail. No contract, for instance, between a music creator and an exploiter can cover all possible eventualities, and human nature will only take advantage of this. More specifically Williamson (1975, 1985) relies the theory of TCE on the assumptions of:

- Bounded rationality, i.e. cognitive limitations to the information processing capacities (memory, computation, communication) on the individual level. Here Williamson (1985) quotes Simon (1961) assuming economic actors to be "intendedly rational, but only limitedly so". It is important to stress that these limits involve both neurophysiological and language limits. While the first deals with memory and computation, the latter deals with communication , "the inability of individuals to articulate their knowledge or feelings by the use of words, numbers or graphics in ways which permit them to be understood by others" (Williamson 1975 p.21). In other words, tacit knowledge cannot be made explicit. One of the fundamental points raised by the knowledge-based theory of the firm (Grant 1997, Grant and Baden-Fuller 1995) is actually accounted for by TCE and as such it will be relied on heavily for the rest of this thesis.
- Opportunistic behaviour i.e. the seeking of self interest with "guile". This assumption guides Williamson's thinking (1975,1985, 1996) and it is on that premise that TCE has been attacked by a host of critics. As Williamson (1985, p.64) notes though: "I merely assume that some individuals are opportunistic some of the time and that differential trustworthiness is rarely transparent *ex ante*".

Transactions according to Williamson (1985) differ in terms of the following dimensions:

- Uncertainty which can be both internal and external (environmental). Strategic uncertainty stems from the opportunism of one or both parties to the transaction, i.e. it is internal. External uncertainty of course is attributed to contextual and environmental factors. Williamson (1985) further postulates that the various "interaction effects" between uncertainty and asset specificity are key to the understanding of economic organisation. With high degree of asset specificity, any increase in the degree of uncertainty will increase the complexity of the contracts.
- Frequency of the transaction, which can be of three basic kinds. Occasional, intermediate or high. The degree of interaction with asset specificity determines the governance mechanisms for the transactions.
- Asset specificity which refers to assets that cannot be re-deployed without losing their productive value. Williamson (1985) distinguishes four types of asset specificity: site specificity, physical asset specificity, human asset specificity and dedicated assets. He adds two more later (1991a) namely: brand name capital and temporal specificity. Malone et al. (1987) propose another type of asset specificity, time specificity. Asset specificity is tied to investment, therefore Williamson (1979) also uses the term "idiosyncratic investment".

The above transaction characteristics, coupled with the behavioural assumptions of individuals, can create bilateral dependencies and potential contractual hazards if the transactions are to be carried according to the market mechanism advocated by neo-

classical economics. In a case of a monopoly supplier and a monopoly buyer, for example, transaction costs create the problem of "small numbers bargaining". In this and similar situations there will not always be alternative buyers and sellers in the market. According to the theory this will lead to unproductive investments of both the parties to the transaction in their race to improve their relative bargaining power (Grant 1995). The theory will prescribe vertical integration. Another potential market failure stems from "information impactedness". Information is not freely available or is asymmetrically distributed between the parties to the exchange. Due to opportunism one of the parties might withhold information making the market transaction hazardous. Bounded rationality will not cover all the contingencies that a contract could and so organisation in hierarchies is preferable to organisation in markets.

Ouchi (1980) sketched the market failures framework shown below:

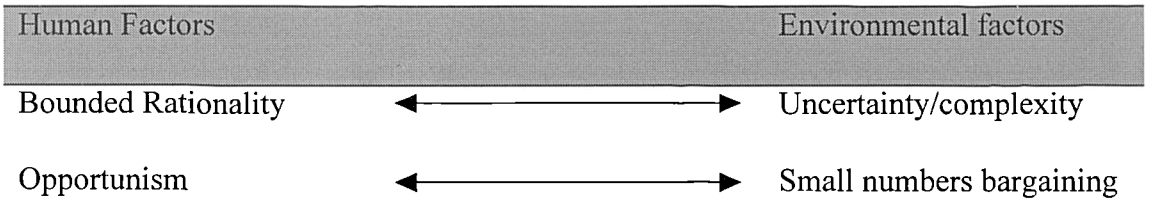


Figure 1 The market Failure Framework

Source: Ouchi (1980)

Williamson (1985, 1991a) came to recognise the existence of hybrid forms of economic organisations that exist between markets and hierarchies and allow bilateral governance. The hybrid organisational form, such as a franchise or a network , trades-off incentives for superior co-ordination compared with markets and co-operativeness

for incentive intensity compared with the hierarchy (Williamson 1991a). Other authors such as Ouchi (1980) split hierarchies into bureaucracies and clans in which the latter eliminate transaction costs not via "fiat" but via "norms".

The implications of TCE for strategy making are many. More than representing one of the theories of the firm, TCE predictions are useful for determining the scope of the firm and consequently its barriers. The importance of the firm in resolving the dilemma between increased division of labour and co-ordination costs stemming from the specialisation is an old one (Smith 1776, 1986).

Williamson (1991b) also argues that "economy is the best strategy" and superior to strategizing since the latter is "relevant principally to firms that possess market power – which are a small fraction of the total" . He therefore advises strategists to engage their firms in "first order economising" (i.e. effective adaptation and elimination of bureaucracy and waste) and use strategy to cover up economic weaknesses. It was mainly this proposition that classified the theory amongst the Evolutionary approaches to strategy (Whittington1993).

Critics of the theory have doubted the validity of the arguments. Some such as Perrow (1986) claim that the theory is over-simplistic and thus it does not present a good explanation or even a dominating motive for vertical integration. He points out that economic relationships also contain elements of mutual trust and exchange of a social and cultural kind (the relevance of this in a highly unregulated area such as the music industry, however, would seem to be doubtful). Other sociologists such as Granovetter (1985) argue in the same manner, that economic transactions are embedded in social structures and thus markets cannot be fully insulated. Perrow (1986) also supports that

TCE has hidden political and ideological implications something that any reader can discern by reading the first Williamson book (1975).

Bowles and Gintis (1993) emphasised power and economic exchange contrary to Williamson who contended that economising and governance are more important. One of the examples they examine in the paper, is how power influences financial decision. They contend that "capital markets tend to penalise non-hierarchical enterprise structures" and that "capital markets concentrate power because rational lenders prefer to transact with organisations with undemocratic political structures". As Williamson (1993) notes though, in his answer, capital will move to the most rewarding use regardless of preference of organisation and this is proved, along with other examples, through the successful launch of bonds on part of the "back catalogue" (already existing products/exploited creations) of artist/composer David Bowie (see Vignette 8 in 5.4.2).

A number of authors (Ghosal and Moran 1996, Moran and Ghosal 1996, Rumelt 1991, Simon 1991, Hill 1990) have questioned the propensity of hierarchical organisation to remedy market failure as prescribed by Williamson (1975,1985). Instead they argued that the emphasis on rational control in organisations will lead firms to become uncompetitive and therefore "succumb to markets" (Ghosal and Moran 1996). Rumelt et al (1991) actually urge strategy scholars to look beyond the market failure framework of Williamson and develop theories so that "markets can be identified as beginning where organisations fail". Simon (1991) developed the metaphor of the Martian visitor that reports social structures as large green areas (firms) interconnected by red lines (market transactions) and the green areas dominate the landscape. He asserts that we are living in an organisation economy rather than a

market one as the economists will want us to believe. Other researchers (Foss forthcoming) have observed that strategising and economising are complementary aspects of the rent creating processes of the firm. Strategising decisions are concerned with the creation of rents through strategic and entrepreneurial initiative; economising with its emphasis on efficiency is further increasing those rents.

The conditions of durable advantage of organisation over sophisticated markets is captured below in the three propositions proposed by Hill (1990). Thus co-operative solutions are unable to deal with opportunism when:

- Outcomes of the transaction are highly uncertain
- Reputation of the parties to the transaction is difficult to establish
- Short term gains from opportunistic (entrepreneurial according to Ghosal and Moran (1996)) actions outweigh the discounted present value of future co-operation

In all other instances he asserts that the "invisible hand" will select the opportunists out of the market.

Goshal and Moran (1996), admit that "shared purpose" in organisations which caters to their purposive adaptation and the price mechanism which caters for the autonomous adaptation in markets are not mutually exclusive. They call instead for "realistic and balanced" assumptions about people and organisations (Moran and Goshal 1996).

Douglas C. North (North 1991, Hirsch and Lounsbury 1996) is another academic whose views contrast that of Williamson's in a very interesting way. Both he and Williamson claim transaction costs as their intellectual heritage but their thoughts

have developed along different intellectual paths (Hirsch and Lounsbury 1996). Besides the main difference in the unit of analysis, the economy in North's case and the firm in Williamson's, further fundamental differences can be traced, highlighting new debates in organisation theory and strategy. The most important is the way these writers treat transaction costs as a variable. For North Transaction Costs are used as a dependent variable while for Williamson as an independent. The implications of the Northian approach is that this dependability allows for the alteration of the transaction costs in an economic system, by individuals or groups. Transaction costs change according to ideologies and political forces while in the Williamsonian approach enforcement of property rights and measurement of the transaction costs are taken as given and managers exercise discretion only on the make or buy decision. North has used this idea to explain the divergent paths of the Spanish and English systems in the New World (North 1991). His insights contribute to the theory of economic growth and the economic performance of nations by analysing the path dependent nature of institutions. What is interesting is that by combining the two approaches, North (1990) proposes two forms for maximising behaviour by the firm :

- Making choices within the existing set of constraints
- Altering the existing set of constraints

As North (1990, p.79) writes "Organisations with sufficient bargaining strength will use the polity to achieve objectives when the payoff from maximising in that direction exceeds the payoff from investing within the existing constraints". North (1990, p.86) conceptualises what he calls an "Institutional equilibrium". This is "a situation where given the bargaining strength of the players and the set of contractual bargains that made up total economic exchange, none of the players would find it advantageous to

devote resources into restructuring the agreements". Formal constraints can be lifted or changed by renegotiating contracts but sometimes that is not feasible without "restructuring a higher set of rules". The creation of intermediate organisations between economic and political organisations is one solution to the problem

The theory of Transaction Cost Economics has been used to justify vertical integration in the presence of increased transaction costs. With the increased use of Information Technology though, changes are expected in precisely those costs . This is the basis of the Electronic Market Hypothesis predictions which will be analysed in 2.3. The theory begs the obvious question in the context of the music industry, will information technology lead via more "rational" behaviour to lower transaction costs, thereby reversing trends in vertical integration.

2.2 Network externalities, customer and supplier lock-in and first move advantages

Another theoretical insight that is relevant to the study of the music industry is that of network externalities and the increasing returns literature. A more detailed approach can be found in Kretschmer, Klimis and Choi (1998) paper which applies those concepts in the cultural industries in general.

Early indications of the relevance of these theories as well as that of increasing returns that is referenced in the next paragraph, is evident in the use of systems theory in analysing the music industry by Wallis and Malm (1984, 1988). In both these papers the authors use systems theory to describe the industrial complex that emerged in the 80's. This method of analysis is useful for describing systems which "attempt to reach equilibrium by balancing the relation of demands and rewards between the

participants". The subsystems that are described in these papers can serve as destabilising forces that can induce change and give strategic leverage to various players.

Network externalities (Katz and Shapiro 1985), affect the introduction of technologies, standards and Interorganisational Information Systems (IOS) and also the rate of adoption by the participants/users. That can give an advantage to first movers which could, though, be easily and quickly dissipated. One of the most indicative examples is the fate of SABRE airline computer reservation system, where customer lock-in through contract didn't prevent the loss of market share when competitors started offering incentives in excess of the switching costs, to the buyers (Bakos forthcoming). The same happened with the introduction of Automatic Teller Machines (ATMs) by banks (Rayport and Sviokla 1994). In reality what happened in those cases is that technology, instead of conferring a competitive advantage, it became a strategic necessity (Bakos 1991).

Discontent, Bakos and Nault (1996) assert that if an industry is characterised by positive network, marginal network and investment network externalities then "that industry should participate in a single system or coalition of systems, consistent with the formation of the grand coalition in a bargaining game". The writers also note that the presence of these externalities are responsible for the migration of businesses to the Internet as the infrastructure of choice for conducting their business.

A newly (re)discovered concept is related to the above is that of increasing returns (Arthur 1994, 1996). The concept of increasing returns has been explored in relation to virtual communities (Hagel and Armstrong 1997), and also in relation to cultural industries (Kretschmer, Klimis and Choi, 1998). This reflects a totally different

economics approach from the Marshallian "Fishbowl economics" (Beinhocker 1997). Economies are perceived as complex adaptive systems. Examples include cites, the immune system and the Internet. Numerous researchers from various disciplines such as biology, economics, computer science, physics etc. are involved in continuous research into the properties of these systems (Waldrop 1992). The main message is that being a good evolver as well as a good competitor is of great strategic importance in complex adaptive systems. Wallis and Malm (1984,1988) make precisely that point when they talk about how the need to balance the stresses and strains in different bonds guide players in different subsystems which take the form of vicious cycles.

The transactions in marketspace (see chapter 2.3 for a definition) are prone to increasing returns. Since the variable cost per unit of service is near-zero, adding another customer in the service means near clear profit for the company, given of course that the service is priced according to perceived customer value and not on the unit's marginal cost. This is a fundamental property of marketspace transactions (Rayport and Sviokla 1994) and it is being aggressively exploited by some players such as Microsoft. The profit stream of increasing returns then, takes the form of a growing annuity. The 1997 joint venture with First Data, MSFDC, is a good example of how increasing returns can be exploited[1].

Arthur in a 1998 paper (see Arthur 1994 p.111-132) set out four self reinforcing mechanisms:

- large set-up or fixed costs (which give the advantage of falling unit costs to increased output)

[1] More information at URLs: http://www.msfdc.com/ and http://www.news.com/News/Item/0,4,11935,00.

- learning effects (which act to improve products or lower their cost as their prevalence increases)
- co-ordination effects (which confer advantages to "going along" with other economic agents taking similar action)
- self-reinforcing expectations (where increased prevalence on the market enhances beliefs of further prevalence)

These 4 mechanisms provide adequate explanation for the repertoire strategies of the major record labels and film studios (for a more detailed discussion see Kretschmer, Klimis and Choi, 1998)

The consequences of these mechanisms are again spelled out by Arthur:

- multiple equilibria, i.e. indeterminate outcome
- possible inefficiencies. "Bad luck" can result in an inferior outcome.
- lock-in effects. Once a solution is reached exit from it is difficult.
- path dependence, where the market share dynamics are nonergodic[2]

North (1990) complements Arthur's discussion on increasing returns by examining the "path to institutional change". For him, there are two forces shaping institutional change. Increasing returns and imperfect markets characterised by significant transaction costs. In a perfect market there is no need for institutions since the

[2] The principle of nonergodicity basically states that history matters. Indeterminate outcomes and system "tipping" may accrue due to "historical small events" that are not averaged away.

transaction costs are zero. But in imperfect markets there are increasing returns to institutions and the change is mostly incremental shaped by the mental constructs-ideas, theory and ideology. That explains the prevalence of different institutions in society, where increasing returns develop organisations and interest groups with a stake in the constraints which can shape the policy to serve their own interests, producing thus a vicious cycle. Seeing it from an economist's perspective, even if an entrepreneur's objective was economically beneficial as a whole, it might not be realised because of the institutional constraints and also because of the imperfect knowledge of the entrepreneur himself.

It must be noted at this point that there are some severe criticisms of the concept of network externalities as market failures by economists such as Liebowitz and Margolis (1994). Their criticism centres on either debunking the examples usually cited (e.g. in David 1985) or distinguishing between effects and externalities in networks.

2.3 Electronic Commerce and Electronic Markets

Various definitions of Electronic Commerce have been proposed. Some authors like Klein (1996), for example, distinguish between business to business and business to consumers transactions:

"... *electronic trading*, [is] the exchange of goods and services based on electronic linkages among the business partners. The phrase Electronic Commerce, which is very popular at the moment, covers a broader range of businesses such as construction, finance, insurance, production and logistics, tourism, transport, and includes doing

business with consumers with an emphasis on marketing and purchasing. *Electronic markets* refer to the institutional and technical platforms for Electronic Commerce and the phrase suggests that business is conducted in an open, market-like fashion." (Klein 1996)

More general definitions also exist, that do not distinguish between trade and commerce:

"Electronic Commerce (e-commerce) is the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunications networks" (Zwass 1996).

"[e-commerce is] the buying and selling of information, products, and services via computer networks" (Kalakota and Whinston 1996).

In the previous definition Bloch et al. (1996) added the "support for any kind of business transactions over a digital infrastructure".

The author proposes a new general definition that can encompass all of the above:

Electronic Commerce is any transaction of tangible or intangible offerings over a digital infrastructure.

This definition is more general, it doesn't exclude any digital medium, or party to the transaction, and also caters for both tangible and intangible offerings.

Another advantage is that this definition allows more possibilities into the general picture of e-commerce. In that way, if the consumer searches for information about a film, say, he/she can buy that information from an electronic magazine or exchange that information with other consumers through collaborative filters such as Firefly (Bailey 1996, Bailey and Bakos forthcoming, see also 10.4.2). Companies can sell the information or the product and even consumers can buy and later sell offerings to another party through the process of downstreaming (Wallis, Choi, Klimis et al. 1996). The possibilities offered are endless. In the music market, consumers can search for information in a portal such as MTV and buy the CD or download a song on a digital format directly, or by connecting to the relevant vendor or even the artist him/herself. A framework to make sense of these complex arrangements is developed later in 6.4.

2.3.1 The Electronic Market Hypothesis

As it will become evident in the literature review, there is a clear cut influence of TCE on the literature relating to e-commerce. The idea of focusing on transactions, or interactions, as a recent article (Butler et al. 1997) prefers to name them, is more satisfactory in the context of e-commerce. The same article calculates the share of interactive activities in the US as constituting 51% of GDP - around 50% in service industries and 35% in mining, agriculture and manufacturing. Intermediation has also been recognised as constituting a large fraction of the economy. In the case of the US this is calculated as 28% of GDP (Spulber 1996).

The Information Technology (IT) Management literature offers a theory that can be used to base predictions on the scope and evolution of electronic markets. The theory behind the Electronic Markets Hypothesis (Malone, Yates and Benjamin 1987) is a useful starting point for the development of a conceptual framework.

First some definitions to clarify the following. *Production costs* are defined as the physical or other primary processes necessary to create and distribute the goods or services being produced. *Co-ordination costs* are the costs of "managing dependencies between activities", as Malone and Crowston (1994) have defined co-ordination. These include the transaction or governance costs of all the information processing necessary to co-ordinate the work of people and machines that perform the primary processes. They also include the cost of setting up a relationship, and most importantly, search costs for both buyers and sellers.

Rayport and Sviokla (1994, 1995) distinguish the *marketspace* from the *marketplace.* In the marketspace "buyer seller-transactions occur in an information-defined arena" or an information world rather than in the physical world of a marketplace.

Consistent with Williamson (1975, 1985), Malone et al. (1987) define markets and hierarchies as the two mechanisms of economic transaction co-ordination. These represent for them the two ends of the continuum of relationships that can be nurtured in a computer-mediated environment. In a later article, the authors (Malone et al 1989) include the network as another possible structure consistent with Williamson's hybrid arrangements and the idea of "value added partnerships" (Johnston & Lawrence 1988).

Leaving aside hybrid arrangements such as networks for the moment, one can thus distinguish between the two polar forms of co-ordination as they relate to different buyer/seller benefits and trade-offs in the marketplace. These can be seen in the table below:

	Co-ordination through markets	*Co-ordination through hierarchies*
No of vendors	Maximum	one
Search costs	Maximum	minimum
Buyer's choice	Wide	Limited

Figure 2 The Two Co-ordination mechanisms

If we define control as the means by which the behaviour of the employees or trading partner firms is governed, and opportunistic behaviour is avoided, then under a *hierarchy*, the value chain activities are controlled and directed by management decisions either within a single firm or across several interacting firms. Consequently product and service attributes are set by managerial decisions rather than selection in the open market. A buyer does not choose from among many potential sellers but instead procures goods and services from a predetermined supplier. Forms of hierarchical control include partnerships, alliances and long term buyer -seller relationships. If a single firm serves as a sole supplier to many buyers then the formers relationship with the latter would be considered hierarchical.

In contrast, when a *market* mechanism is at work, the flow of materials and services through the value chain is co-ordinated by a decentralised price system. Relationships among firms, and between them and the end consumers, can be short-lived and at arm's length, since price and net value received on a transaction by transaction basis determine the exchange of economic resources. The availability of goods and services varying in price, quality and other attributes is not determined by the explicit managerial direction of a dominant supplier or buyer firm or a cluster of them. Assuming perfect market information, buyers purchase from whichever supplier can offer the best combination of these attributes. Theoretically speaking then we would expect that perfect market information will lead to buyers shopping around for the best combination of these attributes. Thus co-ordination of transactions through markets give the opportunity to the industrial buyer or the consumer to compare offerings from a variety of vendors but with the trade-off of additional search costs. The hierarchy minimises those search costs but it restricts the number of vendors available and, consequently, the range of choice available to the consumer.

Malone et al. (1987, 1989) postulate that in the physical domain production costs rise as the number of competitive suppliers falls, a result of hierarchies. The firms do not have the incentive to charge lower prices if they do not face the threat of competition. On the contrary, co-ordination costs rise as competitors proliferate in a market. These ideas are summarised below:

Organisational Form	Production Costs	Co-ordination Costs
Markets	Low	High
Hierarchies	High	Low

Source: Malone et al.(1987)

Figure 3 Relative Costs for Markets and Hierarchies

Assuming that customers are not altogether irrational in their choices, then according to this analysis, if IT or any other factor can give the extra benefit of lowering the co-ordination costs then it is obvious that markets will prevail as the favourite mechanism of economic transactions.

The Electronic Market Hypotheses (EMH) makes the prediction that information technology lowers co-ordination costs and thus should, *ceteris paribus*, lead to an overall shift from use of hierarchies toward use of markets for the co-ordination of economic activity. These hierarchies and markets that are mediated by information technology are called *electronic hierarchies* and *electronic markets* respectively.

The impact of computer mediated transactions on the structures of the industries is predicted to be so tremendous that it will eventually lead to a disruption of conventional practices in many activities of the value chain (Rayport and Sviokla 1995, 1994, Malone et al 1987, 1989, Porter 1985).

According to what's been said already then, it follows that IT will lower or even eliminate transaction costs in an Electronic Market since the latter possesses the following characteristics:

1. There are always alternative suppliers and buyers
2. Information is freely available
3. Opportunism due to bounded rationality is prevented

Two other factors which can be influenced by IT are equally important in order to determine the choice between the two co-ordination structures. These are asset specificity and complexity of product description and are both analysed below:

Asset specificity This factor has been discussed before in the chapter of TCE. Generally it can be defined as an input that is highly specific to a firm or a customer. Another type of asset specificity not proposed in the TCE framework, although implied (Williamson 1991a), is time specificity. "An asset is time specific if its value is highly dependent on its reaching the user within a specified relatively limited period of time" (Malone et al. 1987). This is already used as an important barrier in financial services (trading for example) where timely information is of the utmost importance and is also commercially exploited in the entertainment industries, especially the film industry, by segmenting the market according to temporal preferences.

Complexity of product description. This factor is highly significant for later discussions. Malone (1987) defines complexity of product description as "the amount of information needed to specify the attributes of a product in enough detail to allow potential buyers (whether producers acquiring production inputs or consumers acquiring goods) to make a selection. It is obvious that commodity products such as

stocks for example are easier to present than, say, insurance policies. There exists a major debate in the financial services industry, for example, regarding the uncertain relationships between product complexity, longevity and delivery channel[3]. There are other products that may be almost impossible to describe in words, new popular music and books could be such examples. A useful connection can be made here with the literature on consumer behaviour which is based on the economics of information - this is briefly reviewed in 2.6.

EMH (Malone et al. 1987) assumes therefore that product attributes affect the organisation form. Therefore items of high asset specificity and high complexity of product description are more likely to increase the co-ordination cost advantage of hierarchies. On the contrary, low asset specificity and low complexity of product description will encourage market transactions. *Ergo* IT can facilitate a move to electronic markets. Malone et al. (1987) summarise these points:

[3] I am indebted to Dr. Roger Wallis for this remark

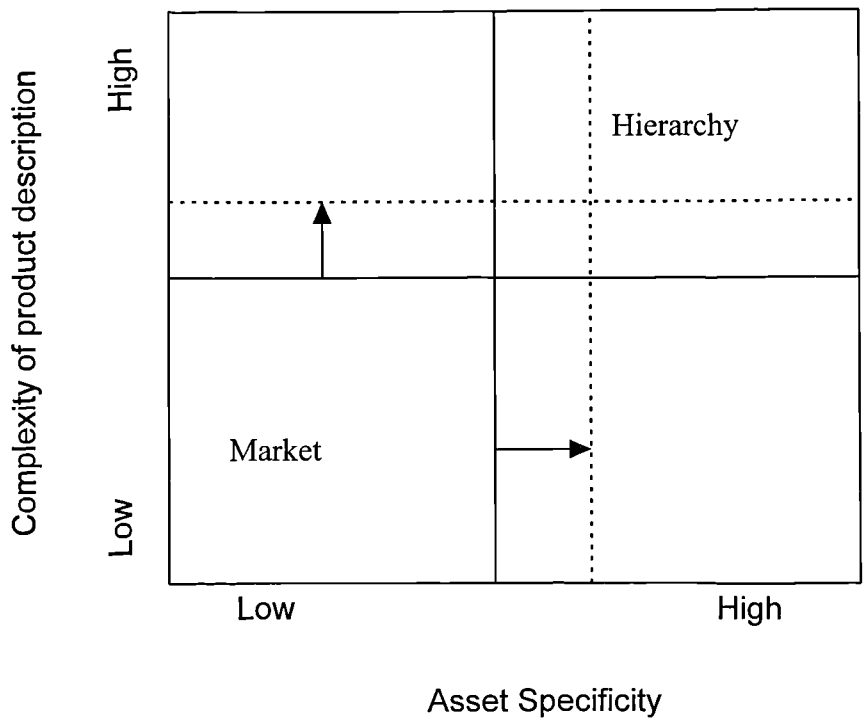


Figure 4 The shift towards Electronic Hierarchies

Source: Malone et al.(1987)

Extending this thought, the article discusses how improved co-ordination mechanisms endanger intermediary organisations (such as stock brokers or distributors) that rely on market inefficiencies.

More specifically, economising on search costs leads to the "electronic brokerage effect". Examples of electronic brokers or market makers include the NASDAQ system which creates an electronic market for trading stocks, the various airline reservation systems such as SABRE (Malone et al.1987, 1989, Hopper 1990, Bakos 1991). These allow consumers to do comparison shopping on ticket prices and also include information such as ticket availability etc. Other example include the various record shops on the Internet (Bailey 1996, Crowston 1996, Bailey and Bakos forthcoming). All these services "make" the market by connecting different buyers and sellers through a centrally maintained database or the decentralised World Wide

Web and provide ways of searching the data. They help the buyers to quickly, conveniently and inexpensively evaluate the offerings of various suppliers (more in chapter 2.6). The electronic brokerage effect can increase the number of alternatives as well as the quality of the alternative ultimately selected, while decreasing the cost of the selection process.

Firms can also achieve the opposite effect by making it more cost efficient for buyers and sellers to integrate. This creates the "electronic integration effect". Early examples were electronic data interchange (EDI) systems (Graham et al.1996) that facilitated Just in Time and inventory management, standardised invoicing procedures etc. by connecting buyers such as auto manufacturers and their suppliers. Information technology is thus used not only to facilitate communication but also to tightly couple processes at the interface between stages of the value chain.

Another prediction then, of the EMH, is that the major shift from hierarchies to markets resulting from lower search costs will eventually lead electronic brokerage effects to dominate over electronic integration effects.

EMH also asserts that any of the several participants in an existing non-electronic market can initiate an electronic one under different motives. But the pre-condition is that both suppliers and buyers have to be included. Two other kind of participants are predicted to be needed in an electronic market. Middlemen to act as distributors, brokers or agents (named distributors by Malone et al. 1987) and financial services providers such as banks etc. Another category will be information technology and network providers. All these players have their own interests in initiating an electronic market and conflict is to be expected.

Yet another prediction of the EMH is that industries will follow an evolutionary path in their transformation towards electronic markets. The final stage in the transformation will always be a personalised market but the immediate stage could well, and in fact most of the times will, include a biased market and an unbiased market. Examples of that evolutionary path can be found in the airline computerised reservation systems (CRS) (Malone et al.1987, 1989, Hopper 1990, Bakos 1991). Competitive and legal forces will remove or significantly reduce the bias of hierarchical systems. The evolutionary path is shown clearly in the following figure (from Malone et al. 1987)

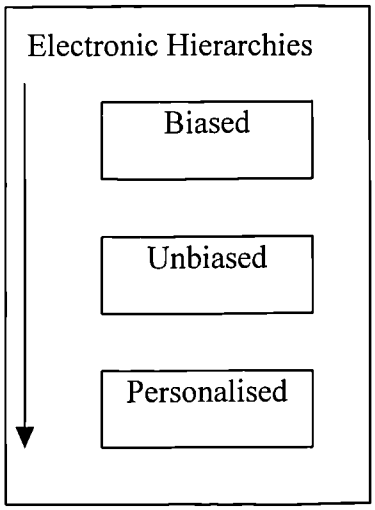


Figure 5 The Evolutionary path from E-Hierarchies to E-Markets

Source: Malone et al.(1987)

With the utilisation of intelligent agents, search engines, and collaborative filters (Bailey and Bakos forthcoming, Bailey 1996, Crowston 1996) with ever increasing sophistication, the personalised electronic market has come closer to reality

(Negroponte 1995). These authors argue that the move to the personalised markets is more important in markets for which " the product descriptions involve a number of related attributes that are compared in different ways by different buyers". This is particularly related to the case of entertainment products and music (see also Daniel and Klimis 1999, forthcoming) where choice is often highly personal.

2.3.2 Alternative views and empirical evidence

In the ten years that passed since the publication of the Malone et al. (1987) article there have been few attempts to empirically test the hypotheses.

Brynjolffson et al. (1993) found evidence, at the industry level, that increases in investment in IT was indeed associated with a decline in average firm size and rise in the number of firms.

Hess and Kemerer (1994) tested the predictions of the EMH against empirical evidence from five case studies. The Computerised Loan Origination (CLO) systems examined, suggest that indeed financial intermediaries have been threatened by the introduction of CLOS, and in some cases opposition has been mounted against the systems, as predicted by the EMH. As the authors observe "despite a decade of experience with these systems though, the industry has not been fundamentally changed". The need to align the incentives of the parties in the market has been perceived as one of the potential remedies for the failure of electronic markets. The authors suggest that the success of an electronic market might come down to choosing the participants for that market.

Another source of failure could be a structural one attributed to the infrastructure. Market-like relationships between suppliers and buyers require open

telecommunications networks and standardisation. But even in open networks such as the Internet, passwords and encryption, for example, can turn a seemingly open relationship into a proprietary one, provided of course that the encryption is strong enough to resist the hackers. By allowing specific participants to leverage their resources, Interorganisational Information Systems (IOS) and electronic marketplaces (Clemons 1990) can be proven beneficial to them.

Critics of the EMH advocate the "move to the Middle Hypothesis" (Clemons, Reddi, and Rowe 1993,Clemons and Row 1992). This states that the impact of IT on the organisation of economic activity will lead to a greater degree of outsourcing, with that increased outsourcing concentrated on fewer suppliers with whom the buyer has long-term relationships. Bakos and Brynjolfsson (1993), developing ideas along similar paths, term this phenomenon a "paradox". Using the incomplete contracts theory of Grossman and Hart (1986) and Hart and Moore (1990) the authors observe that technological advances that reduce co-ordination costs will generally increase efficiency. They also prove that when such advances increase the importance of non-contractible supplier investments or attributes such as in quality, responsiveness and innovation then they do not necessarily lead to an increase in the number of suppliers used by the firm. In order to remain competitive in a fiercely competitive environment, the firm should emphasise those qualities. The same authors argue further that IT tends to automate the more routine tasks which are typically those more easily described in contracts, leaving behind the residual tasks which are neither automatible, nor contractible.

Other authors such as Gurbaxani and Whang (1991) are more sceptical about choosing sides, advocating that IT can support both an increase and a decrease in vertical

integration. Using ideas from agency theory (Eisenhardt 1989) they analyse the effects of IT on centralisation. Where IT primarily reduces agency costs i.e. the costs of employees not acting in the interests of the firm, it leads to more decentralisation, but where it reduces decision information costs, it leads to more centralisation.

Some authors (Bakos and Treacy1986) contend that IT can improve the bargaining position of the suppliers relative to customers. When the former can provide unique and valuable information and services that require idiosyncratic changes to the customer's organisation, they are consequently making the switching to a competitor more costly.

2.4 From Value chains to Virtual Business Spaces

The value chain as a concept goes back to the seminal work of Michael Porter (1985a, 1985b). It enables managers to divide the company's activities into the technologically and economically distinct activities it performs to do business. The firm can also be visualised as embedded in a "value system". This encompasses the suppliers and buyers i.e. the players that appropriate the upstream and downstream value until the offering reaches the end consumer (Porter 1985b). The primary use of the traditional firm value chain as developed by Porter (1985a, 1985b) was to segment the activities of the firm and categorise them in their respective functional "bins". Critics argue that the model is very linear, resembling a Fordian assembly line and thus fails to capture the dynamics inside the firm. The same can be said for the value system and the external environment of the firm.

The concept of the value system was enhanced by Johnston and Lawrence (1988) and their notion of the Value Adding Partnership (VAP). They advocate that IT helped

reduce co-ordination costs and thus enabled independent companies to work together managing the flow of goods and services along the entire value chain.

Norman and Ramirez (1993) extended the model to a more interactive one where value added activities are not related in a linear manner but instead they are to be found outside the firm and sometimes outside the industry itself, in a value creating system. They termed this system "value constellation" and asserted that successful companies analyse that system, reconfigure it and reinvent value for it. There is a potential downside, though, since outsourcing makes the boundaries of the firm more permeable and excessive outsourcing could easily turn into an unmanageable risk (Quinn and Hilmer 1994).

While Porter (1985b) has already recognised that each value activity has a physical and an information component, Rayport and Sviokla (1995) treat information as a source of value in itself. This new virtual world of information, the marketspace, is distinguished from the marketplace of physical objects. Successful businesses operate in both the marketplace and the marketspace. They can thus create new markets and new relationships with the existing markets, by means of the value matrix. This concept is the synthesis of the physical and virtual value chains in which the latter involves a sequence of five activities: gathering, organising, selecting, synthesising, and distributing information. Rayport and Sviokla's (1995) value matrix is shown below:

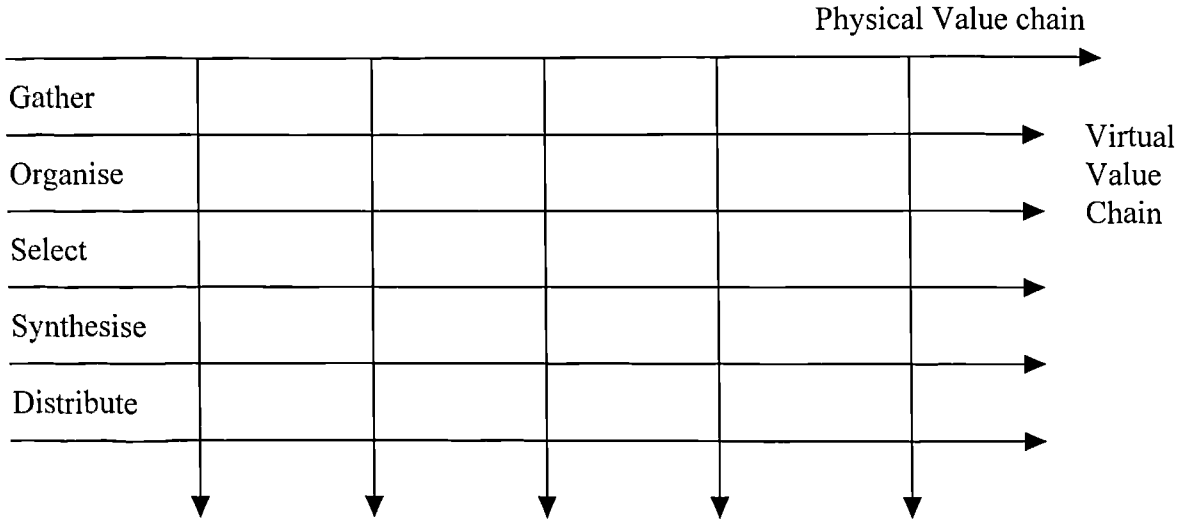


Figure 6 The value matrix

Benjamin and Wigand (1995) also deal with the value chain and its disintermediation in the marketspace. One of their contributions is that they draw attention to the importance of the "market choice box" a technology component that connects the electronic devices in the home with the Information Superhighway. They also provide various explanations for the failure of electronic markets. These are:

- Impact of interorganisational value chains. Firms want to attain control of the chain and this results either in hierarchies or a smaller number of suppliers
- Fear of profit margin deterioration. This is felt particularly in the commodity markets.

Anghern (1997a, 1997b) has developed a model that classifies the potential strategic impact of the Internet. The model caters for both the internal (how companies operate) and the external (competition in general) perspective, with the latter being more

relevant to this research. Four virtual business spaces are distinguished, thus elaborating Rayport and Sviokla's (1995) marketspace concept. These are:

- The Virtual Information Space (VIS). A one-way communication channel, which operates like a large billboard. Its function is to provide information on the availability of products and some of their attributes such as price etc. Most of the record labels' sites would be included in this category.
- The Virtual Communication Space (VCS). This is an interactive channel of communication. It is here that the various IRC (Internet Relay Chat) channels reside as well as Email and video-conferencing, and not least, the virtual communities. Most 'fans' sites belong to that category since they mainly comprise forums for the exchange of information about the stars.
- The Virtual Distribution Space (VDS). Refers primarily to the platforms and processes facilitating the distribution of products that can be wholly or partly digitised. The latter also includes the various services that exploit the information value of tangible products. Music On Demand (MOD) companies such as Cerberus (see case study, 10.2.4 appendix D) belong to the VDS.
- The Virtual Transaction Space (VTS). This is the space where business related transactions are executed. These include orders, invoices, payments etc. The main difference with the VDS is that no goods or services are exchanged in the digital domain, but they might do in the physical domain. The various Internet retailers of physical goods such as CD-Now and Music Boulevard belong to that space.

2.5 Selective influence theories and the notion of gatekeeper

Economic theories can be very powerful but cannot sufficiently explain all the phenomena of social life. Theoretical inputs from the sociological and mass communication literature as well as from TCE can complement one another. As Mansell and Jenkins (1992) found out, even in industries with EDI standards, participation was generally confined to pre-existing business relationships, defying the rules of economics. Granovetter (1985) has argued convincingly that economic activity is embedded into a network of social relationships and that might be a valid explanation for the tendency of finding interorganisational relationships being maintained in cyberspace. The same can also be said for the transactions with individual consumers.

The economics discipline has developed models which try to explain individual conformity to fashion or fads making various simplistic assumptions about the behaviour of individuals and masses (a very good review of the models used to explain the fashion process can be found in Miller, McIntyre and Mantrala (1993)). Articles about herd behaviour and information cascades abound in the economics literature (Banerjee1992, Bikhchandani, Hirshleifer and Welch1992, Shiller 1995). Those theories utilise interdependent demand models where the individual demand is modelled as a function of the aggregate demands of other members of the social system. The effects of the aggregate demand can be both beneficial and catastrophic for the demand of a product. Snobs will lower their demands for products that exhibit high aggregate demand, while herds will demand the "in high demand" products. Simmel's classic article on fashion follows that simple reasoning (Simmel 1957) and

is consistent with Veblen (1912) in differentiating the two groups according to social class.

The theories of mass communication enable us to move away from the realms of such "magic bullet" theories[4]. Authors have criticised the futility of the magic bullet approach in both the IT and organisational change literature (Markus & Benjamin 1997) and the mass communications theory literature (DeFleur and Ball-Rokeach 1989). The later adopts the framework of the "uses and gratifications" approach for understanding the active role of the audience members and the same theory is adopted here to account for the consumer.

The Selective Influence theories contest that between the stimulus and the response there are various psychological and sociological factors which act as independent variables. These are: Individual Differences, Social Categories with Subcultures and Social Relationships. These theories present a more realistic model than the simple one of herd behaviour and information cascades. The factors are depicted in the following figure:

[4] A "magic" or "silver" bullet is one that always finds the target.

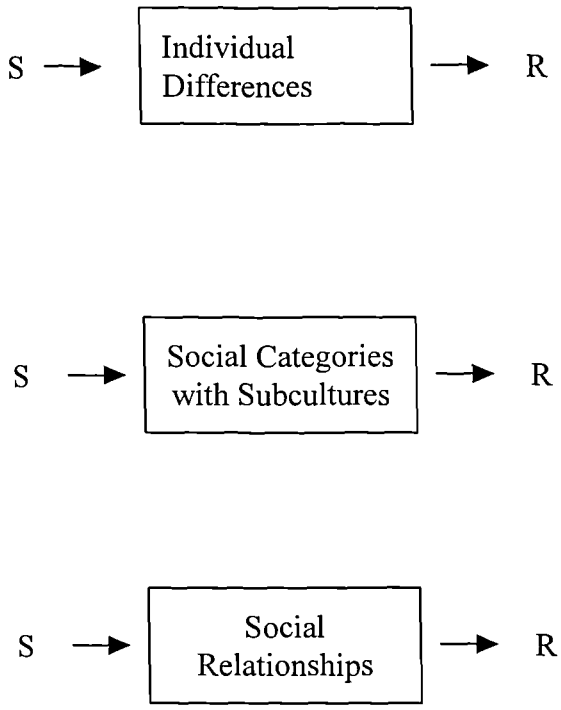
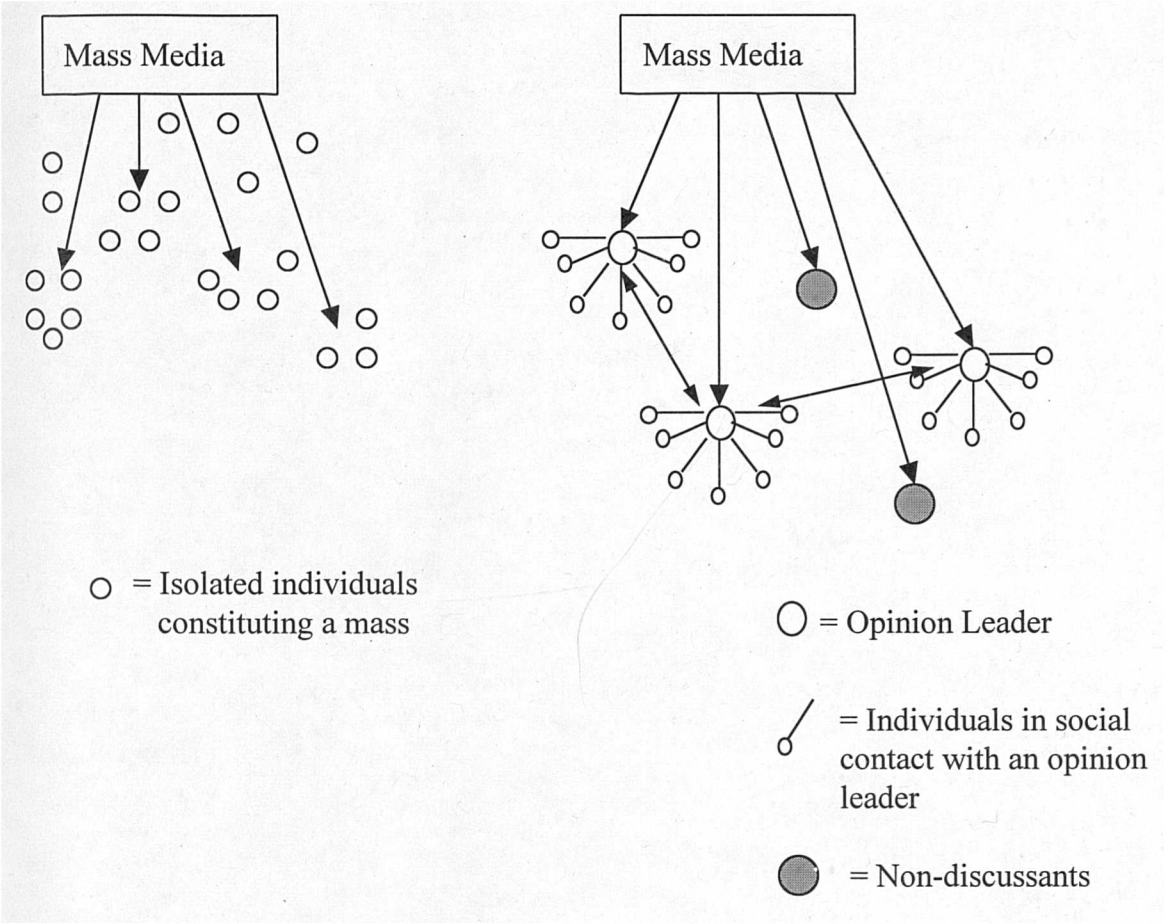


Figure 7 Factors Between Stimulus and response

According to the theories of selective influence and specifically social relationships theory (McQuail 1993, DeFleur and Ball-Rokeach 1989) it is understood that information moves through two stages:

1. from the media to relatively well informed individuals (called opinion leaders) who furthermore attend to mass communications and
2. from those persons through interpersonal channels to individuals who had less direct exposure to the media and who depended upon others for their information.

Other researchers such as Robinson and Windahl (McQuail and Windahl 1993) revised the model by including also the "non-discussants" who may be more prone to direct influence by the media. The two models are integrated below:



Adapted from (McQuail and Windahl 1993)

Figure 8 Two step flow model of media influence including non-discussants

However the selective influence theories are mostly concerned with short term effects on individuals and they do not adequately account for the long term effects of mass media (DeFleur and Ball-Rokeach 1989).

The notion of the gatekeeper is also important and should be understood thoroughly before further models can be developed. The gatekeeping model postulates that

information flows along channels which are controlled by gates. These gates control the flow of information i.e. whether it would be allowed to enter or continue in the channel. The decisions are made according to impartial rules or personally by a gatekeeper. The role of the gatekeeper includes, besides that of the selector, the roles of agent, producer and promoter and publisher (Hirsch 1972). Shoemaker (1991) extended the model to include more than one communication organisations in the gatekeeping role.

The parallels that can be drawn with other forms of mass communication, such as films and broadcast news are clear. Indeed Wallis and Baran (1990) have shown the similarities between the developments in two industries, music and broadcast news as regards the functions of selection, presentation and distribution of content.

And it is actually the plurality of media that assumes primary importance in the study of transactions in a multimedia environment. The possibilities of herd behaviour might induce some to believe that the Internet is a "magic bullet". Similarly, any other medium can act as a gatekeeper in the long chain of information events that influence consumer's behaviour. In their book "Theories of Mass Communication", DeFleur and Ball-Rokeach (1989) observe the history of the mass media and their diffusion in society by adopting a functionalist paradigm and developing a theory of transitions. They conclude by noticing that "As each new medium arrived, it had to find its niche among existing media". Their theoretical framework enable them to hypothesise that "Even if some totally new medium were to be invented suddenly and find its place into our homes, our overall media system would survive in a more or less stable manner because the functions that it provides would still be there". Therefore the

EMH promises of consumer "welfare" in a digital environment must be critically appraised in the context of such propositions.

2.6 Search Costs, Intermediaries and Market Makers

The impact of information on market making has attracted considerable attention from economists. A good example of the impact of information asymmetries is the famous analysis of the used car market by Akerlof (1970). Markets for lemons (American expression for a bad used car) fail to realise the potential gains from trade. According to this principle, when information asymmetries exist, sellers will behave opportunistically and bad products will eventually drive out the good. That will happen because the sellers with the good products will not be able to obtain the full value of their products and will therefore withdraw from the market. High search costs then, not only lead to efficiency losses but may cause a market to break down, or may prevent it to arise in the first place (Stiglitz 1989, Bakos forthcoming).

Stigler (1961) in his seminal article on the economics of information, develops a theory of search which forms the basis for the literature of search costs in electronic markets. He states that the expected savings for the consumer that will result from an additional unit of search for a commodity, are approximately the quantity he/she wishes to purchase multiplied by the expected reduction in price as a result of the search. Therefore the search costs that the consumer is going to incur in a market increase with the increase in the dispersion of prices but decrease with the amount of expenditure on the commodity. Stigler (1961) considers time as the chief search cost and thus costs increase with the amount of identified sellers approached. On the other hand consumers are as diverse in their valuation of time as they are in their taste.

Advertising is considered to be one of the remedies of identifying potential buyers and sellers in a market. The other is localisation of the transactions, something that the Internet makes obsolete but closed networks ("walled gardens" as the Murdoch/Sky UK digital venture calls them) might facilitate.

Search should enable consumers to obtain information on prices and quality. Nelson(1970) assumes that even if consumers know where to find that information, they will wish to evaluate the utility of each of their purchase options. Information about quality is especially important and limitations on that information can bestow monopoly power to the parties whose information is available to the consumer. Evaluation can be carried out by search and by purchase. Evaluation of brands by purchase is obligatory when there is no search alternative. It is because the market will not have an incentive to provide a "taster" before the purchase that market failure under such conditions occurs. An obvious example is holidays. Therefore for Nelson (1970) there are two kinds of goods. Search goods and experience goods. Darby & Karni (1973) introduced a third category, that of credence goods for which quality is rarely learned even after purchase. A typical example is management consultancy services. Therefore accurate evaluation is beyond the consumer's capabilities both ex ante and ex post. In those markets, the information asymmetries that exist between buyers and sellers means that, effectively, it is the sellers that determine customers' needs (Emons 1997). In these cases it is reputation capital and age and size of the firm (Choi and Hilton 1995, Choi and Kim 1996) that can be potential sources of competitive advantage. Music and entertainment sometimes fall within that category, in the sense that reviews by critics can add credence to a product, as do chart position for songs and box office receipts for films .

To summarise: three levels of quality are distinguished for consumer goods based on consumer's ability to evaluate:

1. Search qualities (before purchase)
2. Experience qualities (during consumption, after purchase)
3. Credence qualities (attribute that cannot be evaluated even after purchase and consumption due to the level of knowledge required to understand what the product does).

The following figure summarises the above:

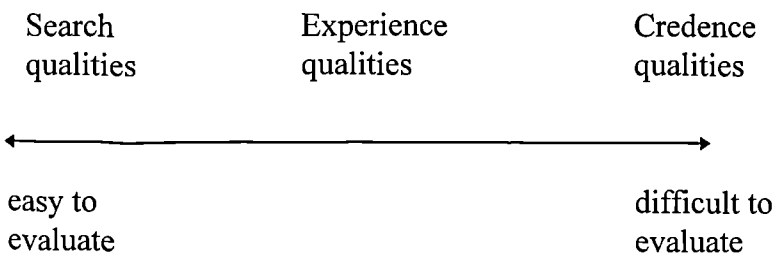


Figure 9 The quality continuum

In an important paper, Adler (1985) analyses the phenomenon of stardom by inferring these previous theories. Stardom for him exists "where consumption requires knowledge". The consumer has to forego some activities for others e.g. rock music for opera and also has "to forego having very little knowledge about a great number of performers for the sake of great acquaintance with the work of a few" within these chosen activities. Adler (1985) goes on to explain why everybody chooses the same stars. Taking into account that music is a credence good and going back to 2.2 and 2.5

with the discussion of network externalities and gatekeeping it is easy for one to derive it from the theories referenced there. The learning process that stems from discussion with other individuals about the same stars results in everyone patronising the same stars for the fear of being left out of the discussion. Therefore the search costs are minimised with the adverse effect of the individual talent of the stars becoming irrelevant. The recording industry has taken advantage of this fact and exploits it to break artists and create super-stars with guaranteed sales regardless of quality (Frith 1981).

In order to assess the impact of multimedia technologies to consumers' search costs one has to introduce the notion of the intermediary as a central "player" in this thesis, taking into account also the nature of the goods as analysed before.

An intermediary is "an economic agent that purchases from suppliers for resale to buyers or that helps buyers and sellers meet and transact" (Spulber 1996). The activities an intermediary performs can be grouped into four categories:

1. Pricing i.e. price setting and market clearing
2. Inventory Holding i.e. Providing liquidity and immediacy
3. Co-ordinating transactions i.e. matching and searching
4. Monitoring Performance i.e. guaranteeing and monitoring

Some researchers such as Bakos (1991) focus on the role of the buyer's search costs to determine the strategic dynamics of electronic marketplaces in both commodity and differentiated markets. Looking at the "electronic marketplace" rather than electronic market, he refers to an IOS, that allows the participant buyers and sellers to exchange

information about prices and product offerings (in that sense the Internet can be perceived as a huge IOS linking potential buyers and sellers through the e-commerce mechanism).

Bakos (1991) argues that reduction in search costs results in:

- direct efficiency gains from reduced intermediation and
- indirect but possibly larger gains by increased allocational efficiency stemming from better informed buyers

In the case of experience goods he observes the paradox that the market becomes more monopolistic with the increase in the number of sellers. For these, and even more so for credence goods, the electronic market will serve as a rating service.

Bakos and Nault (1996) have developed models which combine search costs in a differentiated market with heterogeneous buyer tastes and seller product offerings. The models suggest that reduced search costs have a significant impact on market equilibria, resulting in increased allocational efficiency and possibly lower prices and increased competition among sellers.

Electronic marketplaces in differentiated markets will need to provide both price and product information unlike commodity markets where price information will suffice. While it is easy to provide price information, it is rather difficult to achieve this with product information.

Electronic markets could also enable "missing markets" thereby creating substantial social surplus. They can, for example, extend participation to both buyers and sellers that would otherwise never exchange due to, say, the distance between them.

In a recent article Bailey and Bakos (forthcoming) distinguish four roles for electronic intermediaries:

1. Aggregating buyer demand or seller products to achieve economies of scale or scope and to reduce bargaining asymmetry and search costs
2. Protect buyers and sellers from the opportunistic behaviour of other participants in a market by becoming an agent of trust
3. Facilitating the market by reducing operating costs
4. Match buyers and sellers

Comparisons have been made between different intermediaries such as intelligent agents (Bargain Finder), which acts as an "electronic butler" and a collaborative filter (Firefly) which proposes solutions by aggregating the choices of other users (Bailey 1996, Crowston 1996, Bailey and Bakos forthcoming). These provide insight into the way both the demand and the supply side react to market making agents. The supply side (on-line CD-stores) had trouble accepting comparison shopping, but the demand side (consumers) embraced the Firefly collaborative filter. Resnick, Zeckhauser and Avery (1995) discuss the pros and cons of collaborative filtering further emphasising the possibility of herding effects and free-riding problems. Other forms of

intermediaries could be the virtual communities (Hagel and Armstrong 1997, Alstyne & Brynjolfsson 1997). All these services play an important role in the developing functioning of the chaotic Internet. They help consumers cut through the fog of all the junk information, and content in general, that clutters the network as a consequence of its openness (Klimis 1997). In a sense they become gatekeepers (see also 2.5), though they can experience a certain disadvantage when the cultural mix of openness and anarchy clashes with the commercial reality of manipulation where possible.

The following table taken from Bailey and Bakos (forthcoming)compares the services that are supplied by intermediaries in the marketplace with those at the marketspace.

Role of market intermediaries	Physical - oriented intermediation service	Information -oriented intermediation service
Aggregation	Combination of customer orders in wholesale orders	Provision of one-stop shopping
Trust	Provide legal contracts to govern market participation	Provision of authentication and secure communications
Facilitation	Provision of market-specific infrastructure	Exchange of messages between customers and suppliers
Matching	Provision of rich product information	Provision of marketing information to suppliers

Figure 10 Intermediation Services compared between traditional and Electronic markets

The concept of intermediation is central to the patterns that are developed and tested later in 4.5.

2.7 The music industry in the literature

Although the subject matter of the thesis is E-commerce and its influence on the market/industry structure, the researcher felt the need to include a short paragraph on the approaches used to study the music industry. A review of the sociological, cultural and communication studies literature was judged necessary since the music industry has always attracted the focus of academics researching in such discipline. This review is not comprehensive and relies on a selection of key texts that summarise previous efforts in those disciplines.

Wallis (1990) notes three main research approaches evident in the literature. Namely:

1. Production of commodified culture
2. Interactionist studies
3. Cultural/subcultural studies

While many in the industry disagree with the notion of music as a commodity, in reality, the first framework is closer to this study. This becomes apparent when as Wallis (1990) notes, the other two frameworks have little in common with the traditional focus of business studies.

The interactionists focus on the relations between the actors involved in the creative process. At first glance the weakness of this approach would seem to be its distance from the business realities of the marketplace. It has to be said though that authors such as Frith (see especially Frith 1981), adopt the approach in order to examine the relationship between the rock industry and the young audiences, which consequently

consume the records as commodities. And as he states in the introduction of one of his books (Frith 1981) "The basis of any sociological analysis of records must be an analysis of the record industry".

The third approach, the cultural/subcultural one, starts with the Frankfurt school of critical theory. Adorno (1947), a typical representative, insisted on the passivity of the masses and their subjection to manipulation and control and draws the line between high and low brow art. Other researchers in the same stream also "highlight the user end" (Wallis 1990).

The first approach, therefore, is more relevant as it sees the culture industries as any other industry, with implicit and explicit value chains and systems.

Consistent with a conflict paradigm authors such as Hirsch (1972,1975) and Peterson and Berger (1975) have noted the tension between innovation and control in cultural industries and in the music industry in particular. Both authors attempt a systemic analysis of culture industries.

Hirsch (1972) notes that firms in culture industries cope with uncertainty by:

- deploying "contact" persons at their output boundaries
- overproducing and differentially promoting new items and
- by co-opting mass-media gatekeepers

These three strategies are interrelated and have been central to the study of cultural production by many of the researchers (DiMaggio and Hirsch 1976, Hirsch 1975). Demand for new material styles and fashion items creates a need to control the flow of

resources in and out of the system (DiMaggio and Hirsch 1976). Visualising the production organisation as the centre of an open system, Hirsch's (1972) framework places "contact men" at both the input and output borders of the organisation. The "outer-border specialists" for example are utilised where the power of gatekeepers is considerable. Hirsch (1975) argued that when the latter constrain the producer, he/she will try to modify the situation by co-opting the gatekeeper, *using one of those* specialists.

Bourdieu, quoted in DiMaggio and Hirsch (1976) mentions two standards to measure the success or failure of different media or forms of art. These are Market Standards and Critical Standards. DiMaggio and Hirsch (1976) offer the explanation that the artists are co-opted with money and stardom so as the production organisations would reconcile the tension between the two standards.

The same authors also view the control of distribution as an essential function which must be performed in order for a work of art to pass the stage from conception to commodity. The authors distinguish between three systems:

1. *Vertically integrated systems*, where the producers own the means of distribution
2. *The common carrier system*, such as the postal service
3. The *distributing agent system* where agents select a limited number of available items for sale or promotion

Further distinction can be made with regard to gatekeeping in physical distribution and gatekeeping in publicity (see also 2.5). The latter includes radio and TV stations

and their DJs, which are crucial for the exposure of cultural products, and also reviewers and critics in magazines.

Peterson and Berger(1975) research aims to find out how industry structure will affect repertoire policies. The authors examine the business cycles in the music industry, in the US, and conclude that the greater the number of firms in the industry, the greater the diversity in musical output. Therefore a negative correlation exists between market power and innovation. Their cyclical model was challenged by Burnett (1990) who amassed empirical evidence showing that the major record companies are continually forced to present new artists and styles in order to retain their market power. In that process they tend to absorb independent or middle-sized firms when the latter make "considerable inroads into the market" (Burnett 1990). His research, though, relies on data based on the music charts which besides being unreliable and prone to manipulation, do not include albums who might sell steadily and for longer periods.

The unique work of Wallis & Malm (1984) is probably one of the few accounts of the international music industry and its work in small country markets around the world. The authors adopt an open systems approach. Using a sample of 12 selected counties and interviewing over 200 respondents the authors developed the MISC (Music Industry in Small Countries) interaction model. The model is essentially a system where the actors which are identified interact directly or indirectly in three main levels:

- *The International level* which includes the international organisations (IFPI, WIPO etc.), the transnational music industry, the related media organisations and the electronics industry
- *The National level* which includes the local music industry and its related industries, mass media, and music institutions and organisations
- *The local level* (music activity) which includes the grass root creators, sub-cultures and the "public at large".

Two important observations/predictions are to be found in this work. The first one is that the integration between publishers and record labels will continue mainly because the publishers make "money for nothing". The second is a warning that while copyright is essential for the protection of compositions and remuneration of the composers, the copyright system could collapse in a matter of years due to the tensions inherent to it and the pressures from both the inside and outside. Wallis et al. (1998a, 1998b) extend this thought and lay out the threats to the current system which based in reciprocity and solidarity.

The context of both the production and the distribution of culture has undergone continuous change throughout the history of mankind (DiMaggio and Hirsch 1976, DeFleur and Ball-Rokeach 1989). The most important shifts though have been in the last century, with the diffusion of mass media and the development of technology. Using an open systems perspective, researchers tried to assess the role of new media technologies in the overall change of the system. DiMaggio and Hirsch (1976) have understood the interconnectedness of the different media industries when they wrote: "As technological diversity allows the output of one artistic system to become the

input for another, the complexity of institutional systems and the diffuseness of artistic boundaries increase. And as those systems become more integrated and the boundaries among them more diffuse, they also become less stable".

Authors such as Wallis and Malm (1984) and Frith (1987a, 1987b) anticipated the increasing reliance of the industry on copyright rather than the material formats. Frith (1987b) though, along with other authors such as Laddie (1997), view copyright with suspicion because, in their view, it confers monopoly power to their holders.

3. METHODOLOGY

The Lion and the Statue[5]

A Man and a Lion were discussing the relative strength of men and lions in general. The Man contended that he and his fellows were stronger than lions by reason of their greater intelligence. "Come now with me," he cried, "and I will soon prove that I am right." So he took him into the public gardens and showed him a statue of Hercules overcoming the Lion and tearing his mouth in two.

"That is all very well," said the Lion, "but proves nothing, for it was a man who made the statue."

We can easily represent things as we wish them to be.

Aesop

Gradually, there is more and more evidence, at least in the European environment, that the zeitgeist calls for qualitative rather than quantitative research in social sciences. Researchers in Information Systems have also noticed this general shift in their field even in the US (Myers 1997). In a recent award winning MIS Quarterly article (Hess and Kemerer 1994) the authors tested the EMH in the financial services industry by building case studies of five Computer Loan Originator systems. The mode of analysis was pattern matching, as in this study.

The trend towards qualitative research was initiated by an identified need to move from the mostly technological issues and from number crunching and a wide range of statistical interpretations to managerial and organisational issues.

[5] Downloaded from ftp://src.doc.ic.ac.uk/media/literary/collections/project_gutenberg/gutenberg/etext92/aesopa10.txt

This chapter will describe the methodology applied in this study, starting with the philosophical assumptions that guided the research and continuing with a description of the case study methodology, the data collection methods and the modes of analysis used. The chapter closes with an overview of the research process.

3.1 Philosophical Assumptions

It is the duty of the researcher to outline the paradigm that guides the research. In particular this paradigm can be said to constitute the worldview or the basic sets of beliefs and assumptions of the researcher (Creswell 1998) that set his/her approach to social sciences. In other words the underlying ontologies (basic building blocks of reality) and epistemologies (basic building blocks of knowledge) constitute his or her Inquiry System (IS) (Mitroff and Linstone 1993).

Two general paradigms or ISs are distinguished in the literature (Easterby Smith et al. 1991): The positivist and the phenomenological one. Basically the two approaches differ in the way that they view data.

The positivistic orientation suggests that in principle all data can be classified and measured. The data collected should be coded and refined in such a way that it allows them to be "pigeonholed" i.e. categorised and quantified.

The phenomenological orientation, on the other hand, disposes of scales, measures and quantified data allowing the researcher greater freedom as well as the opportunity for much richer explanations and descriptions. Individual cases command merit in their own right without resort to quantitative techniques. Each case or observation is unique and contributes to the whole picture.

There are some basic differences between the two approaches which are listed in Figure 11 adapted from Easterby-Smith et al. (1991).

Assumptions	Positivist paradigm	Phenomenological paradigm
Ontological	Reality is singular, external and objective	Reality is multiple, socially constructed and subjective
Epistemological	Researcher is independent for what is being researched	Researcher is part of what is being researched
Axiological	Research and science is value free and unbiased	Research and science is value laden and biased
Focus	facts	meanings
Telos / intent	causality	understanding
Methodological approaches/ processes	• reductionist • hypotheticodeductive • operationalisation • large samples	• holistic • inductive • multiple methods • small samples
Strengths	• provides wide coverage of a number of situations • fast and economical • of relevance to policy decisions	• ability to look at change processes over time, understand people's meanings • adjust to new issues and ideas as they emerge • contributes to the evolution of new theories • natural rather than artificial data
Weaknesses	• inflexible and artificial • ineffective in understanding processes or the significance that people attach to actions • not helpful in generating theories • ex-post focus makes it hard for policy makers to infer future changes and actions	• lengthy and expensive data collection • Difficult analysis and interpretation of data • hard to control pace, progress and end-points • low credibility for policy makers

Figure 11 The differences between the two main papradigms in Social science

While at first it seems that these two paradigms represent the two extremes of a continuum (Seth and Thomas 1994) in reality they are not mutually exclusive (therefore some thought should be given to the label "paradigm"). Research can and in some cases should allow to be driven by both the paradigms and this is sometimes suggested in the literature (Creswell 1998, Hussey and Hussey 1997, Easterby Smith et al. 1991).

The main point of dispute between those paradigms concerns the methodological approach to theorising inductively as opposed to deductively. Authors such as Glasser and Strauss (1967) argue for the inductive approach while academics such as Eisenhardt (1989) insist on the second approach.

The five research traditions, biography, phenomenology, grounded theory, ethnography and case study can be placed in a continuum depicting the extend of the use of theory in these. On the "Before" end, the theory is used before the research to guide it, on the "After" end theory is generated after the research, by the research.

The case study, as seen in the following figure, is ideally placed in the middle of the continuum (Creswell1998).

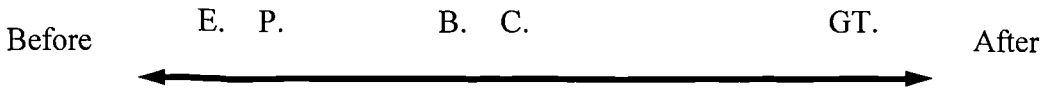


Figure 12 Extent of theory use in the Five Traditions

NOTE: B=Biography; P= Phenomenology; GT= Grounded Theory; E=Ethnography; C=Case Study

The decision to use theory before or after the study is also partly guided by its scope. Descriptive studies that are mostly issue oriented do not usually use theory to guide the research while explanatory ones are mostly at the opposite end of the spectrum. Before going in the specifics of this research a general overview of the case study methodology is given below.

3.2 Case Studies

As Porter (1991) observes, the nature of strategy requires the use of case studies. Given the complexity of the task, this methodology is the appropriate one that enables the researcher to test theories empirically. As Porter (1991) says " I was forced to turn to large numbers of in-depth case studies to identify significant variables, explore the relationships among them and cope with industry and firm specificity in strategy choices". Other researchers such as Eisenhardt (1989) and Lee (1998, forthcoming) have also advocated the use of case studies for building and testing theories.

Case studies are a viable research strategy when the researcher wants to understand certain phenomena within a particular context. As Yin writes (1994)

"A case study is an empirical enquiry that

- investigates a contemporary phenomenon within its real life context, especially when
- the boundaries between phenomenon and context are not clearly evident"

Other authors refer to the case study as the exploration of a "bounded system" (Creswell 1998) which is bounded by time and place. The same author defines the

context of the case as the physical setting or the social, historical, and/or economic setting for the case.

The subject matter of this research is indeed a contemporary phenomenon, e-commerce and its effects in the recording industry, and as such the case study approach is more appropriate. The in-depth case studies are also the preferred methodology because the number of the people that could be interviewed is quite small to enable hypothesis testing.

As Yin (1994) writes:

"The case study inquiry

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis"

The case study of this thesis can be found in Appendix D. It details the developments in music delivery technology between the years 1995 and early 1998 including detailed profiles of the main players. While it seems that there is only one case study, in reality there are multiple units of analysis and therefore multiple cases. Through the profile of the players and their systems one can deduct the strategies and attitude of the recording industry at the time. This is further elaborated with the use of quotes from interviews conducted with key informants during the same time period and is presented in chapter 5 analysed according to the patterns developed in 4.5

3.3 Data collection methods

The following paragraphs detail the sources of data and the method of collecting them. Both secondary sources such as reports and documents, and primary ones such as interviews were used.

3.3.1 Secondary sources

As it has been noted by other researchers (Negus 1993, Wallis and Malm 1984) the secretive nature of the music industry makes it difficult for the researcher to collect quantitative information. The exceptions are to be found in general statistics published in reports and press releases by trade bodies such as IFPI, BPI and NMPA[6]. Confidential reports and documents were also collected, provided mainly by the interviewees in order to help the researcher expand on the issues discussed. All these were accompanied by the researcher's reassurance of not making the contents publicly available, or even publishing attributable quotes without permission. They were instrumental though in providing greater insight in the topics researched.

Reports published by the European Commission and bodies like the OECD and WIPO[7] were also used on specific subjects such as copyright, legislation and the economic impact of the related industries. Finally articles from trade magazines such as Music & Copyright, MBI and Music Week were instrumental in providing the researcher with news and opinion articles about the latest developments and critical incidents (see below) in the industry as they were unfolding.

[6] IFPI: International Federation of Phonographic Industries, BPI: British Phonographic Industry Ltd., NMPA: National Music Publishers' Association

[7] World Intellectual Property Organization

Online search services such as ABI/Inform and Extel were used as well as the Internet in general. The Internet was, in the opinion of the researcher, one of the best resources used since the amount of information put there by the companies and the trade bodies was phenomenal and, sometimes, overwhelming. A large part of the evidence was thus collected on-line by what the author terms "direct on-line observation". The importance of on-line researching for this project was paramount also because of its topic. On-line search enabled the identification of potential case studies and observation of trends as they happened in real time.

A wealth of material has been accumulated in the form of documents, articles, press releases etc. from February 1995 onwards. The "paper" material gathered could easily fill 4 large boxes. In digital form, a massive 64.5 MB or 2,173 files have been accumulated, relating to this study. Most of the material gathered consisted of academic articles, news stories etc. downloaded from the WWW, but also memos, reviews and articles written by the researcher between mid-August 1996 to mid-July 1997. Another 100 MB, approximately, represent the "older" material stored in a second computer's hard drive.

The most important source of data though were the interviews with a selected sample of key informants.

3.3.2 Interviews

Interviews have often been claimed to be the "best" method of gathering information (Easterby-Smith et al. 1991). Within the phenomenological paradigm and the case study methodology, it is probably the most appropriate method and one which is "recommended" in the literature (Yin 1994, Easterby-Smith et al. 1991)

The use of interviews, however, presents the researcher with various problems. One of the most important ones is how to generalise from the interviews with few individuals, even if they represent a small group of key decision-makers and observers.

This study adopts the strategic choice paradigm of Child (1997) as a solution to this problem. Keeping with structuration theory (Giddens 1984, Cassell 1993), Child (1997) recognises the need to bridge the different paradigms of Burrell and Morgan (1979) and thus reconcile the debates long inherent in organisational theory (Astley and Van de Ven 1983). Accepting that action is both constitutive and constituted, the problem of level of analysis is thus addressed in a way that allows researchers to take into account both the voluntaristic and the deterministic approach to organisation analysis and business research in general. The assumption therefore is that the interviewees were conscious actors who shape the world around them as well as shaped by it:

"For while the actions taken in the name of organisations are driven by individuals and therefore draw for some of their explanation on individual motivations, they are organisational both in how they are represented and in the resources and relationships which are activated. When these actions become a constituent element in the relations between an organisation and external bodies, they move onto an even higher level of social process. The consequences of this process for the organisation, which strategic choice analysis depicts as being transmitted to it through a feedback of information on its performance and external standing, are social in origin but may be interpreted in some circumstances by individual actors in terms of their own personal values and priorities". (Child 1997).

Semi-structured interviews were chosen as the preferred method of data collection because they are claimed to be the best way to understand the personal constructs of the interviewee and his/her world view. As Easterby-Smith et al. (1991) assert, semi-structured interviews are useful when:

- "the step-by-step logic of the situation is not clear
- the subject matter is highly confidential or commercially sensitive;
- the interviewee may be reluctant to be truthful about this issue other than confidentially in a one-to-one situation"

All three conditions held true for the majority of the interviews conducted for this research.

Following Miles and Huberman (1994) the data collected followed certain principles according to which more weight was given to some of the evidence rather than to other data:

1. Some informants are "better" than others in the way that they are more "articulate and reflective" or more knowledgeable about the events because of their position in the company or their role in the case study.
2. The circumstances under which the data is collected strengthen or weaken the quality of that data. The aforementioned authors compile a list:

Stronger Data	Weaker Data
Collected later, or after repeated contact	Collected early, during entry
Seen or reported firsthand	Heard second-hand
Observed behaviour, activities	Reports or statements
Field-worker is trusted	Field-worker is not trusted
Collected in informal setting	Collected in official or formal setting
Respondent is alone with field-worker	Respondent is in presence of others, in group setting

3. Data quality also depends on the researcher's validation efforts.

Special mention should be given to the Critical Incident Technique (CIT) as a data collection method. As argued by some methodology experts (Hussey and Hussey 1997), CIT is employed by many qualitative researchers informally, i.e. without the latter realising it. The method is instrumental for facilitating data generation from interviews where the informants lack focus or have difficulty in expressing their opinions. It consists of asking the informants to identify significant incidents relevant to the field of study. Alternatively the incidents can be identified by secondary sources After the incidents are identified further prompting is used to "throw light on these incidents from several angles" (Wallis and Malm 1984).

A good example, in the present study, is the David's Bowie bonds issue (see Vignette 8 in 5.4.2) which was identified by some of the respondents as critical in the sense that

it could represent a major change in the established relationships within the industry. Such incidents often coincided with the "hottest" topics in the conferences attended and with the issues discussed in the main publications consulted, thereby leading to a greater validity. Further prompting enabled the researcher to elicit responses about the financial structure of the music industry and, specifically, the role of the publishers as "venture capitalists". Further investigative analysis by the researcher thus resulted in the Critical Incident approach adding to an understanding of on-going changes in the relationships and attitudes prevalent amongst the various players. The main incidents that were discussed form part of the research protocol (see 9.2 in Appendix B.)

3.4 Modes of analysis

Two major modes are followed in this thesis. The first one, pattern matching is applied to historical i.e. past and existing data and is used to gain insight into the EMH and its predictive validity. The second one, scenario analysis is used to derive insights into the future based on trends revealed in the data. Both are described below.

3.4.1 Pattern-Matching

One of the dominant modes of analysis of the data is Pattern-Matching.

Coincidentally this is an old established validation test in law infringement cases where it is used to determine if copyright law has been violated by copying. It has been suggested as an appropriate test to determine if the "pattern" of the work has been infringed[8]. In a play, for instance, the sequence of events, and the development

[8] See Chaffee, Z. (1945) Reflections on the Law of Copyright, Columbia Law Review, 45, p. 503-513

of the interplay of characters constitute a pattern. The morphology of the composition, harmonic progressions and rhythmic and melodic patterns do so in music.

Specifically, pattern matching implies that complex patterns, if matched, yield greater validity for the theory. Actually there is little difference between pattern matching and traditional hypothesis testing, since developing a theoretical pattern is like developing a hypothesis about what is expected in the data. "The major differences between pattern matching and more traditional hypothesis testing approaches are that pattern matching encourages the use of more complex or detailed hypotheses and treats the observations from a multivariate rather than a univariate perspective" (Trochim 1996). The idea is to match the theoretical pattern with the observed pattern. The first derives by conceptualising from "theories, ideas and hunches" in the theoretical realm while the second by organising the data derived from observations data and measures.

The following figure taken from Trochim (1996) helps to clarify the thinking behind the pattern matching approach:

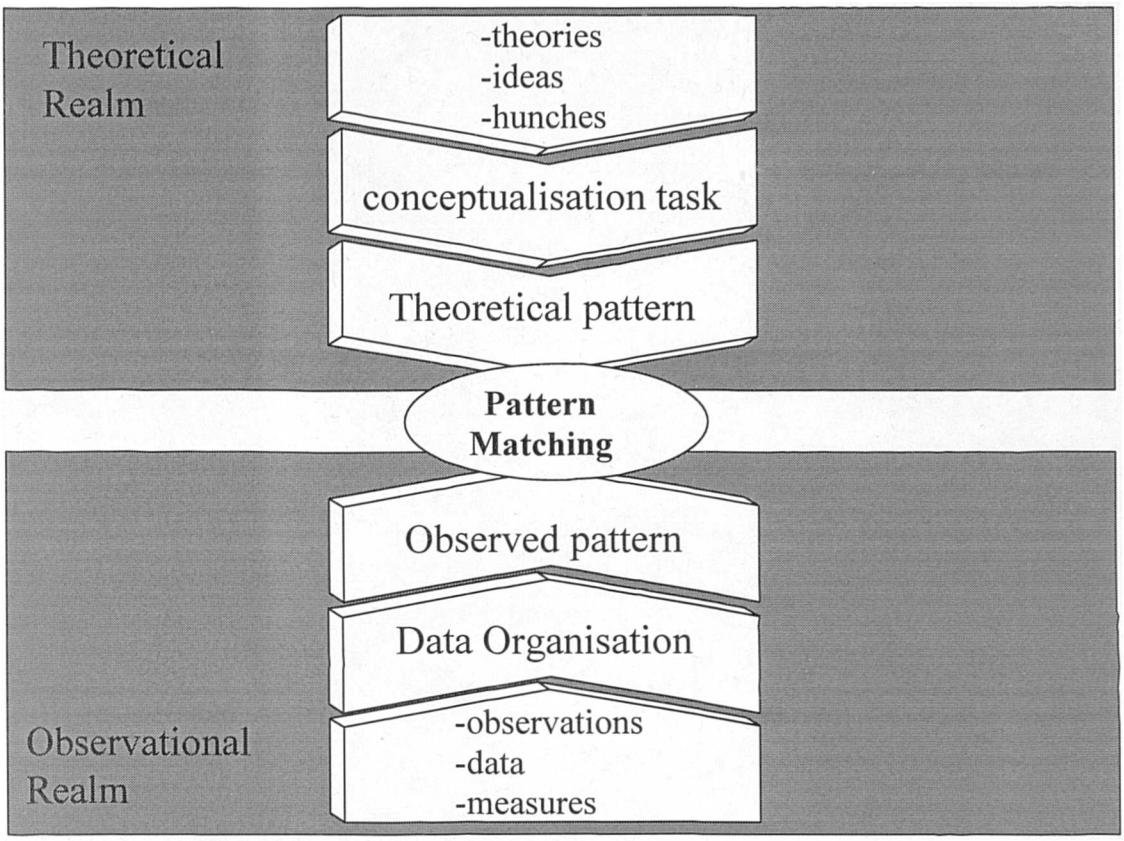


Figure 13 The Pattern Matching Approach

The patterns can be tested for matching those observed in the case studies. Following a replication logic (Yin 1994, Eisenhardt 1989) the cases are treated as experiments. Cases that confirm and match the patterns would supply sufficient evidence to accept the theory. Those cases that do not match the relationships are valuable sources of refinements and extensions of the theory. New patterns will then be developed to be tested by other researchers interested in pursuing the study of the subject further.

3.4.2 Scenario analysis

Scenario analysis offers to strategists a means of identifying a range of potential futures (Courtney, Kirkland and Viguerie 1997). In that sense scenarios are a range of easily analysable subsystems de-coupled from complex phenomena (Schoemaker

1993). By bounding and understanding future uncertainties, scenarios are thus instrumental into structuring the future into predetermined and uncertain elements and they serve as a robust basis for strategic decision making. As Pierre Wack (1985b) writes: " I have found that scenarios can effectively organise a variety of seemingly unrelated economic, technological, competitive, political, and societal information and translate it into a framework for judgement-in a way that no model could do".

Combined with a competitive analysis of the industry (Porter 1985a) and analysis of a firm's core competencies (Selznick 1957, Grant 1995, Foss 1997) they can be instrumental in developing strategic vision and identifying strategic options (Schoemaker 1992). Other authors, notably van der Heijden (1996) link scenario planning to the processual paradigm in strategic management and encourage the use of scenarios as " a natural thinking tool for use in a strategic conversation".

While the actual methods for deriving scenarios vary from the very structured to the unstructured, there are some fundamental "signs" that the researcher is looking for in his quest. As Wack (1985b) puts it:

"The foundation of decision scenarios lies in the exploration and expansion of the predetermined elements: events already in the pipeline whose consequences have yet to unfold, interdependencies within the system (surprises often arise form interconnectedness), breaks in trends, or the "impossible"".

Using the interviews and the data gathered the researcher identified four scenarios presented in 6.5. (the same chapter offers more detail on the construction of those scenarios). It is hoped that these will help not only academics seeking to understand future trends but also managers to understand the forces driving their business. They are not intended to merely serve as "substitutes for thinking".

3.5 The research process

Dealing with an industry in the making, where "the dust hasn't settled down yet" (as an interviewee observed), the researcher was faced with numerous problems. This chapter will try to analyse the various problems encountered and the solutions that were implemented. It will detail the process from the completion of a pilot study in 1997 to the analysis of the data gathered within the research period up to early 1998.

3.5.1 Overview

The researcher was encouraged to continue the research he undertook for the requirements of the award of the Masters of Business Administration in1995. The MBA project was titled "Strategic Choices for New Digital Distributors of Music" and it was there that some ideas for this thesis were developed in a crude form.

The pilot study started in May 1996 and was completed in March 1997. It involved completing a large part of the literature review and the methodology. A small number of interviews were conducted with key informants. The process as well as the outcome of this pilot study had the following significant characteristics and results:

- It has facilitated the development of constructs and hypotheses
- The pilot study highlighted some of the potential problems of doing research in such a volatile, uncertain environment and, not least, secretive environment.
- The pilot study helped in creating contacts and developing trusted relationships with the interviewees and their companies.
- All this led to publications and conferences, demonstrating the recognition of the work by the industry (see Appendix A).

Empirical data for the main research were collected via both primary and secondary sources. The latter included the sources described in 3.3. While secondary data gathering was continuous, two distinct phases can be distinguished when available on-line sources and the Internet were searched for updates on the companies detailed in the case studies and the music industry in general. The first phase took place during August and September 1996 and was repeated again during August and September 1997. The pilot research and the initial interviews advised the second search. Additional online searches were conducted during the first quarter of 1998 in order to update the data where necessary.

After the second search, a new round of semi-structured interviews with key informants was conducted. The aim here was partly to further investigate issues raised by studying the secondary sources, as well as to corroborate the insights obtained through them and the pilot research. The main reason, though, was to inquire into the motivations of the specific parties involved, or not involved as the case might be, in the systems presented as case studies in the appendix.

After all the data has been gathered and categorised, it was analysed using the pattern matching approach. This analysis can be found in Chapter 5 of this thesis. The texts from the interviews were scrutinised for interesting and relevant quotes; there were then selected and put into a separate document under headings relevant to those in the analysis chapter. The document with the snippets alone, out of which the quotes were chosen, was an impressive ninety seven pages in length.

3.5.2 The sample

Gaining access to the firms in the recording industry, was not easy for the reasons described in 1.3. This problem was avoided by exploiting the closed nature of the industry itself. Strong and weak ties developed between the researcher and employees in the same company or across companies, which facilitated access to key informants. This enabled a snowball effect which culminated in an impressive number of interviews. The researcher always asked the respondents for further contacts, at the end of the interview. Frequently respondents offered other names and contacts without prompting. It seems that this is probably the best "method" of conducting research in a closed and secretive environment such as the music industry. Not only contacts can accumulate but, if the contact agrees to an interview, "namedropping" can make it easier to establish some rapport with the interviewee. This strategy was particularly effective within the same "community" such as the collective licensing bodies or within the same company such as EMI Records and EMI Music Publishing. The digital distribution company Cerberus- the subject of the author's MBA dissertation- later recommended three of its client labels for interviews, illustrating that the strategy could also be used to establish contacts among different organisations.

The interviewees in the second round of interviews were chosen from members of the panels and attendees of two trade conferences London Music Week 97 and Musicom 97, that the researcher attended. These were considered as key informants since they were sent by their respective companies to air their firms' official views in those seminars. They in turn suggested other informants to be interviewed.

The sample was chosen for its heterogeneity and all efforts have been made to maximise the number and relevance of informants within.

The interviewing sample consisted of 71 "key informants" from the recording industry, composers, executives from telecommunication companies, software companies etc. A list is available in Appendix A. The following table summarises the sample used in the interviews:

Firms	**Sample**	**No. of informants**
Various Music industry Organisations including Collecting societies and trade bodies	Collecting societies (UK, Sweden, Greece) Trade Bodies (UK)	11
Record Labels and publishers	5 Majors (UK) Various Independents, (UK) Various Independents (Sweden) Music publishers (UK)	17
New Media Companies including Telecomms operators	UK and Sweden based organisations	18
Various relevant sources (music retailers, media companies, Finance companies, artist's managers)	Mostly executives from UK-US based organisations	12
Composers and artists	Various internationally, mainly through "In Tune In Europe" organisation	13

Table 1 Interviews sample

Besides those key informants the researcher has to acknowledge the help of other people in the companies who either participated in the interviews as observants for the interviewee, and sometimes answered questions, or happened to be around and helped clarify some of the technical questions. An example of the former was the assistant of

the Chairman of one of the majors who would sometimes refresh her boss's memory of certain events. An example of the latter was one of Cerberus's database managers who kindly explained the process of electronically clearing the copyright for a song with the collective licensing bodies - this occurred while the researcher was waiting for one of the interviews with the MD.

3.5.3 The interviewing process

The pilot research started with a structured questionnaire which comprised of 12 closed questions of the multiple choice kind (see Appendix B). After a test interview with the Managing Director of one of the companies it was evident that this approach was not appropriate for the research. It soon became clear that the respondents could not answer these questions due to:

a. the perceived uncertainty in the environment.
b. a reluctance to commit themselves to specific answers
c. the shroud of secrecy surrounding some of their own experiments and strategies which they were cautious to disclose in case of leaks to their competitors.

A characteristic anecdote will clarify the above. When the researcher was interviewing an executives with one of the major record companies the telephone rang. The MD of the company, who was scheduled to be interviewed later in the month, was at the other end of the line. Since the subject of Music on Demand (MOD) was of great interest for the company, he was anxious to know what the researcher has asked and how the interview was going (as the executive told the researcher after the telephone

call). The interviewee replied to one of the MD's queries that the researcher "asked some really difficult questions" for which he "really" didn't "have any answers".

It seemed then that the best research strategy was to reformulate the questions and make them open-ended so that the respondent could easily talk about the specific topic, generating the issues him/herself without pressure from the researcher. Therefore the role of the interviewee changed from being a respondent to being an "informant". The role included the suggestion of "further sources of corroboratory evidence" consistent with Yin (1994, p.84).

Letters were sent to the interviewees asking their participation in an interview lasting about one hour. Confidentiality was assured, since in the pilot research it was shown that interviewees were unusually reserved about disclosing information.

The interviews were taped, when permitted by the interviewee, and the majority of them were transcribed within 24 hours, along with all the notes taken. Confidentiality was re-assured to the interviewee prior to the start of the interview and when they sometime explicitly required not to be quoted the researcher either stopped the tape recorder or promised to conceal the confidential part form the public. Since most respondents asked for some degree of confidentiality and more than half of them did not want to be quoted, the researcher decided to conceal the identity of all those interviewed by using only generic reference terms such as "record label executive". In the snippets quoted in chapter 5, sensitive information such as names of bands, executives or companies have been concealed. Instead of the name of a record company, for example, the following is found in the text: [name of record company omitted].

An interview guide was devised for every interview that included the topics to be discussed. Open -ended questions and informal probing were used to facilitate the discussion of those topics in no particular order. The idea was to cover all topics, but the order was dictated by the interview process. The researcher ticked each topic when it was brought up in the interview and asked questions afterwards about the non-covered topics. That ensured the natural flow of the discussion, since it was of paramount importance to let the interviewees tell the story in their own way and find out the process that has led them to particular decisions or a particular view of the world.

4. The research context: The music industry

4.1 The Music industry in general

"The music industry is a complex animal. It encompasses all those artists, composers, individuals and organisations that are involved in the producing, marketing and disseminating of music for a mass market." (Malm &Wallis 1992)

Untangling the music industry is a complex task. The labyrinthine structures and, as some believe, byzantine intrigues are as much a part of the industry as is its glamour.

The first and most important task facing a researcher is be to distinguish between the music industry and the recording industry. There is a crucial difference between the two which has to be highlighted for the benefit of the argument. The idea that the two are the same is deeply ingrained in the minds of the general public but, even more so, in the minds of these responsible for policy making. As a composer from a newly founded European composer's organisation puts it[9]: "The government up until recently have completely ignored the copyright issue. They believe the music business is the records business. That is where they get their £2mn a year"[10].

Currently, there is more value generated by the selling of CDs and the various formats than by publishing (US$40bn from sales of units globally, compared to US$6.2bn from publishing in 1995). But if in the near future revenue generation is not tied to a specific physical format then the role of the publisher (or its functional equivalent) could be enhanced. The media and entertainment industry in countries such as UK, US and Sweden - the world's three largest net exporters of music - have already seen income shifting from this generated by tangible assets (e.g. a physical carrier of music

[9] The organisation is "In Tune In Europe"

such as a CD) to income generated by immaterial sources (right-based items such as royalties and IPR dues for public performances) (Wallis, Choi, Klimis et al.1996, British Invisibles 1995) a trend that was anticipated in the late 80's by Simon Frith (1987a,1987b). The following table, taken from the British Invisibles report, shows the strength of the industry's exports, totally worth over £1.1bn of which almost £800m come from invisibles.

(£m)	Earnings	Payments	Profit
Recording	628.1	304.3	323.8
Music Publishing	259.6	113.6	146.0
Performance Income	100.9	46.4	54.5
Musical Instruments	86.0	112.6	-26.6
Musical Theatre	83.3	10.0	73.3
Total Visibles[11]	358.8	278.1	80.7
Total Invisibles[12]	799.1	308.8	490.3
Total	1,157.9	586.9	571.0

Table 2 Overseas earnings of the British Music Industry 1993

Therefore the distinction between the music and the recording industry is crucial to the understanding of the workings of the industry and the analysis to be undertaken.

The role of firms in the recording industry lies in the selection of copyrights (raw material), and the mass production and marketing of tangibles (see below the section on the recording industry). The mass production and distribution part is as easy to understand and analyse as it is in any other manufacturing industry. The essence lies in understanding that at the heart of the music industry lies the notion of *copyright.*

[10] Interview, composer
[11] Visibles are objects such as CDs, cassettes, musical instruments and sheet music
[12] Invisibles are rights-based items such as royalties and performance fees

The exploitation of copyright via the production and selling of tangible units constitutes only one (and diminishing) revenue stream.

4.2 Revenue streams

When a song or a piece of music is composed, a potentially exploitable copyright is created. Due to the difficulty, or even inertia, of the artist/creator[13] to exploit that copyright commercially, the later traditionally assigns that role to a publisher. Thus theoretically speaking, the artist is the principal and the publisher the agent, but in reality the roles reverse for new artists. Control of the copyright also depends on the country the composer/author lives/works in. As was evident by our interviews with UK and European composers, the Anglo-Saxon system of the common law favours the publisher rather than the composer, while the opposite is true for the *droit d' auteur* system of the European countries.

The "life of copyright" is the author's life plus 70 years. Many publishing contracts in continental Europe still require authors to grant rights to a publisher for this extraordinarily long period of time. In some countries, such as the UK and the US for example, bargaining power can result in a much shorter duration of the publishing contract (as little as five years). In those cases the income is split usually 75:25 in favour of the composer (it used to be the other way round when composers didn't perform the songs themselves as is the practice nowadays) (MMC 1994).

The publisher's income comes from the following sources:

[13] The word "artist" will be used to denote the composers/groups who also perform their own music as this is the norm from the late 60's onwards.

- The use of compositions in recordings (collected from MCPS in the UK), called the mechanical royalties (from the mechanical rights). Those royalties are usually fixed as a percentage of the wholesale price, or are statutory (see Table 3). The publishers distribute the author's share after they get it from the collecting societies. Attempts have been made to bypass societies and collect directly or, more successfully centralise the collective administration of mechanicals to only a few societies (Wallis, Baden -Fuller, Klimis and Kretschmer 1998).
- The licences of performing and broadcasting rights in compositions (collected via the PRS in the UK) for distribution via TV, radio and other public performances, called the performance royalties (from the performance rights). Table 3 shows the income generated from this source in 1995. In most countries in the world, composers get their income directly from the collecting societies.
- The licences of the synchronisation rights in compositions used in films and TV programmes (As observed above, when the soundtrack is recorded and sold on a format such as CD then the publisher gets royalties from mechanical copyrights).
- The licence to overseas publishers who exploit the copyright in their territory.

Country	Net Royalty	Method of determination of Mechanical Royalties	Phono-Mechanical Royalties (US$mn)	Performance based income[14] (US$mn)	Other Income[15]	Grand Total
Canada	6.16% of ppd [16]	collective bargaining	34.43	50.64	15.14	***100.21***
France	9.306% of ppd	BIEM-IFPI	163.42	329.51	239.1	***732.03***
Germany	9.306% of ppd	BIEM-IFPI	282.60	341.62	374.82	***999.04***
Italy	9.306% of ppd	BIEM-IFPI	57.22	261.23	73.12	***391.57***
Japan	7.5% of ppd[17]	government regulations	378.53	231.73	170.21	***780.47***
Netherland	9.306% of ppd	BIEM-IFPI	180.17	115.08	57.19	***352.44***
Spain	9.306% of ppd	BIEM-IFPI	50.35	64.44	40.18	***154.97***
UK	8.5% of ppd	government regulations	170.2	178.02	97.71	***445.93***
USA	8% of ppd [18]	set by statute	471.07	594.96	263.26	***1329.29***
Rest of Europe[19]	9.306% of ppd[20]	BIEM-IFPI	106.98	193.75	152.06	***452.79***
Rest of world	Various	Various	80.69	309.92	79.07	***469.95***
		TOTAL	1975.93	2670.9	1561.8	***6208.9***

Table 3 Mechanical Royalty Revenues collection and performance income, 1995

Source: NMPA, IMRO, G.M.Klimis
Key: IFPI = International Federation of the Phonogram Industries (represents the interests of the recording industry), BIEM= Bureau International des Sociétés Gerant les Droits d'Enregistrement et de Reproduction Mècanique (represents the interests of collecting societies), ppd= Published Price to Dealers

.

The next figure, adapted from Thorn-EMI's 94 annual report (1994), is a map of the revenue streams created from a copyright. It shows exactly who licenses what to

[14] Includes income from radio, TV/cable and satellite, live and recorded performances
[15] Includes income from synchronization/transcription, Private copy, reprint of printed music, sale of printed music, rental/public lending, interest investment income and other miscellaneous income
[16] Estimate based on the following assumptions: 10tracks per CD, CD Retail price $14, Retailers margin 25%. The official rate is 6.47 cents per work, 1.295 cents per minute. Controlled composition clauses were not taken into account
[17] Estimate based on retailer margin of 25%. Official rate is 5.6% of the rsp (Retail sales price)
[18] Estimate based on the following assumptions: 10tracks per CD, CD Retail price $11, Retailers margin 25%. The official rate is 6.60 cents per work, 1.25 cents per minute
[19] The countries included are Austria, Belgium, Denmark, Finland, Greece, Hungary, Iceland, Ireland, Norway, Poland, Portugal, Sweden. Some of the countries haven' t reported performing income while Ireland's reproduction based income is included in the UK figures.
[20] Ireland's rate is 7.5% of ppd

whom and how record labels and publishers get remunerated. The potential of synergy between the recording and the publishing arms of a record company are evident.

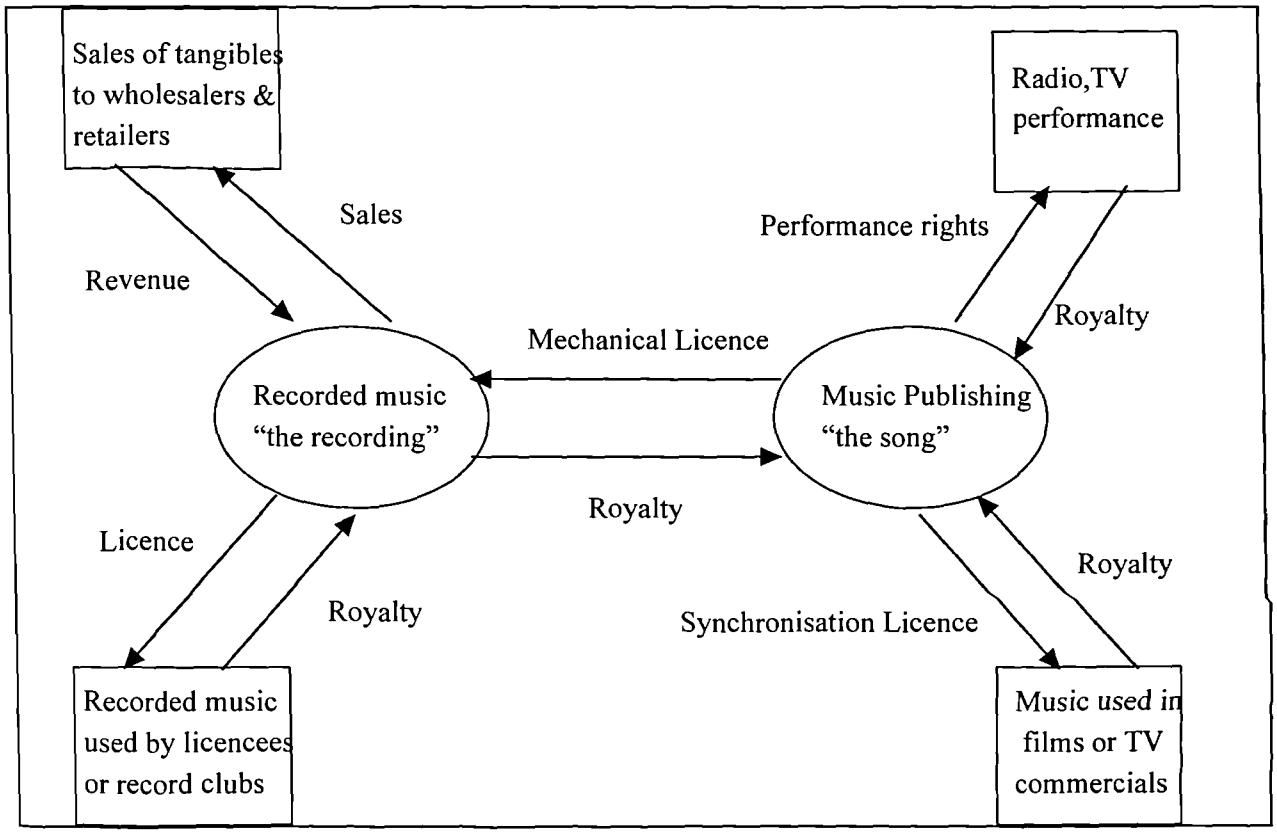


Figure 14 Revenue generation in the music industry

The "song" then belongs to the publisher and the "recording" to the record label. As it happens, the majority of artists who are also composers (singers/songwriters) sign first with a record label and then with a publisher who is not necessarily the record label's affiliate. That could lead to cases where a WEA Records artist, like *Simply Red* for example, has signed a publishing deal with a different publisher such as, in this case, with EMI Music Publishing. A large percentage of Polygram's recording artists, on the other hand, is signed with their record label's publishing arm (over half of the Anglo-American repertoire).

Evidence gathered from the interviews and triangulated with evidence from other sources such as articles (e.g. Montgomery 1994) point to the fact that among the majors, EMI and Warner's publishing interests outweigh their recording interests while Polygram's (now Universal) and Sony's recording interests are more important. Licensing for public performances and mechanical reproduction is the function of copyright licensing bodies or collecting societies (generally one or two for each country). The former are usually licensed by the performing rights societies (mostly owned by the authors/composers themselves) and the latter by the mechanical copyright societies (owned by the publishers, where applicable). In some countries such as in Germany (GEMA), Spain (SGAE) and Greece (AEPI), they are the same company. In others such as UK (MCPS and PRS)[21] and the US (Harry Fox Agency and BMI, ASCAP etc.) they are separate bodies. The function of the collecting societies also ensures (or should ensure) the enforcement of Intellectual Property Rights all over the world and precludes (or should preclude) the exploitation of the composers by publishers and/or record labels. In continental Europe collecting societies are mostly rights owner owned and controlled and justify their monopoly status by protecting the interests of their members collectively. As a senior judge said: "On account of conflicts of interest between the copyright holders (beneficiaries) and the users, the former, who are in a weaker economic position, have to form collecting societies"[22].

That isn't always beneficial for the major record companies who feel they are giving away part of their share of a record sale to the collecting societies. Therefore the latter

[21] MCPS and PRS in the UK merged recently, forming the Music Alliance

[22] Mr. Advocate-General Mayras quoted in the "Official Journal of the European Communities" No.1, 94 p.17. I would like to thank Dr. George Krippas of AEPI for mentioning this article.

have become a target for efficiency "efforts". That was the main reason for the deal between Polygram and MCPS for central licensing of Anglo-American repertoire (Music Week 1996). The potential economic benefits of having a central licensing body to collect the mechanicals for the whole of Europe was huge. Monies could flow from the record division to the publishing one within the same company, cutting all the intermediaries (bar MCPS) in the various European countries who previously retained a percentage for themselves (Wallis, Baden -Fuller, Klimis and Kretschmer 1998).

The next figure is more detailed and it includes the various collective licensing bodies which act as intermediaries for the collection and administration of royalties, in the UK, and also the final recipients of revenue, the artists/composers.

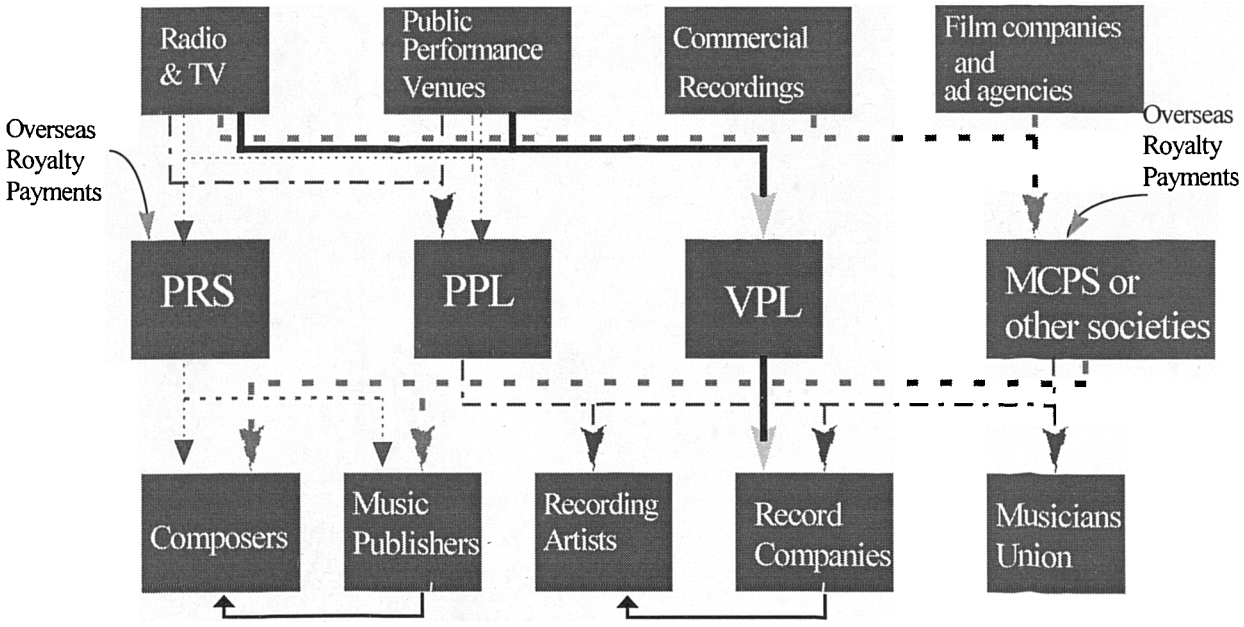


Figure 15 The flow of payments in the music industry (adapted from BPI)

Even a cursory perusal of the above figure highlights the potential for efficiency that e-commerce could facilitate. The analysis that follows looks in depth at one of the nodes in the above figure. This node is that of the record company.

4.3 The Value Chain/system of the Recording Industry

The record company is in the centre of a web of transactions, or so it was up till now. The breakdown of the value chain of a record company can help pinpoint the value creating components. The value system as opposed to a value chain will include more players with their own value chains, such as artists, publishers, collecting societies etc. The following analysis deals with a major record company which is vertically integrated along the whole value chain. Independent labels usually outsource some of the value adding activities such as distribution for example. Retailing is included only because until early 1998, one of the majors, namely EMI, owned the retail chain HMV. The value chain in the marketplace can be illustrated as follows:

Figure 16 The Value chain/system in the recording industry

The basic components of the value chain are:

1. A&R (i.e. Artists & Repertoire). Probably the most important component identified and, the author hypothesises, the one that gives the record labels a distinctive advantage over third parties. A&R is the equivalent of R&D in other industries and is the core competence of every record label. A&R people are the key "knowledge" workers in the firm and they are very highly paid. EMI invests approximately 20% of turnover in artist and repertoire development annually[23].
2. Production is the component that deals with the financing and recording of the music. It is the stage where the producer(s) bring together all the creative people (composers, performers, sound engineers, etc.) that contribute to the record/song to be recorded. After that stage the product is in the shape of a completed master ready to be mass produced, marketed and distributed. A recent trend, however, involve independent producers financing records which are then licensed to record labels for distribution. Examples of composers/artists who have adopted that business model include such diverse names as Garth Brooks in the US[24] and Zbigniew Preisner, a Polish classical and film music composer[25].
3. Manufacturing is an easier activity to understand. The master is multiplied into thousands of copies and in primarily three formats: CD, Vinyl LP and cassette. As with everything else that has to do with manufacturing, the majors enjoy huge economies of scale and utilise over-capacity by pressing independent label's CDs. There are of course numerous independent manufacturers. Interviews conducted in the pilot study showed that executives thought that the music industry suffered from a lack of alternative formats and compared themselves with the film industry:

[23] Remarks by Sir Colin Southgate, Chairman of EMI, at the Goldman Sachs, Global Investor Conference, 6/12/94, New York
[24] Confirmed by an EMI executive in an interview
[25] Confirmed by his manager Laurence Aston in an interview

"Unlike the film industry the music industry has only 2 formats : the CD and the cassette tape". CD sales are plummeting, vinyl is still selling in few countries and is the preferable DJs medium, DCC failed and MiniDisc was not selling well (up to the summer of '95). In the words of an executive "the industry is in bad need of another cheap and disposable format to replace the cassette"[26]. One has to note here that a format change is an important source of income since enthusiasts have to replace their libraries, i.e. buy new copies, once new carriers and related hardware become generally accepted.

4. Marketing & Promotion is another core activity of the record label. The label has to maintain good relationships with the media and the retailers to incite them to promote their records. With a credence good[27] like music this is probably the most important function. The major companies maintain that no artist has been "broken" (industry jargon for superior sales in a market) by one medium only. There are degrees of mutual dependence (informal integration) between the producers and the media leading to comments, by some artists in the interviews, such as: "the media and the (recording) industry are feeding each other"[28]. In most cases the marketing department is consulted prior to the release of the recording and even the signing of the contract with the artist/band (see also Negus 1993)
5. Distribution is by far the most important activity and the most important entry barrier in the industry. The five majors control the distribution channels internationally and the independent labels are obliged to outsource this activity (there are some independent distributors though). It is this activity that adds more

[26] Interview, record label executive
[27] For definition of a credence good see the literature review
[28] Interview, artist

value. The international distribution networks that the majors have established is one of the factors that lure small and big artists to the majors especially in the UK and the US.

6. Retailing is an activity that is not currently undertaken by any of the majors with the exception of EMI, until recently owner of the HMV record shop chain, and the mail order record clubs. In reality, the retailers are the customers of the record labels. In the States, and gradually in Europe, though, labels try to bypass the "high street shop" by establishing their own record clubs and mail order companies in an effort to sell directly to the consumer (see also Vignette 3 in 5.2).

   It is estimated that, at least in the UK, retailers gross margins range from 29% to 36% (MMC 1994). The major retailers can command huge discounts from the labels since at least in the UK the concentration ratio is very high (top five retailers account for 61% of the sales).

   The five majors (EMI, WEA, Sony, Polygram and BMG) are vertically integrated in all the activities of the value chain (with the exception of retailing) while the majority of the independents keep only A&R and Marketing and Promotion in-house. These two activities are considered to be the core competencies to a label in the recording industry.

4.4 Transactions in the recording industry

The core activities of a label can be modelled as transactions. A firm in that sector has to manage the transactions with the supply side (artists) where the label act as a buyer, and consequently as a gatekeeper, and with the demand side (marketing and

promotion) where the firm act as a supplier itself. The core activities of a retailer also involve such transactions. A retailing firm has to manage the transactions with the supply side (labels) where the retailer act as a buyer, and, again, as a gatekeeper, and with the demand side (consumers) where the retailing firm act as a supplier itself. *Ergo* both the labels and the retailers are intermediaries in the marketplace (Spulber 1996). The same can be said in theory about publishers, which regard themselves as intermediaries between the artists and the record labels. Indeed the role for the publisher was very significant prior to the 60's, since performers would typically record cover versions of the songs by famous composers/songwriters. The latter assigned their rights to the publishers thereby decreasing considerably the co-ordination costs of finding performers in the marketplace to record their songs. That role diminished after the 60's where most of the artists/bands perform their own music (MMC 1994). Some researchers (Klimis 1998, Wallis & Malm 1984) have actually observed that publishers make "money for nothing" as intermediaries, "milking" copyright royalties without having to perform any definable role[29]. Noting this opportunity many media companies (e.g. TV stations) have started publishing firms; composers accepting assignments to write music for TV productions are frequently forced to hand over publishing rights to such publishers as a condition in the commission contract.

It is expected that the multimedia technologies will alter the relationships between these players. The next chapter defines the new landscape.

[29] I'm indebted to Dr. Roger Wallis who first brought this "practice" to my attention

4.5 Research questions and propositions

There is one main research question that the thesis will attempt to address:

How does e-commerce affect the music business, in general?

This is a question of an exploratory nature. Focusing more on the structure of the music industry and how it is being affected by the multimedia technologies some "sub-questions" in the form of hypotheses can be formed.

With digital networks in place and developments in technology and copyright protection, the value chain will be restructured in a way that could "rob" the incumbents of their monopoly. The most successful and profitable artists already control the production of their recordings and activities such as manufacturing and distribution can easily be outsourced to third parties. Furthermore it is argued that the activity of manufacturing is not even relevant in a totally digital context where songs are essentially "formatless".

In an environment such as the Internet, or for that reason any other digital conduit open or closed, the physical distribution activity is also made redundant. The ability of having a song in a server and authorising its access globally, via the Internet, or locally via a closed network such as cable, turns this activity into one of managing licensing agreements. There is no need for a label to open wholly owned subsidiaries (WOS) in foreign countries for example, a common practice for the distribution of foreign repertoire (usually Anglo-American), since distribution can be done digitally, provided the market has developed the necessary infrastructure.

The retailers are also made redundant since the owners of the song, either the artist or a label, can easily bypass such intermediaries and sell directly to the consumer. This has been proven by the growth of labels that sell their records through their own record clubs (Britannia Club owned by Polygram in the UK and BMG Direct owned by Bertelsmann in the US are two examples). The public also seems to accept this way of shopping, since mail order sales account for more than a quarter of the total sales volume and are still growing in the UK (BPI 1996). This point is reinforced by the fact that sales of CDs over the Internet are rivalled only by sales of software in terms of volume and value. Thus the competitive advantage of expensive sites and prime locations is compromised.

The disintermediation argument becomes clearer when one considers the breakdown of the price of the CD in a market. If one takes the UK market as representative then the following picture emerges for a typical full price CD:

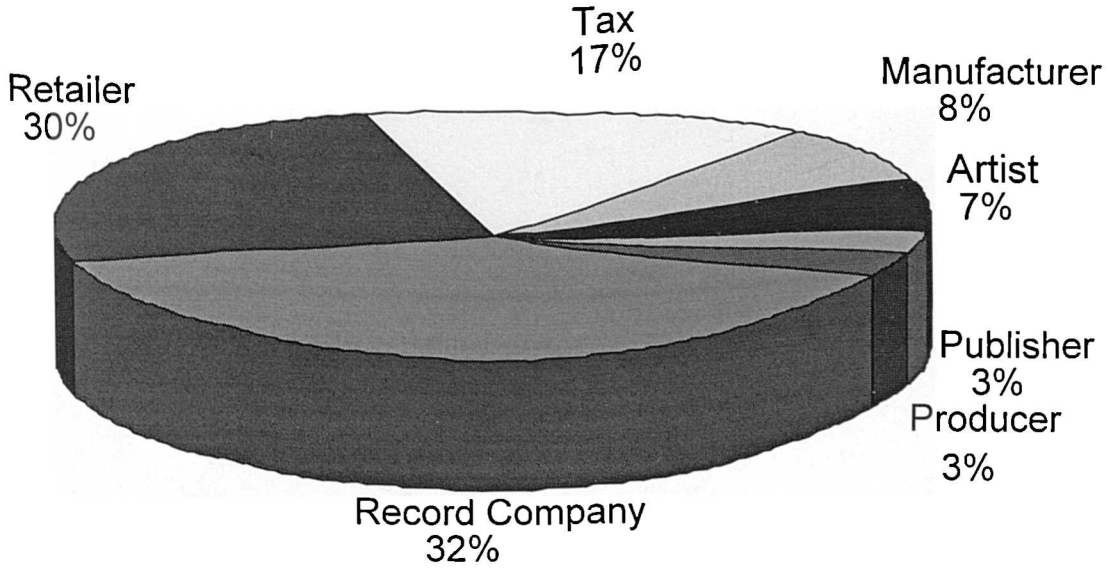


Figure 17 Full Price CD Breakdown

It is easy to see that the record company would be able to appropriate at least another 38% of the retail price by disintermediating the retailer and shunning manufacturing. This profit can be split with the consumer resulting in cheaper music and higher sales volumes. It can also be split with the artist creating thus a win-win situation for both the producer and the content creator. Therefore it could be hypothesised that the following pattern will be found in the data:

Pattern1: Labels sell music content[30] directly to the consumer

Going upstream in the value system, the artists themselves can bypass everyone else (publishers, labels, collecting licensing bodies etc.) in the system and sell directly to the consumer, collecting revenue globally. Therefore it could be hypothesised that the following will be found in the data:

Pattern 2: Artists sell content directly to the consumer.

Given all these incentives for intermediation, the value system in the new multimedia context could be expected to change. The music industry itself forecasts that "the level of substitution [from electronic delivery of music recordings] could be 15% over the next five years. In Europe alone that would represent a market of approximately $2 billion" (IFPI 1996). The two patterns can be seen in the following figure:

[30] From this point forward the phrase "music content" or "content" will be used to denote the music regardless of the format, i.e. the software

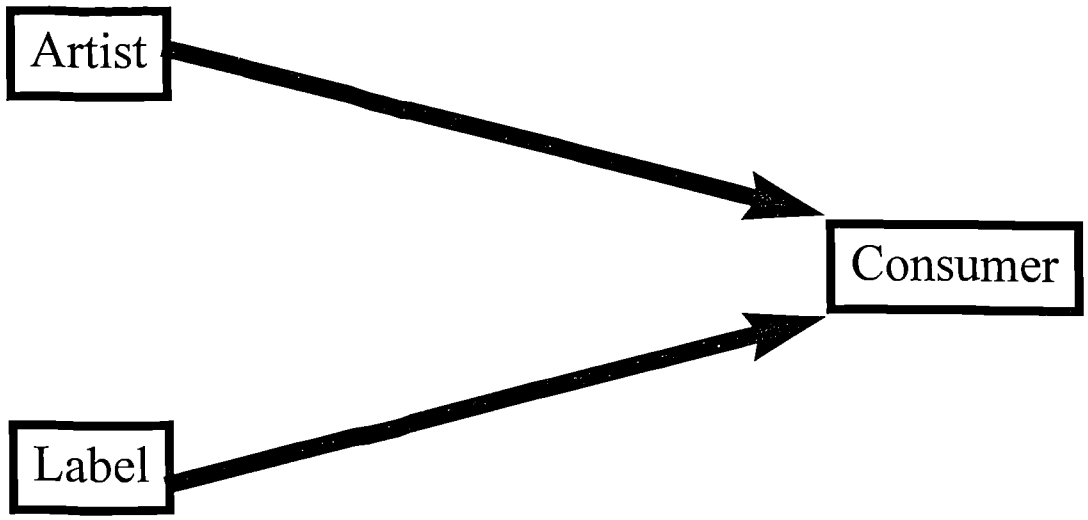


Figure 18 Content owners sell directly to consumers

In an electronic marketplace, as the theory suggests, the intermediaries fulfil the functions described in Figure 10. One would expect that intermediaries such as those would become established players and facilitate the business-to-business and business-to-consumer transactions. Therefore it could also be hypothesised that the following pattern will match the data:

Pattern 3: E-commerce between content owners and consumers will be facilitated by intermediaries.

This pattern can be seen in the following figure:

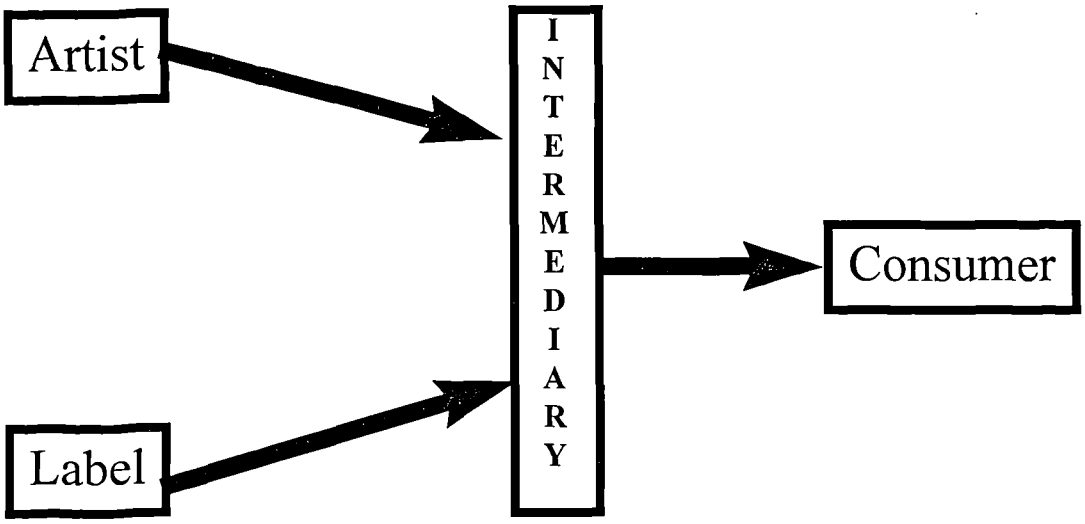


Figure 19 Re-intermediation between content owners and consumers

Research "around" those patterns will help both strategy-makers in the music business as well as other industries, such as banks, which have shown some interest in this research, to understand the effects of e-commerce on established industry structures. Such research should also help the formulation of public policy that facilitates the transition to a "virtual world".

5. Analysis of data

The interviews conducted helped provide answers to the failure so far of realising e-commerce in general and digital distribution of music in particular over the Internet and/ or closed networks. The data collected has been matched with the patterns and each of them is analysed, with explanations derived from interviews and case studies forming the larger part of the narrative.

The mode of data analysis has developed through an iterative process between data collection and analysis.

5.1 General observations

As is evident by the case studies in Appendix D., the patterns generated by theory seldom match the collected data. Both disintermediation and re-intermediation occurred in a less spectacular way than the electronic market and disintermediation hypotheses, as developed in the existing literature, would have led one to expect. The measure of activity applied involved a search for at least one major record label/company that has started selling music on line, on demand and within the time frame late 1995-early 1998. Mild support of both disintermediation and re-intermediation was found and the general conclusion is that a redefinition of the theoretical frameworks is necessary. This will be attempted in the following chapter.

In the following paragraphs the patterns that were derived from the theory and the pilot research are examined closely with the help of the data gathered from the interviews. Some of the vignettes incorporated in those paragraphs point towards some evidence of initial forms of disintermediation/ re-intermediation in the music

industry, but while it seems that E-commerce is always involved, there are also other causes behind the observed phenomena.

5.2 Pattern 1: Labels → consumer

5.2.1 Observations

In the time frame of the research none of the major labels have started selling content on the Internet direct. Instead they used it merely as a promotional tool.

BMG used Liquid Audio technology to allow the download of free thirty-second samples from new releases, but not whole songs, from their three branded sites. The only time the same company did so was when they made one single from the group Verve Pipe (see 10.2.2) available for download. This can hardly be defined as disintermediation since the single was available for free and served only as a "teaser" to entice the consumers to buy the album on a tangible format such as the CD. The same holds true for the Virgin Records effort with Chemical Brothers (see 10.2.3).

Capitol Records' experience with Liquid Audio was somewhat different, but the outcome was the same. Even though the single from the group Duran Duran was sold for 99 cents, the intentions behind the trial were made clear (see 10.2.3) since the company had to face the wrath of the retailers[31].

The independents were more adventurous. Knitting Factory is on one extreme example of a label which made nearly its whole catalogue available for download.

N2K, a company better known for its on-line retailing arm Music Boulevard[32], established a record company, N2K Encoded Music, and sold "downloadable" singles

[31] See "Net Nightmare for the Music Biz", Business Week, 2/3/98

[32] www.musicblvd.com

on-line. Based on its founders' reputation (Dave Gruisin and Larry Rosen were musicians themselves and also executive producers for numerous jazz-fusion acts on their own GRP label) and headed by legendary producer Phil Ramone, it managed to attract quite an impressive array of content[33].

Besides N2K, another venture categorised in Pattern 1 is Aegean.net (see Vignette1). Both companies took advantage of multimedia technologies to disintermediate and thereby create a better relationship with the consumers

Vignette1: Aegean.net is a label that was set up by pop star George Michael as an A&R vehicle for the artist. The first signings were Toby Bourke and Joanna Bryant. Artists include Trigger and Primitiva.

The presence on the Internet was of paramount importance and the artist made some songs available for downloading (although none of his) through the Liquid Audio Player. The results deemed sufficiently encouraging to justify the continuation of the project (no numbers were revealed in the interviews conducted). Aegean's MD, Andreas Georgiou, said that "the Internet gives the company a chance to sell directly, bypassing the retailers who demand huge discounts on the product". The whole George Michael catalogue, on CD format though i.e. not for download, is available by mail order sale from the site. The artist himself steers clear from the independent route preferring to be signed to DreamWorks for the USA and Virgin for the rest of the world. Nevertheless the site hosts George's fan club, Members Online, and caters to their needs by selling merchandise etc. Aegean is one of the new breed of record

[33] In August 1998, N2K announced the formation of Digital Artists, an imprint label under the Encoded Music label. The label's release will be in both CD and digital form (for downloading). The first signing was Dave Stewart (ex-Eurythmics member)

labels with the determination of becoming global while at the same time retaining their independent spirit and respecting the artist's needs.

While some activity from the independents was observed, the majors have been curiously inactive. Not many of the record labels in the UK chose to disintermediate the retailers and proceed to sell directly via the Internet or other media. The only major that has done it within the time frame of this research was Island Records a division of Polygram; the aim here was only to sell the physical product (CDs and tapes) via the Internet.

Vignette 2. Island Records

Island Records[34], was the first UK label to sell directly on the Internet, leapfrogging all the others who are still using the Internet purely as a marketing medium. The majors in the US, however, were the first in the game; the probable explanation being the difference in the retail topology between the two countries. UK retailers, unlike their American counterparts, still command considerable bargaining power since the market is highly concentrated. In the US there is considerable effort by the labels to utilise their record clubs's brands, such as BMG Direct (owned by BMG) and Columbia House (owned jointly by Sony and Warner), on the Internet (see below, Vignette 3).

Island Records said that they had no intention of selling the big names such as U2 via the Internet but rather obscure artists and catalogue product that the retailers do not stock. The experiment, thus, can be seen as fairly harmless for the retailers.

Fulfilment of orders is done by iMVS a UK on-line retailer.

[34] www.island.co.uk

From the interviews conducted it was evident that the majors, at least for the period examined, were not keen on selling direct. One of the major reasons for that was the difficulty of maintaining credibility for the labels. Both record industry as well as media executives claimed in the interviews that consumers are not going to trust record labels that sell their offerings direct. A characteristic response came from an artist's manager:

"First of all I don't think that people necessarily trust record labels to be retailers. Because they have a vested interest in the product. What we are talking about wouldn't be possible if we were talking about the record companies. It is going to be lethal"[35].

Record industry executives believe that retailers are needed because "the value and the security of a brand like Virgin or HMV or Our Price is going to be vital. And you're right, again, from a consumer's point of view. Unless consumers are sophisticated, know what they are looking for, know that the only source of certain kinds of product is maybe to go direct to the original supplier, the record company"[36].

One of the ways to get the consumer attracted could be the branding of the label.

Branding a label though is difficult and potentially dangerous. Only a handful such as Motown (soul), Blue Note (jazz) and Deutsche Grammophon (classical), that concentrate on specific genres, were/are eligible. Labels experimenting with branding online include Virgin and BMG. Virgin was the pioneer in the UK. It initiated the trend with the Raft, a showcase site for acts such as The Massive Attack and FSOL. They continued with two more sites Eden (for the grown up, Adult Oriented Rock, AOR, segment) and Channel 3 (for the teenage segment). Besides the Internet

[35] Interview, artists' manager

presence, Virgin has participated in trials in cable networks with infomercials under the same brands. BMG followed suit in the US with three branded sites namely BugJuice, TwangThis and Peeps Republic, again representing different genres and targeting different audiences.

A retailer executive interviewed was more relaxed about branded labels:

"the customer doesn't necessarily know what label what artist is on. I certainly didn't before I worked for [major retailer's name omitted], and for half of them I still don't know. ... So, yes, it would have to be the branding of [major retailer's name omitted] and the fact that we have, hopefully, everybody's music on-line as opposed to just Sony or the other labels"[37].

There is another reason, as voiced above, for the need of an intermediary between content owners and the consumer. The traditional intermediaries, the retailers, are aggregators of content from different content owners. Therefore they can stock, in theory, all content. In the scenario where record labels try to integrate into retailing, the consumer stands to lose the ability to shop for all the products in one place unless the record companies co-operate. Given the threat of antitrust legislation, though, this seems as an unlikely outcome.

The business practices of companies themselves also prohibit from co-operating effectively. In the marketplace, alliances between different labels means that certain companies do not co-operate in compilations. Thus it becomes difficult for consumers to buy, say, a "best of" compilation of an artist that has a catalogue with more than one non-co-operating companies. The same situation seems to prevail in the marketspace. These concerns are voiced in the following interview snippet:

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[36] Interview, record label executive

"But how one's going to deal about going somewhere where as you say, huge company's product is excluded? Because [record label name omitted] can't do a deal with [record label name omitted] or with [record label name omitted] you just got two rival camps. That happens in the compilation business in the UK. We have a deal with [record label name omitted] and we do stuff with [record label name omitted] but not with [record label name omitted] and [record label name omitted]"[38].

Rivalry between labels is also evident in the record club business, analysed below:

Vignette 3: Record Clubs

The BMG Direct site[39] is the US, Internet based operation for the mail order company established by the music arm of Bertelsmann who owns BMG, one of the 5 major record companies. The author tried the BMG Direct site just before Christmas 1997 as part of his research. He tried to shop for one CD from each of the 5 major record labels. It soon became clear that he could not buy any of the Sony products in that site. In the search for Michael Jackson's CDs for example, only the Motown albums appeared to be available, a sure sign of an alliance with Polygram who has bought the once independent company. The Sony repertoire which includes the multi-platinum "Thriller" was not listed as a choice. Other Sony artists, which any retailer would carry if they wanted to get customers in their stores, were missing as well (e.g. Bruce Springsteen and Mariah Carey).

Another example of a record company with their own club is Polygram, owners of the Britannia music club in the UK. They are trying to lock in consumers by limiting the product available, to their own labels. The only choices in the classical part of the club

[37] Interview, record retailer executive
[38] Interview, record label executive
[39] www.bmgmusicservice.com

is product sourced from the Polygram's labels such as Deutsche Grammophon and Decca, which of course include practically every mainstream classical composition, most of the times recorded more than once and by different performers and /or with different couplings. The Pop section of Britannia, though, includes rival labels' product. Certain kinds of repertoire lend themselves to that kind of lock-in strategy. At present it seems that the only such viable genre is classical music since it is commoditised on the composition side i.e. many performers are releasing records of the same repertoire. A consumer then has a wide choice of different performances of the same composition released by different labels.

Record clubs owned by record labels are a long tried effort on the part of the content owners to:

1. bypass the retailers in the marketplace and
2. lock-in consumers to their label's product, where applicable.

With record clubs as owned retail outlets, the labels stand to earn substantially more than by selling through traditional retailers. Besides the obvious profits from integrating into retailing, record company owned clubs stand to profit from paying less in terms of royalties to publishers and artists. This happens because most clubs (record label-owned or not), have a licence from the record labels to manufacture and distribute their own CDs. Therefore they can license the masters at a rate that is considerably low for historical reasons (club sales were considered to appeal to non-regular buyers). They are also allowed to give away one CD for each one they sell for marketing purposes. The copyright owner, of course, is paid on the amount of records

sold and not on those which are given away free[40]. The benefits of this circulation of money from and to the same record label are obvious.

In a move that shows the bargaining power of the major record companies, as opposed to that of the artist, EMI and Polygram temporarily pulled out product from both BMG Music Service (owned by BMG) and Columbia House (owned by Sony and Warner) but returned at the end of 1995 after the two clubs agreed to pay more than triple the amount in their original licensing agreement[41].

Locking in consumers in any one label's offerings, through label-owned record clubs, will be very difficult when the former can roam the Internet with intelligent agents and assume a more interactive role with the medium. The biggest problem though will be the lack of any of the labels enjoying critical mass.

For all the above reasons, the labels spoken to have been wary of upsetting the retailers by starting to disintermediate them. The move by some of the labels of offering free tracks via the Internet exclusively to consumers that purchase the records from certain retailers (Tower Records for example see 10.2.2) is a sign of the intention of the recording industry to stick with the status quo and take advantage only of the marketing opportunities that are offered via the new media.

The record labels of course are gearing up to sell online with Island records the only label in the UK, at the time, that publicly started selling directly online. All the others, though, had plans of their own. The conventional wisdom was that total disintermediation of the retailers or other electronic intermediaries such as electronic magazines or interactive TV programs would not happen. The labels perceived e-

[40] For a discussion on these topics the reader is advised to consult Passman (1998)

commerce as an additional revenue stream for them but not the only one. As one executive explained:

"I think we'll do it [sell directly to the consumer], but the word I disagree with you is "only". It would be "a way we can sell". It would be one of the hundreds of ways we can sell... Its never going to be just record companies because it ignores the value of store brands or whatever. Also it is a poor way to shop as you said; you have to visit BMG for BMG act, Sony for Sony act, it's a laborious way for the consumer; you simply don't want to do it, you'd rather go to Tower or HMV, unless for some reason it just makes sense either because it's cheaper to come directly to [record label name omitted] or we have something that nobody else has."[42].

The role of the intermediary is also important for the labels in terms of promotion of their artists. The co-operation of a retailer is crucial for the success of the label's acts in the marketplace.

"The key for me is not to undercut the people that I want to work with most, that kind of the particular retailer that is most proactive and breaking act, in the UK will be characterised by [name of record retailer omitted] for instance, as a major retailer, or a small independent store in any of the key cities where you desperately need to have their endorsement and their help in order to be able to create the kind of buzz you need to break an act."[43]

Retailers can also hinder the success of a new act if they do not stock it. Consumers do not get a wide choice available on the shelves of giant retailers such as Woolworth's for example who alone represent 25% of the sales in the UK. The new

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[41] "Clubs Are Positioned ToPounce", Webnoize, Issue 2, February 1997, http://www.webnoize.com
[42] Interview, record label executive
[43] Interview, record label executive

technologies, some hope, will be able to restore the balance in the system by allowing new competing intermediaries who are not competing for prime locations for their "bricks and mortar" stores:

"As the distribution systems open up this is going to change. You see Woolworths, they wouldn't stock a record unless they feel that it is going to be a huge seller which actually shuts a lot of people out of the marketplace. They have those criteria that they lay down, such as Radio 1 A list, x number of TV, tour etc. all these things they want, otherwise they wouldn't stock the record, and that means that the public basically, they won't even look at the record. This is not necessarily healthy. I'm sure the industry would like to change that. The technology and the new distribution systems will be able to challenge that. MTV, unlike all these mainstream sellers, will always maintain a role in that area and they will compete with the MTVs of this world. But in terms of the emerging artists, the creative side of business, then the new distribution systems will kind of start to bypass the Woolworths"[44].

The solution to the problem can be the selective choice of intermediaries by the record labels themselves. As one executive told the researcher:

"I think the central issue there is that this assumes that our offering is unchanged, that assumes that we do not package our offerings in any way, that we continue to brand individual artists individually. Which is not an unfair assumption. We will continue to promote individual artists individually. Because artists are individuals and on the whole consumers don't respond to packagers they respond to individuals. But that

[44] Interview, artists' manager

doesn't mean that the relationships with certain platforms or certain gatekeepers couldn't be changed by aggregating packagers that are monopolistic...."[45]

This "informal integration" between labels and intermediaries will then continue the "tradition" observed by some authors (Malm and Wallis 1992, Wallis and Malm 1984) in the marketplace. A good example of that is the granting of exclusive songs to some retailers (see 10.2.2).

A stakeholder to be influenced by the disintermediation of the retailers or the integration of labels into retailing (depending how one sees it) is the artist. Artists stand to lose when the retailers are intermediated for physical products such as CDs. That's because most of the contracts specify a lower royalty rate for record clubs and non-traditional retailers and thus could seriously affect their income should on-line retailing becomes reality. An artists' manager voices his concern:

"What's interesting about that is that, at the moment, a lot of artist's contracts specify a kind of half rate royalty on non-traditional outlets, and it would be very interesting to see what the outcome of all this is going to be because not only the retailers but also the artists are going to react because at the moment they don't have enough information about the royalty system to see how the record companies are treating that. The point is how the record labels are going to treat this type of non-traditional outlets. Is it going to treat it as a record club? ... We have been looking at all these clauses in the contract, especially for record clubs because the latter are increasing significantly. And we talk to the traditional type of record club. But it has to be

[45] Interview, record label executive

extended I think to these [i.e. the online retailers] because I'm sure that the record companies are going to treat them as clubs."[46]

5.3 Pattern 2: Artists → consumers

5.3.1 Observations

This pattern is the definitive in disintermediation where the content creators communicate with the consumer and sell the music directly to him/her. Technologically speaking, it is very easy and cheap for the artist to create his own homepage and digitise his/her music, making it available to the world via a server. There is a plethora of artists that have made the headlines in the past few years by adopting similar approaches. The father of all them is probably Todd Rundgren who, to the best of the author's knowledge, was the first to put a whole album available for downloading on-line (Wallis, Choi, Klimis et al 1996). Other artists that advocate this approach are Carlos Santana who sells CDs from his own site[47] and made songs available for download first via CompuServe and then on the Internet, and Bob Dylan who made seven songs available online exclusively (albeit in Real Audio format)[48]. Thomas Dolby[49] is also an advocate of artists bypassing record labels and his controversial speech in London's MusiCom '97, where he predicted the death of record labels, confirms that.

Record labels reacted furiously to that trend by threatening both artists such as Oasis and the independent labels they control, when they tried to sell on-line. Sony - a major

[46] Interview, artists' manager
[47] www.santana.com
[48] www.bobdylan.com. Two of the songs "Lay Down Your Weary Tune" and "John Brown" were from an, as of January 1998, unreleased live LP by the singer. See also "I shall be unreleased" at http://new.webnoize.com, 23/01/98

with a considerable stake in Oasis' label, Creation - has announced its intention to include a "comprehensive range of on-line rights" (covering such areas as domain names, digital distribution etc)[50] in future recording contracts with artists and groups. But despite the threats, they cannot stop artists that they do not control. In September 1996 David Bowie made his "Telling Lies" single available on the Net from his own site davidbowie.com. The single was available exclusively for a month before it was released in the physical form. A total of 450,000 copies were downloaded from people in 87 countries. It takes a standard 28.8kbps modem about 45 minutes to download the entire song[51] and yet his fans weren't deterred , which shows the power of good or popular content.

While on July 1997 there were 24,517 artist specific websites in Yahoo (one of the most important web portals)[52], very few examples exist of this kind of disintermediation for major contemporary artists. One of those who tried this do-it-yourself approach , albeit only as an experiment, was pop musician/composer TAFKAP (The Artist formerly Known As Prince). The label New Power Generation is the "vehicle" for the artist and is owned by him. Therefore release and marketing decisions and are made by TAFKAP himself.

Vignette 4: TAFKAP and "the Crystal Ball"

TAFKAP is definitely one of the most active artists in terms of disintermediating the record labels. He had a dispute with WEA the record label he was signed to, in the early 90's. WEA's reluctance to let him own the master tapes of his music and the

[49] For more info on Thomas Dolby see his website t http://www.tdolby.com and also his company's Headspace website at http://www.headspace.com

[50] "Sony Play for On-Line music Rights", FT 8/12/98

[51] "Music on the Net: A Topographic Tour of the Online Music World", a report produced for Liquid Audio by Iconocast, 1997

control in the number of releases per year were among the disenchanting factors. TAFKAP was released by WEA and ever since he has been active in promoting his material on his own label New Power Generation Records (NPG), occasionally licensing it to majors for distribution (e.g. to EMI in the UK for the Emancipation 3-CD album). His latest venture (or "experiment" as he calls it in his website) is a 4-CD collection of songs covering his career from 1982 to 1997. "This is the direct result of the xperiment (sic) in truth -- no charts, no royalty disputes, no returns, no arguing over product placement, no singles and video budgets, no egos and most of all, NO MIDDLEMAN!"[53]. "Crystal Ball" as the album was named, initially was made available only via mail order by TAFKAP's label. Orders could be taken online (from the artist's label site[54]) and through the telephone (tel: 1-800-NEW-FUNK). Consumers ordering from the site were expected to pay US$60.55 (price includes Federal Express shipping). In September 1997 the album had already amassed 84,000 advance orders. Orders have been taken from July 1997 but the first sets start shipping in the beginning of 1998. One of the prime reasons for the delay was that the set initially was being held from production until the first 100,000 orders were received. The other was that, as it was revealed by one of the operators, orders were being taken by hand and later fed into a computer database. Therefore processing was delayed for up to 4 weeks[55]. The TAFKAP website issued the following release (the reader should bear in mind that TAFKAP uses numbers or letters for some of the syllables in the words of the text below. For example, "before" is written as b4. The symbol O}+> is the one used to denote TAFKAP using computer keyboard characters):

[52] "Music Rights in Digital Media" Report, Market Tracking International 1998
[53] http://mtv.com/mtv/news/gallery/p/prince970930.html
[54] http://www.love4oneanother.com/

"A recent article in a national "news" paper ranting about dissatisfied Crystal Ball customers appears 2 us 2 b another case of a reporter sporting the journalistic blinders (read: one-sidedness) that all 2 often come with the job. The article called this innovative project a "failure" because of a few complaints about distribution and ordering, all the while downplaying its many levels of success. (C related post on the Future page). A project of this scope had never been done on the internet b4 and even we could not have anticipated the overwhelming demand. It was a bold step in2 the future 4 the small company called NPG Records, a huge leap xpressing faith and freedom 4 a musician of O}+>'s standing"[56].

In a surprising move TAFKAP made "Crystal Ball" available exclusively through the Best Buy chain of stores in the US while announcing later (end of January 1998) that it would also be available through Musicland, Blockbuster and some independent record stores. Retailers such as Tower Records, who were left out, were reported to be "slightly angered"[57]. To differentiate further, consumers who ordered directly from TAFKAP's label received "Kamasutra", an extra CD that contains some of the artist's instrumental music and it's not available elsewhere.

As it is easy to see from the above, artists that try to disintermediate the labels and/or the retailers prove the point that intermediaries add some value especially on the business side of things. Inventory management, and sales processes that get orders or issuing invoices promptly, are necessary to E-commerce. Customer service is of paramount importance to any vendor. A decision to outsource those functions could

[55] Addicted to noise 11/12/1997
[56] http://www.love4oneanother.com/innovat.htm

probably serve TAFKAP better, but that would mean re-intermediation, with new entrants, i.e. neither record labels nor the retailers, fulfilling those roles. Efficiency though, is not the only consideration in this kind of disintermediation. The following vignette paints a different picture:

Vignette5: Ani Di Franco and Phish

Ani Di Franco, a US artist, beat the "system" by distributing her own albums and selling via mail order. With the help of her manager, Scot Fisher, she has build a database of 35,000 fans and saw sales keep growing. She makes an average profit of $4.25 per album while typically an artist could do with only $1.25 if signed to a major[58]. One of her more successful albums, "Righteous Baby" sold 260,000 units in its first year (1996) and has reported to reach sales of 2mn by October 1998[59]. Her label Righteous Babe Records in Buffalo, which she founded in New York in1990, is distributed independently and employed 8 people (as of the end 1996). DiFranco admitted that she "did pay a cost by going the independent route", saying she could have got the exposure she has now in six months with a major label instead of the 10 years it took on her own.[60] DiFranco's latest album went straight to number 22 in the official chart in Billboard magazine, and sold a quarter of a million copies.[61]

Fans can find an officially sanctioned newsgroup but no website. Instead the artist and her record label provide the material, such as press releases and photographs for the fans to build their own websites. Albums can be ordered via the 1-800-ON-HER-OWN freephone which also provides information about tour dates etc.

[57] http://news.webnoize.com/scene/1911.htm
[58] Forbes Sep. 23 1996
[59] The music industry: A note of fear, The Economist 31/10/98
[60] CNN 22 November 1996

Phish is another US group that not only release their own records bypassing the labels but they also allow fans to record every concert and trade tapes via the Internet in a move that mirrors John Perry Barlow's ideas[62] and the Grateful Dead's attitude towards their fans. The band maintains an enviable online community and they even go so far as to send tapes with live material themselves to fans that provide them with a blank tape. The group played the "Great Went" (the biggest two day outdoor festival in North America) and the Madison Square Garden in New Year's Eve (1997). Phish were really early in the online world since they maintained their own newsgroup, rec.music.phish from 1991 onwards. Besides the official Phish Web site, there are fan sites on the web that the band makes no attempt to curtail.

The above examples highlight the main problem that solitary artists/bands face when they decide to sell directly, bypassing the recording industry system. The web alone has not been, generally, able to "break" an artist in a spectacular way that will make the headlines. If other media such as TV, radio and magazines, are needed for positioning artists in the market, then artists definitely need an intermediary to co-ordinate marketing and promotion. Ani Di Franco's advice seems to be that disintermediation can actually hinder the process of recognition and stardom.

The cases of TAFKAP and Di Franco can be used to falsify the pattern examined in this chapter. In both cases it seems that intermediaries, such as the record labels, fulfil other functions non- replicable by the artists themselves even within electronic environments that facilitate digital distribution of music.

[61] The music industry: A note of fear, The Economist 31/10/98
[62] http://www.hotwired.com/Lib/Wired/2.03/features/economy.ideas.html

All the executives interviewed in the music industry believed there was great added value in a record company for the artists and therefore they could not foresee that in the future artists would like to disintermediate. The following quote is characteristic of this approach.

"....I don't also believe that bands will be able to set themselves up and act as record companies. I think that's folly. There are so many mechanisms, so much machinery in place for the big record company to add value to the artist recording process, that I'm not overly concerned about that at all".[63]

This "machinery" and "mechanism" are essential to help the artist earn more money by helping the record label to maintain profitability and grow the business. Probably the most important "mechanism" is the "star system". This is, essentially, a self re-enforcing mechanism that creates a virtuous cycle for the artist and thus helps sell more units (Frith 1981, 1987a). To use the terminology inherited by the Boston Consulting Group's growth share matrix, the process is for the record label to turn the "question mark" artists (businesses with low, unstable but growing earnings and negative cashflow) into "stars" (businesses with high, stable and growing earnings and neutral cashflow) and later into "cash cows" (high stable earnings, high stable cashflow) generating huge profits in the process. In order to be able to participate in that system, the artist must sign with a major record label. One executive puts it bluntly:

"Why you need these huge corporations, why do you need these bureaucracies when it is basically all about a creative medium and it all is so cheap that you can write, record, play and put it in your own home server, have it there to be downloaded.

[63] Interview, record label executive

Where is the role in for the record companies? and I come back to the point about it, is about making stars".[64] The same executive goes on to explain why the system is so important particularly for the new entrants in the market:

"OK, granted you are Oasis or the Spice Girls you get millions of hits a week on your site, if you are the brand new signing in [name of the label omitted] no-one knows about you. Less someone goes out aggressively selling your records to retail, selling you to newspapers, selling you to TV shows, selling you to radio, that's what we know and we do all the time, where else are you going to have a career where else are you going to sell music".[65]

The above quotes echo the writings of authors such as Simon Frith (1987a) who have gone so far as to suggest that " "the industrialisation of music" can't be understood as something that happens *to* music but describes a process in which music itself is made- a process, that is, that fuses (and confuses) capital, technical and musical arguments. Twentieth-century popular music means the twentieth-century popular record; not the record of something (a song? A singer? A performance?) that exists independently of the music industry, but a form of communication that determines what songs, singers, and performances are and can be".

The labels are the providers of capital and services that facilitate the process of stardom. Using the famous quote, attributed to Ralph Waldo Emerson, one record label executive supports this thesis:

"These [artists] are all little entrepreneurs. You have a great idea and a talent and the talent might be to produce the world's best mousetrap, but if you don't have any money to do it, and nobody is going to give you the money or lend you that money

[64] Interview, record label executive

unless there is a return to them, it doesn't matter how good an idea you've got. If you've got the world's best mousetrap and you go you don't tell anybody about it, you don't market it then you are not getting a return. You need money to do that, to R&D it, to produce it and then market it. That is commercial life".

The cost of super-stardom is not small. One executive revealed confidential information about one of the super-groups in his label, maintaining that the artists could not finance themselves to that scale:

"I don't believe that they will be able to get mass exposure for themselves unless they are actually conventionally financed; it doesn't have to be by a major, could be by a funded indie, because the sums of money that are involved in putting a band around the world, making the videos for them... I just committed a £160,000 this morning to [name of band omitted]'s new video, in the same breath I'm talking about the one after that one would probably cost me another £100,000. I just spent another £105,000 on them for "Help the Aged" just before Christmas. I spent £500,000 on video alone on [name of the same band omitted] before I even start talking about tour support or the £500,000 that it cost me to record the album, or the advances. So the amount of money that is involved in [name of the same band omitted], this year in marketing would be in the region of £1,5mn for this company alone, let alone what other [name of record company omitted]companies around the world spend on it which has no impact upon me. So [name of record company omitted]'s investment in [name of same band omitted] will be many millions of pounds this year"[66].

This opinion is held by a different record label executive. New entrants need the services of the record labels, something that is not necessarily true for the superstars:

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[65] Interview, record label executive

"Record companies do an awful lot to create success and in fact the most horrific vision of the future for me does not have that process being undermined, except by artists that are really big in a very well developed market for the Internet, that means that digital downloading is meaningful and they are so well developed that people will go for them for information"[67].

Another important service that the record labels offer to their own customers, such as the retailers and media companies, is A&R. The importance of a filtering mechanism that is provided by the record companies cannot be underestimated. For popular music, in particular, the entry barriers are very low and nearly anyone can claim his share in fame. Accessible multimedia technologies and open networks such as the Internet can only lead to an overcrowded marketspace (Klimis 1997), badly in need of a filtering mechanism.

"I'm less convinced by the concept of the Internet freeing up from the shackles of record companies the gateway of exposure for every act in the world. Look at the cassettes that I'm sitting here trying to listen to. I was in my A&R department yesterday and quite literally we have dustbins full of cassettes waiting to be listened to and they *get* listened to. ... In the UK market, plus the entire world, they are hundred of thousands of bands who all think they are brilliant all of whom have a very strong reason for existing in their own lines, all of whom will be given cheap and ready access to the Internet. I think its a nightmare, it's going to be very, very difficult to pick between the good and the bad unless you really know where to look and how to research it"[68]. Yet another record label executive voices his concern and reinforces the

[66] Interview, record label executive
[67] Interview, record label executive
[68] Interview, record label executive

argument that A&R and Marketing and Promotion are the two most important and distinctive competencies of a record label.

"A lot of people say that a band can go straight into the internet, but no it can't. It is lost in the billions of things out there and the consumer doesn't care. They need to be told. That is the point of marketing. There is always going to be somebody selecting products, because people don't have time to wade through all this stuff. So there has to be a function somewhere in there which is selecting from millions of different things and then putting a promotional budget behind it and supporting it, which it means the tour, on the crowd, all kind of events the traditional marketing and promotional activities".[69]

The argument that disintermediation is going to free the artist's creativity is also refuted by the same executive. It is based though on what is the most feared scenario in the music industry. Artists do not disintermediate by adopting a "do-it-yourself" approach but they rather allow re-intermediation by using third parties such as telecommunication and software companies as intermediaries between themselves and the public. Even if the new intermediary is an enthusiast, the record labels stand to lose and they claim that the artist will too.

"And if websites spring up that they are not run by record companies but they are run by enthusiasts, well they will start up being run by enthusiasts but eventually the sheer commercial potential of them or the volume of them means that they will be substitutional. The artist will free themselves by the constraints of the record company only to be put into the taste and constraints of somebody running a website. So I'm not totally convinced by the argument that it is going to actually free up creativity for

[69] Interview, music television channel excecutive

musicians. And as such my feeling is much more lean toward the opportunities of digital TV are going to give us. Its more conventional in a way".[70]

The telecommunication companies that were interviewed were sceptical about this kind of direct disintermediation. A typical response went on like this:

"The artist has to surrender some of the value of its IPR or the [whole] IPR in order to get the benefit and leverage of marketing and targeting to the correct audience of its material. Maximum value is derived from it, he only gets a percentage of it. I think for the artist it has to be incredibly compelling, the idea that that model hasn't got to be there any more, that you can get the risk yourself because the cost is much lower maybe you are going to get the whole of it. I think it is inevitable but for many years it is not going to become a dominant paradigm. That is the important point".[71]

The last reason, given in the interviews, that prohibits that kind of disintermediation is, oddly enough, the artist him/herself. As one executive sees it "Artists just want to play their guitars"[72]. They are not interested in setting up web sites or take up the responsibility of taking orders and fulfil them or deal with the business side of things. That's why they will sign contracts with record labels:

"as an artist you want everything. [the interviewee pretends to be an artist] "I want to retain credibility so I sign to a pretty fab[73] label", well, OK, so do you then want to do 30 or 40 independent deals, with foreign record companies to distribute your records? How are you going to physically sign all these deals? How are you are going to decide which is the best independent in the territory? How are you're going to police that? actually that's really awkward isn't it, its really complicated and far easier to sign to a

[70] Interview, record label executive
[71] Interview, telecomms operator executive
[72] Interview, record label executive
[73] fab is jargon for fabulous

major that can say : "With one stroke of the pen I can do all your world-wide marketing and distribution"[74].

Besides marketing and promotion, policing and enforcing intellectual property rights all over the world is almost impossible for the solitary artists. In interviews with artists and publishers it was revealed that something trivial such as the misspelling of a composer's name by a database operator could cost millions of dollars in lost revenue. Technology might help in that way with Electronic Copyright Management Systems (ECMS) or the Common Information System (CIS) championed by CISAC. As of early 1998 the various ECMS were still pretty much in drafting stage and various projects around the world such as IMPRIMATUR in the EU and Propagate in Australia, were trying to bring together the various stakeholders to agree on a standard model. CIS is delayed and some of the interviewees blamed the publishers and the collecting societies for this delay.

5.4 Pattern 3: Intermediaries facilitate E-commerce

This is the pattern of "business as usual", where there can be both disintermediation and re-intermediation by new players who negotiate a part of the existing value system.

There are two main sub-patterns here. The first one arises when labels or artists retain their IPRs and allow other functions such as manufacturing, distribution and retailing to be "re-intermediated" by third parties. The second one is when artists disintermediate the record labels themselves by assigning their rights to different parties and use another intermediary to reach the consumer.

[74] Interview, record label executive

5.4.1 Sub-pattern 1: IPR owners → intermediary → consumers

In this first sub-pattern, the new intermediaries attack mainly the downstream functions, such as distribution and retailing. These intermediaries try to negotiate deals with the labels or artist for the downloading of music over closed networks. Examples are the trials run by Deutsche Telekom in Germany and BT in the UK (see 10.3.1 and 10.3.3 respectively). Intermediaries also include software companies such as Cerberus and Liquid Audio (10.2.4 and 10.2.3) that try to establish standards for digital delivery of music. They also include media companies which capitalise on the popularity and acceptance of their gatekeeping function in the marketplace; Examples are MTV (a music television channel) and NME (a UK music magazine) with the dotmusic.com site.

The case of Deutsche Telekom (DT) trial, (see case in 10.3.1) was a crucial development on the road to music on demand and yet, even if the majors support it, it was met with considerable scepticism from the interviewees. First of all, there were many justifiable reasons to attempt a trial like that in Germany. The country is emerging as the largest single market for the on-line consumer in Europe. The growth of ISDN in Germany, as a result of a promotion strategy by DT, has been phenomenal, compared to other European countries, and its penetration to the general public is consequently high. Half of the users are private households. There were about 1.9 million customers using "T-Online" at the time of the research, and thus Deutsche Telekom claimed to be the largest Internet service provider in Europe. Besides the latter, Deutsche Telekom also holds the legal monopoly for providing the cable infrastructure in Germany and it had recently expanded its infrastructure

holdings by acquiring a stake in SES-ASTRA, the main European satellite operator. Therefore Deutsche Telekom can offer both the technology and the customer base to make the experiment worthwhile. If one combines that with the fact that the country is the third largest music market in the world and the largest in Europe then the early involvement wouldn't come as a surprise.

The agreement of DT with the content providers is very important since it puts forward a possible industry model for using music in digital networks, albeit closed ones. It remains to be seen if this will be able to migrate to other countries and other telecommunication operators. It will also prove more difficult to transfer to the open and anarchic Internet. As a learning experience though, it would be beneficial, if not for anything else but for the fact that it tests the potential relationships between the content owners/providers and the digital distributors.

The main advantage of the DT trial is the control the majors exert over the content which is a major issue for the labels. They can specify all aspects of the marketing mix, retaining their role as packagers, and thus controlling the downstream. The idea of content presented as single songs that can be mixed and matched in various ways by the consumer might be appealing to the latter but it faces opposition even from the independent labels (see Musicmaker.com case in 10.4.4). Record labels are also placing "coupling clause" restrictions in contracts that guarantee that a song from their artist, say Michael Jackson will never be allowed to follow or be followed by a song from, say, Madonna in a compilation. There are also the territorial restrictions where a song might be owned by another record label and another publisher in different parts of the world therefore restricting digital distribution to only those parts of the world that a licence is granted. A nightmare scenario if one considers the global nature of the

Internet and one that is not so secure as the author has found out himself (see 10.4.4). Most of these issues can be solved if closed networks, such as the one by DT, are utilised.

The main drawback of the DT trial, as mentioned in the interviews with recording industry executives, is that prices do not seem to be attractive to the consumer since the latter has to pay for both the album and its delivery via the ISDN network. Since the content providers demand the full retail price, the proposition becomes thus less appealing to the average consumer because the potential savings of digital distribution are not realised. When Deutsche Telekom's usage fees are added the consumer ends up paying more for the downloaded music than if he/she purchased it in one of the high street shops. This is just another classic example of the unfulfilled promises of multimedia technologies and the Internet since the same phenomenon, i.e. prices in the marketspace being actually higher than in the marketplace, has been observed in other cases such as in Amazon.com for example[75].

The following excerpt from an interview shows the suspicion of a major record label executive about the trial:

"GMK: ... you are participating in some trials like the Deutsche Telekom one in Germany?

Executive: Barely. It's not much of a trial. I mean what kind of a trial is it where you charge people the same price as they could buy something from a retailer and then you charge them an additional premium for the pleasure of getting it over an ISDN line? I have to question the value of such a trial. And one has to question the reason why

[75] I have to thank Dr. Roger Wallis for bringing the point to my attention.

such a trial could be placed in such a context. The reason can only really be that they have some other reason for them to do it, like they want to sell their ISDN lines".[76]

A chairman of one of the UK majors puts it in the same way but, furthermore, he is also somewhat sceptical about other dangers inherent in the trial. His basic fear is that the pricing system could collapse and telcos might assert their right to the repertoire. Confusing licensing deals, and transaction costs, one can hypothesise, could lead to the issue of a blanket licence just as in the case of the radio stations when the same problem arose:

"The DT trials I suspect by accident, or by dent of the "collaboration" between the industry and DT which has set the pricing at current retail price structure, is the industry telling itself that it's going to learn something to its benefit or that it hasn't given anything away in the process of allowing DT the rights. However the perception in this country [means the UK] is that the deal with DT is a very, very dangerous deal indeed because effectively there is no real control in the pricing mechanism and indeed the danger is that DT with the collusion of the German government effectively has a right to the repertoire and can subsequently produce pricing at whatever they choose it to be. So that is very, very dangerous. And initially the German industry has been very complacent about it and they felt that they have done a good thing, because:

1. it was inevitable anyway that we were going to be forced into it

[76] Interview, record label executive

2. that they got a price which was the equivalent of the retail price and therefore they protected the position in terms of the balance between the electronic and the retail marketplace"[77]

5.4.1.1 The Cerberus case

It was this balance between the marketplace and marketspace that Cerberus (see 10.2.4) wanted to alter and in the process "change the whole architecture of the music industry" with its revolutionary Digital Jukebox (CDJ)on-line distribution system. Cerberus, as well as a2b, Liquid Audio and AudioSoft fit the pattern examined here since they do not demand to own IPRs and most of the times they do not demand exclusivity as well. The content they distribute can come directly from the creators themselves or from a record label.

The Cerberus case is probably the most fascinating of all undertaken in this research, and it was certainly the one that stimulated the curiosity of the researcher, enough to start the inquiry into the whole subject.

Ricky Adar, the Managing Director of the company, viewed Cerberus as "being an embryonic distribution company for copyright. We form a link between artists, writers, record labels and the general public who want to buy. A record company gives its permission to put the copyright up, the relevant publishing company also gives permission to put it up. Then we distribute it".

When the venture started its life, as Cerberus Digital Jukebox (CDJ), in 1995 it was based on two ideas:

[77] Interview, record label executive

1. centralised storage and distribution of the music

2.A proprietary piece of software, which is simply called, "the player"

The idea of centralising content in Cerberus's servers wasn't exactly met with enthusiasm by the record industry, especially the majors who feared about their own future existence and had to come to grips with the threat of disintermediation. The press became congested with articles about the bleak future of the recording industry and the end of the majors, as artists could easily distribute through the likes of Cerberus. One of the executives we interviewed has an instructive story to tell about those days:

"Two or three years ago, you must have seen it all, all, the PR from Ricky Adar and Cerberus. My mom was ringing me up and said, "you are going to be out of job in 5 years, I've been reading these articles and they say there won't be any record companies etc." Again its a classic thing. Just because it can be done doesn't mean that it will be done. It ignores the fact the way people like to shop, the role that shopping plays in people's lives"[78].

Combined with apparent consumer apathy, Cerberus was also plagued by the indifference of the music industry and being too far ahead of its time, they didn't manage to establish the digital jukebox. To his credit though, Adar managed to turn the company around by changing his centralisation strategy. He decided to let labels and copyright holders purchase a piece of the server, effectively creating a "distributed" system and turning his company from a distributor to a facilitator of E-commerce. Each record company or artist can now have its own Virtual Pressing Plant

[78] Interview, record label executive

(VPP) and thereby retain control of packaging and distribution. The idea of customised CDs is also catching on, albeit limited by the availability of the content.

One of the remarkable feats of Cerberus is their appeal to independent artists and labels. In a few years they claim to have amassed about 85% of the dance music output in the UK. From some of the interviews that the author conducted with Cerberus's clients, the impression was formed that the latter remain loyal, as providers of content, because they prefer the free spirit of the company to the "suits" that run other similar companies. This was enhanced by the special trusted relationships that the MD and members of the company enjoy in the independent sector.

Having progressed little as an electronic marketplace, Cerberus is now concentrating on establishing its technology as a standard. In that respect, the absence of any relationship with big corporations can prove beneficial. This is crucial especially when the competitors are already linked with big powerful interests (a2b and Liquid Audio with AT&T and Microsoft respectively, see 10.2.2, 10.2.3) which have deep pockets and enough clout to alter bargaining positions vis-à-vis the content providers. The independence of the company could easily constitute a competitive advantage in that sense.

Cerberus, or rather the people behind the company, represented the typical way of thinking that is prevalent among executives in technology driven businesses. Technology is thought of as a "silver bullet" capable of creating wealth and growth regardless of the institutional pressures and structures. The content owners, and especially the major record companies, could not disagree more with this opinion. One of the executives puts it like that:

"[Ricky Adar] is really confused about what is going to drive the business. He thinks that the technology is what is going to drive the business, but its not, it is the content that is

going to drive it and he is limited by the attitude of the majors and most of the major rights owners to dealing at the fringes"[79].

A critical mass of content was mentioned in all the interviews conducted as the sine qua non of successful ventures in e-commerce. One telecommunications company executive puts it bluntly:

"Noone cares about this content [that Cerberus is offering]. As we were discussing earlier, its content that drives the whole thing. Sport which is the no 1 content of all or music which is probably No 3 or 4 or 5. But unless you've got the content you've had it. I mean look at Cerberus and you wish them luck"[80].

It is the absence of valuable and desirable content that has been the plague of many of the systems outlined in the case studies. The reasons for the reluctance of record labels to trust their content to digital distributors surfaced in the interviews with record label executives. Music, as a formatless, intangible offering delivered via the information superhighway threatens the record industry's business model. In particular the income that can be generated from distributing the music digitally will be substitutional rather than additional since the majors already control distribution.

Technologies like Real Audio for example (10.2.1) do not seem to pose a serious substitutional threat to the music industry's retail sales. It is mainly a technology for live broadcasting and other ephemeral use of audio[81]. It was and is mainly used as a way of marketing rather than selling music, although its function as a technology that could enable a digital jukebox should not be underestimated. A technology such as Liquid Audio (10.2.3) though, or MP3, which could fulfil both roles (performance and ownership

[79] Interview, record company executive
[80] Interview, telecommunications company executive
[81] For an example see Mama's Cucina at www.ragu.com!!

of recordings) could gradually pose a threat to the industry. Comparing the recording industry with the film industry and Video On Demand one of the executives interviewed puts it thus:

"[The record industry] for the first time looks for example at the film industry who's got it right, they've got a pricing structure for every type of activity, cinematic release, rental etc. while record labels make everything available on day one and they cannot change their pricing structure to something like that."[82]

That, by and large, can be explained by the music industry having a few formats with a low level of information. The 5" CD and the cassette tape. Furthermore they are available to the consumer on the same day and no provision of pay-per-listen has been made. The film industry, on the contrary, can earn substantial rents by exploiting a film's copyright by cinematic releases, video releases, video rentals, broadcast TV, cable and satellite TV even books, video games, theme parks (for Disney releases for example) etc. with a different pricing structure and a different timing for each activity.

5.4.1.2 Motives of the Telecommunication firms

Upon examining closely the nature of the two offerings and the way the two industries are positioned one can understand the perceived need for the record companies to retain tight control over distribution.

On the other hand though, the motives of the telecomms companies are clear enough. There is no interest in music per se, but only on "content", a word which seems offensive to most of the artists and record label executives the researcher interviewed, but which is also widely used in this thesis. The record labels are wary of that. Therefore they are very cautious about allowing their content to become the leverage

for building a customer base for the telcos and for establishing standards that could turn against them.

AT&T, as of course all the other telcos, are more interested in selling their microbilling mechanisms and getting users to subscribe to their Internet services, rather than setting an audio standard. The a2b trial (10.2.2) is the testbed for that at AT&T. The telco would like to have the first mover advantage in establishing a standard in micropayments and digital delivery systems, since it would allow the company to corner the market pretty much in the same fashion as Microsoft did for the Operating Systems. As David Nagel (AT&T Labs President and Chief Technology Officer) said "Delivery of online music is an excellent example of a profitable application for soft goods distribution"[83]. By "soft goods" he meant all kinds of content that can be delivered digitally, such as articles, books, music and movies, but also stock quotes and expert advice. Although all these in practice can be served by a multitude of suppliers a common prerequisite is a delivery/microbilling mechanism in place which should be standardised in order to avoid incompatibility. Microbilling is, traditionally, one of the distinctive capabilities of the telcos, one that they could naturally leverage on the Web. An immediate application would be for consumers to shop for songs by letting AT&T charging them in their telephone bills every time they listen to a song for example (see also Deutsche Telekom). This would solve the problem that the use of credit cards presents i.e. huge transaction costs which only make sense economically if the amount of payment is big enough. A telecoms executive makes that clear:

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[82] Interview, executive music industry trade organisation
[83] http://www.att.com/press/1197/971103.ala.html

"In Telia's model [see Figure 27] we are in Terminal hardware, facilitating services, billing /clearing. Billing /clearing is a [name of telco operator omitted] core competence because it is something that we do so much over the telephone it's an obvious area. It is natural."[84]

Furthermore as an ISP they are interested in customer acquisition and the development of content and services seems a way forward to fulfil that objective. AT&T has already signed deals with online consumer services such as NetGrocer and Auto-by-Tel for the company's AT&T Market Square online commerce service. As every telco worthy of itself, they are also looking to include music retailing in the future. Again the music industry was cautious in embracing the trial. RCA might have allowed the download of the Verve Pipe's single but it wasn't music on demand they had initially in mind. Their main focus was on marketing and promotion. As Kevin Conroy (senior VP of BMG Entertainment North America) said " The object is to increase awareness of the Verve Pipe and drive sales of the "Villain" [album]"[85]. There must be no doubt though, that this was another of these "toe in the water" exercises for the record company. The Tower Records deal is very significant since it demonstrates that, finally, all the parties can reach a mutually beneficiary agreement. It seems then that a2b has a clear advantage in that respect.

5.4.1.3 The rest of the trials

Liquid Audio have declined to disclose any specific figures about the downloads of Liquid Tracks from their site. They claimed that this is confidential information available only to their clients. For the bands participating in the Indie 1000

[84] Inrterview, telecommunications company executive
[85] http://www.a2bmusic.com/about/news/bb111597.asp

programme the figure they gave was "around 250 downloads a week". Figures for clients who have purchased their own stand alone systems were not made public.

The link of Liquid Audio with Microsoft should be very carefully examined. This co-promotion of technology makes sense in the light of offering a total system to the consumer. Liquid Audio will need the microbilling and payment mechanisms developed by Microsoft in the latter's joint venture with First Data Corporation (MSFDC). This will greatly leverage MSFDC's billing mechanism turning it into a standard. The same can happen with Microsoft's Netshow server. In return Liquid Audio will leverage the huge Windows customer base, to become the defacto standard for downloading music from the Internet. There is also the credibility argument. As CEO Gerry Kearby said in a recent interview. "We're a start-up; we've got to be able to talk about standards. People's first question is, 'What happens if you go away?'"[86]

Their involvement with the cable providers seems to complicate things a little as far as defining their role vis-à-vis the labels. They seemed to want to expand their role from that of being a technology company to that of a content provider.

The AudioSoft trial on the other hand seemed very significant for France and Central Europe in general. Two factors make France a special case, as far as the music on demand via the Internet is concerned:

1. The Minitel service is still dominant with the uptake of the Internet still in its infancy (as of 1996 there were 6.5 mn subscribers to Minitel as opposed to

[86] http://www.zdnet.com/zdnn/content/1103/204893.html

the124,000 subscribers to various ISPs). Cable coverage, though, is higher than in the UK for example (about a quarter of households are passed by cable in France).

2. The French Ministry of Culture is very sensitive in cultural matters. In 1996 the Broadcasting Standards Authority forced stations to devote 40% of their broadcasts to French music as an effort to preserve the national heritage. Quotas exist not only on foreign repertoire on the radio but also on films. It is only logical that the French will favour closed systems rather than the anarchic Internet which is mostly US dominated. That gives AudioSoft a territorial advantage made stronger by the involvement of the Paribas Group.

As for the BT trial one of the executives told us in the interviews, that the music industry did not seem at all impressed.

"In the first one [then Colchester/Ipswich trial] they were excited about being involved because they thought it was going to show something really radical and of course it...well it did in a way, people going in and controlling what they viewed on demand. Observing the human species with Video On Demand control. Unfortunately most of them didn't make the transition to "couch commando" any time really, they were too ingrained in "couch potato", maybe that was just Essex and Colchester, I'm not sure. But I think it was exiting in that respect, but I think probably all the companies involved would like us to come and say " the answer is big dollar sings we are going to make you incredibly rich" and of course it didn't quite enough"[87].

[87] Interview, telecommunications company executive

The record labels, for that reason, did not remain enthusiastic about the subsequent trials. At the end of the day all that it proved was that it can be done. As the same executive says:

"[name of record label executive omitted] is always very cynical about the information, keeps saying that he throws it [the report] in the dustbin straight away ....What it really proved is that you can do it technically and people wanted it. I think that by the time when Westminster came along they [the record labels] were more jaded. They thought "Oh we've been through all these trials its going to prove that you can do it". I think that the people then also left. I think that with Colchester the record companies thought it was eminence and in a sense a bubble burst and certainly Video on Demand is not eminence. We learned a lot. We based a lot of our current music strategy on things that we learned from those trials".

The same reasons that prohibit artists selling directly to consumers and which were analysed in 5.3 are also valid when transactions are mediated by Cerberus and the other intermediaries, outside the music industry system. The reason, as explained before, is that these companies can offer nothing more than a digital distribution channel and a billing system but no "participation" in the music industry's star making system. One can only wonder if things will change when the intermediaries are from inside the system? One such intermediary is MTV the musical television station that can "break" an act globally by "rotating" its video clip in its programs.

Vignette 6. MTV and the Buzz Clips in MTV CD Lounge.

MTV has its own site on the web[88] and in that, maintains a page devoted to the alternative, cutting edge clips that are being played in its TV program (called the Buzz Clips). Video clips in the Buzz Bin, the name of the list, get played between 12 and 30 times a week, and can be rotated in the various programs for as long as 15 weeks. In the US this alone can "break" an act. Consumers can access the page on the web for free. They can then listen to samples of the songs and also click in the hypertext link to shop for the album online. Fulfilment is done by Music Boulevard[89]. The move by the Viacom-owned company into the web could be significant for the way consumers shop for albums online. Its brand can become very important for the viability of portals etc. and it might easily become a portal itself. In fact, MTV "explored" the possibility of having ISPs paying to carry its site in 1996[90] with deals that closely resembled the ones they had with cable operators. It is possible that MTV would demand exclusivity in closed/controlled networks as it did in the marketplace (Banks 1996) because consumers would be attracted by its instantly recognisable brand. The bitter experience for the record companies with the "independence" of MTV, which led to the establishment of the rival channel VIVA in Germany sponsored by the majors, could be repeated on the Internet and in closed networks as a counter attack. (see also Deutsche Telekom case)

[88] www.mtv.com

[89] Fullfilment in 1999, when last checked, was done by CDNow. It has to be mentioned that Music Boulevard and CDNow merged late 1998. Furthermore MTV has now a much more segmented apporach to selling CDs with sites such that cater to different genres such as Top 20, electronica, rock etc.

[90] "MTV Tries Cable Revenue Model on the Net" by David Lazarus, 3/12/96, Wired News at www.hotwired.com. Also "I want my MTV.com" by Noah Robischon, 3/12/96, Netly News

MTV is central to the star making system and any move is closely monitored by the executives at the labels. The firm's latest development was the regionalisation of services started in 1996. This was a crucial strategy that helped the channel compete with the regional channels that used local content (such as Viva in Germany, ZTV in Sweden, MCM in France, the Box in the UK etc.) and which were starting to steal away valuable advertising revenue. This was not of course a welcome development for the record labels as illustrated by a graph one of the record label executives sketched in an interview:

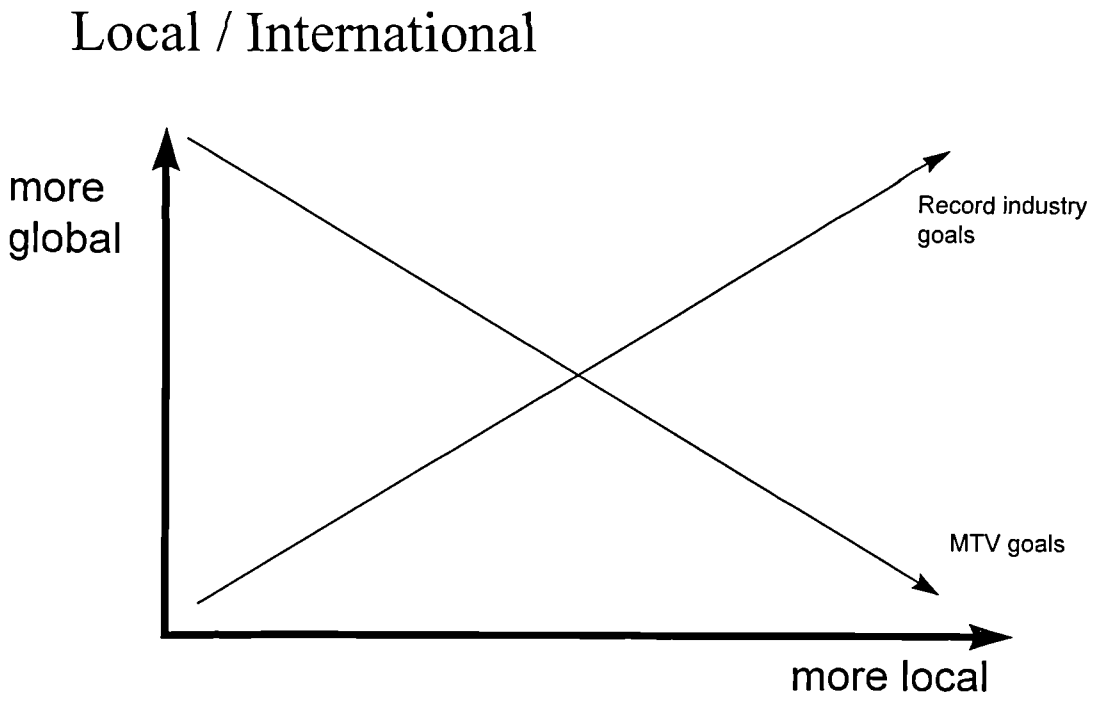

Figure 20. Battle between global and local forces in the music business

This conflict of interests is detrimental for a multinational corporation who would prefer MTV to follow them rather than the other way around. Majors then can control

the telcos such as DT, but it will be more difficult to dictate their terms to the likes of MTV, with such an important role in the credence creating process. The result would be costlier for the majors. Answering a question on the phenomenon of the closure of some labels' subsidiaries in different countries, an executive explained the simple economics behind being a successful major, multinational record label:

"The reality of the economics is that you *absolutely* would like to have 2 albums selling 20mn a piece rather than 40 albums selling 1mn a piece. What's happened , if you look at the structure of the major's performance of the last few years, and [name or record label omitted] being a perfect example, I think they didn't have a record with the exception of [name of band omitted] in 1996 and I don't think they have sold over 5mn copies world-wide. That is not a healthy way to go about in business. They still sold *X*ty million albums, but they were from artists from all over the world and they were selling it in smaller quantities. Now this is simple maths to work out this is going to cost you more money. The way that that shows up is that each subsidiary is costed as a profit centre on its own right and if it is not making money then it would be under threat"[91].

MTV has not signed deals with artists yet, but they have issued compilation albums under their own brand. Rumours in the industry always persist of MTV buying up a record label and they intensify when the markets have speculated about suitors for record companies such as Polygram or EMI. When they do that they can be assigned to the next sub-pattern.

[91] Interview, record label executive

5.4.2 Sub-pattern 2: Artists (content creators)→ intermediary (content owner) → consumers

This is the sub- pattern where artists bypass the record labels and publishers and use intermediaries to communicate with, and sell their content to, the consumer. The intermediaries in this pattern are not merely distributors of content. They also package it, adopting thus the double role of content owners and distributors/ retailer. Content creators, i.e. the artists, assign their IPRs to them by contract.

Signing contracts that assign IPRs to media companies has become common practice amongst composers of "media music" i.e. music that is commissioned for use in broadcasts or synchronised with pictures (film, TV etc.). The media company becomes the publisher and sometimes even the record label. It has obvious consequences for the future of the music business and the current structure as one knows it. Very few cases exist of this kind of disintermediation mainly because there are legal restrictions that prohibit cross-ownership. One of the cases in the marketplace but with obvious consequences for marketspace is discussed below:

Vignette 7: Capital FM, a UK radio station formed a joint venture with Wildstar Management and Telstar Records to form a label called Wildstar in 1997. Conner Reeves, a heavily rotated artist on Capital FM, was the first signing. The venture, while not the first of its kind, was met with considerable scepticism by the interviewees. Some were bitter enough and remarked that "OK they proved that they can do it but can they repeat it"? They reminded the author that similar attempts by players such as Disney and Marlboro to establish a profitable label were met by failure. The jury is out there for other players such as BBC and MTV.

The reactions the researcher got from the interviewees about the above ventures can be best summarised by the following phrase "I think there is a serious conflict of interest there and I feel there is only a matter of time before people start to cry foul. And the government will issue legislation. You have to remember that in the early days of payola, it wasn't illegal. And I see a similar kind of situation at the moment for that, radio stations developing artists. At the moment is not illegal, but in retrospect looking back on payola they had to stop this, paying people to play the records on the radio. ...I do think that this project is sailing very close to the wind."[92].

But most of the record labels were confident that this is not a serious threat. All of them, without exception, mentioned the failure of Disney to enter the industry with the label Hollywood Records. Again A&R came on top as a distinctive competence that cannot be replicated easily by those intermediaries:

"If it was that easy then why did Disney fail for 9 years to break one single act? Or Rupert Murdoch failed twice with record labels in Australia and the UK. It's not that easy and that's the reason why fortunately or unfortunately young guys can earn hundreds of thousands of pounds, because it is a very much an instinct based industry"[93].

Ventures such as this destabilise the equilibrium that prevails in the music industry. Everyone seems to know their place in the system and the slightest intrusion in "foreign" territories will cause retaliation by the offended party. One tactic could be to stop issuing licences to the broadcasters (certain broadcasters are not subject to collective licensing). The game should be played by the rules otherwise retaliation will follow or so an executive thinks:

[92] Interview artists' manager

"...in the same way we are going to be putting an enormous amount of thought, time and talk on why do we not want to [annoy] our retail friends, I think they also have to think very, very carefully about [annoying] the other record companies. Because it only needs a three way conversation between [names of chairmen of 3 of the majors omitted], and [name of music television channel omitted] has no market. They are reduced to playing the records that nobody wants. And I think they are very wary of that. They haven't done it and they know they can't do it and they've sort have done it with [name of series of CDs issued under the channel's brand omitted], they've done very well out of it, but they did it in partnership with record companies".[94]

One of the broadcasters interviewed sees no economic reasoning behind his company becoming a record label. The economics of the record industry are not attractive enough to justify the entry.

"Think about CDs for a second. How much I'm going to make on a CD, am I going to make £1? That'll be good. So I have to sell a million CDs to get a million pounds. We do one ad [i.e. advertising] deal for a million pounds, it's like you make a huge amount of effort. It can work but it is a question of when you are going to reach a critical mass to actually make it a real value, but if we are out there to make £10-20,000 who cares? Too much effort"[95].

5.4.2.1 The importance of "back catalogue"

One of the entry barriers in the recording industry is the catalogue that the incumbents have amassed for years and that the new entrants lack. The majors can leverage their catalogue to increase sales and therefore the cash flow of their businesses. The money

[93] Interview, record label executive
[94] Interview, record label executive

earned is pure profit since no new investment is needed, besides the manufacturing and distribution mechanisms which are already in place to serve the new acts. Therefore huge economies of scale and, sometimes, of scope can be achieved. Majors can continue investing in new acts even if 9 out of 10 of them are "flops"[96], because they reinvest money earned by the catalogue. The new entrants on the other hand can survive with difficulty, because they spread their risks over a handful of acts which all need continuous investment. It would take them years to build a catalogue that would allow them to attain critical mass (see also 10.5).

Besides the unattractive economics, the next most powerful argument against media companies, integrating into developing content, is the retention of their independence. The perception of the consumers should be that they are dealing with a true third party and not somebody who is pushing its own offerings. The true role of a media company thus is going to be compromised by the involvement into packaging. As one executive said in an interview:

"What we mean to consumers is something totally independent. That is one of our core values. We are independent of anybody, that we will give you what we think you really want. ... consumers should look to us and go "well I know they are not just trying to give me their own products, because they do not have their own products. [Music television channel name omitted] selects for me what they think is good"[97].

The second development that was really intriguing to observe after Cerberus, and satisfying since the author has predicted it in a report (see Wallis, Choi, Klimis et. al. 1996), was the securitisation of intellectual property. For years artists disintermediated

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[95] Interview, music television channel excecutive

[96] Jargon for a release with unsuccessful sales

[97] Interview, music television channel excecutive

the record labels, by producing their own records. But in a new twist to an already familiar pattern, some big money is involved for the first time, since it seems that the financial markets have wisened up and they are beginning to understand the value of copyright. In this pattern the big stars, and therefore those most sought after by the media, can retain their copyrights and licence directly. They become, in a sense, record labels themselves, even if third parties such as banks finance them in the form of a loan. This is another case of re-intermediation which bestows a disadvantage on traditional vertically integrated firms into a disadvantage in relation to more specialised competitors. What's more it is directly driven by multimedia technologies because of the possibility of having multiple formats and channels to leverage the copyright.

The following vignette is worth of special mention. The pattern it describes is probably the one that if adopted (and that is a big "if" according to most of the interviewees) it will, in combination with multimedia technologies, change the face of the music business as we know it.

Vignette 8: Bowie's bond issue.

David Bowie sold $55 million of bonds to Prudential Life Insurance in a private placement, which took place in February 1997. The deal is the first-ever securitization of intellectual property rights. The bonds, underwritten by Fahnestock & Co, are backed by royalties on the publishing rights and master recordings of 300 of the artist's tunes from the first 25 albums he recorded before 1990. The bonds reach maturity in 10-years and are paying 7.9%. With his back catalogue averaging 1-1.5 mn in sales each year, there is virtually no risk of defaulting. Once the principal has

been paid out, all future royalties will go straight to the artist. Bowie, it should be noted, has a new deal with EMI Records, which is guaranteeing an up-front payment of $30 million for the catalogue as well as royalties from the album sales. The bond deal was negotiated by a US merchant banker, David Pullman.

Bowie is said to have used some of the money to buy out the share of a former manager and thus regain complete control of his music. It should be noted here that the artist owns the master tapes to his recordings.

These novel type of bonds are generally referred to as "asset backed securities" and consist of securitising future revenue streams of anything from credit card receivables, student loans and residential mortgages to health-care receivables and auto-loan payments. It could prove to be an attractive way of financing new artists since they can get ready access to cash instead of waiting for future royalties to come in year by year. Those bonds also offer tax advantages to stars, who receive the cash up-front but are not taxed on it until they have earned the royalties.

There was a consensus, among the executives in the recording industry interviewed, that the catalogue was overvalued. Nevertheless the notes were rated single-A-3 by Moody's Investors Service, i.e. the same rating given to General Motors! William Zysblat, president of Rascoff Zysblat Organisation Inc. and Bowie's business manager, is said to have an exclusive arrangement with Fahnestock, the issue underwriter for a dozen potential deals in the works. His company represents Paul Simon, the Rolling Stones and the estate of George and Ira Gershwin.

The newest deal from D. Pullman involves Brian Holland, Lamont Dozier, and Eddie Holland, collaborators on dozens of Motown-era hits. In April 1998 they took a $30 million 15 -year loan securitized on the songwriting side (the trio do not own the

publishing rights) of their massive 300-song catalogue. Their entire catalogue is valued at $100mn. Although their value is considerably higher than Bowie's, there is no record company guarantee hence the smaller loan.

The trend for bonds is catching on. Many of the "copycats" are also using old executives form the music industry i.e. "insiders" in order to make their issues more "credible".

Vignette 9: A new company, called CAK Universal Credit Corporation, headed by the former music industry executive, Charles Koppelman, is engaging in asset backed securitisation focusing initially on music publishing. Koppelman is working on the projects with Prudential Securities.

Another music executive, Irving Azoff, head of Giant Records, prepared a loan worth $15.4 million with Nomura Capital Entertainment Finance intended for securitisation on Rod Stewart's future publishing income. Nomura plans eventually to issue a combined bond against Stewart's future royalties and those of other musicians. Other companies looking at deals of this kind are Morgan Stanley and Societe Generale. "Exotic" securities such as these will become more common in other industries as well. Citibank in 1996 sold $1 billion in commercial paper backed by Twentieth Century Fox's future movie revenues.

As David Pullman says his firm isn't just seeking superstar catalogues for loan deals. Various assets such as songwriting, publishing, or producing assets can be packaged together in a bond. The minimum royalty stream Pullman looks at from a single

catalogue is a consistent $200,000 a year. Securitisation, though, is for the "older" assets that have proven sales and that is emphasised by Pullman in the interviews.

In the interview with the researcher, he mentions where he got his inspiration from:

"I wanted to do it was because people said that publishing is a bankable business. As a bankable business I should be doing it cause in Wall Street the money is cheaper than a publisher's money. Where a publisher like EMI and Polygram is supposed to make 15-20% on of its equity but is not supposed to be a bank, of course this money is more expensive".[98]

The following table shows some hypothetical deals as envisaged by Forbes magazine:

Asset	Copies sold p.a.	Royalties p.a.	Fifteen-year bonds worth
Pink Floyd's Dark Side of the Moon Album	400,000	$720,000	$6.5 mn.
Metallica's catalogue	3.5 mn	$6.3 mn	$57 mn.
"Happy Birthday to You" song	-	$ 1mn (composers get half of $2mn)	$9 mn
The Beatles' original 13 recordings	2 mn predictable - 5mn	$6.9 mn	$62 mn

Table 4 Hypothetical bond deals

Source: Forbes 22-9-97

As is evident form the above D. Pullman does not distinguish the record company's publishing business from banks.

[98] Interview, David Pullman

"Traditionally, record companies have acted as bankers by paying advances to artists against future royalties in return for the rights to their work; in future, established artists will get their advances from banks and keep the rights for themselves"[99]

Furthermore copyright, unlike physical assets, can be put to more than one use and therefore can generate revenue that increases over time as technology progresses.

"because you're actually getting copyright, you are getting an intangible that is increasing in value so if you look at something in this room, if you rent this, [shows the hotel lobby] if this is an office space and you are renting this space for £43 per sq. foot then if those are the dimensions, width length etc. then that's it. In music, in terms of publishing as an example, there's different models so you could be selling different models of this space because you are selling space for advertising and you are selling space for film music and you are selling space for radio airplay and in terms of records sold and each time a new format comes out from the 8-track cassette to vinyl to CD to DVD and everytime there is a new use like the Internet that no-one has ever thought of ."

D. Pullman, besides being a great believer in technology, also thinks that royalty rates will increase and more countries will adopt the copyright "practices", therefore increasing the revenue generated by catalogues:

"... we want the royalty to go up and up, so anything that can be done to increase mechanisms is better...As the world gets more technological it is going to be easier [to collect copyright royalties]. And also you have this upside for publishing ... that you have that half of the world's population [who] doesn't pay so there is only an

[99] FT 10/08/98 "Bonds have more fun as banks rock'n'roll" By Alice Rawsthorn and Jeremy Grant

upside. You have the former Soviet Republics, you've got India and China they don't pay and they have the world's half population."

Pullman was really convinced that the collecting societies in the US are really doing a good job of collecting money from even small sources such as bars and pubs.

"The most efficient [collection of money] I saw was when I walked into Philadelphia, and I hadn't been in this place for 10 years since I was at the university, and after I've done this deal it was the first time I noticed they had this sticker that said ASCAP, BMI and SESAC on the window. So if they went to this place that had 20 people in it to make sure they collect, I think they are doing a very good job. And they are doing a better job in Europe and the UK in terms of collecting royalties in a pub as an example".

He continues about the collecting societies and the way some of their members view this development:

"The system is only going to get better and the technology is going to help them to get better. Even if they do a horrible job they only get better by default because of the fact that technology will be there to help them. I've worked with the people in terms of their business side and I know about the effort they are making to make improvements. They're really looking to enhance value for their members, find new ways to collect and they have lobbying groups etc. And I also heard in the board meetings of these societies, there are publishers on the societies that might have thought that this won't be a fit, in terms of this will hurt them, because it benefits the songwriters and independence, because the majors have most of the seats on these boards"[100]

[100] Interview, David Pullman

The record labels executives interviewed did not share the same ideas with Pullman. Besides finding Bowie's catalogue overvalued, they denied that what they were doing was only banking. In the words of a senior executive:

"If we were only doing financing we would go bust very quickly because most of our decisions are wrong. It is the process that makes your decision right or wrong. And that is understanding the creative process, understanding artists, the creative people that work with artists, which is a very complex process and it is a lot of added value to that, that protects our position. If you strip it down to an economic exchange we are vulnerable I agree.[101]

The following vignette shows another aspect of this same pattern. The company below tries to re-intermediate the publishers and in this case the customers are the professional users of music.

Vignette 10: Online Music Library[102] is a German company which acts as an online aggregator/broker for professional producers and musicians. A business to business venture, OML gets its catalogue directly from artists/producers. Most titles on OML are available for "any territory, any application and -if desired - even for exclusive licensing". The company is a brilliant example of the efficiency of a free market for IPRs. Some of the music in its catalogue was written by famous artists but wasn't released officially or was axed by the record labels. The company serves the professional sector, mainly the film and video industry and the advertising agencies, ads but also the multimedia. Its targets are "Creative Directors, Music Programmers

[101] Interview, record label executive
[102] http://licensemusic.com

sand Editors, audio-visual and multimedia Producers, Music Directors of Film-, TV-, and Video Studios, jingle & commercials production agencies and everyone involved with licensing music for synchronisation purposes". The library includes 50.000 titles already which can be searched using descriptors such as style or instrumentation and moods.

Real Audio is used for previewing the titles. After a selection has been made, tracks ordered are recorded on CD and delivered to the customer. An option to be activated in late 1998 includes on-line CD-quality delivery via ISDN lines.

In the case of On-Line Music Library, it is clear that the company is trying to get a chunk of the business of a traditional publisher.

Other potential re-intermediaries are the publishers themselves. Without the need for a format, or more correctly without the format and distribution being controlled by the majors, it seems only natural that the publisher could become a record label itself. Not so if one takes into account the following excerpt from an interview:

"What's to stop publishers from doing it? All the same reasons that I've said that it means that Disney can't do it. Disney have invested, they reckon about $90mn into it and some other people estimate something around $300 and $400mn maybe even more, in the music industry and they failed completely. They could have bought [name of record company omitted] for the money they invested. The reason is , and I'm speaking as somebody that spend half his career as a publisher and half in the record companies, is that its kind of horses for courses. The A&R instincts that go into publishing are common. Good publishers sign spot at before the record companies do, and at the same time as the record companies do. But the world-wide organisation of marketing selling promoting is something that you are completely removed from as a

publisher. The biggest culture shock, and it took me quite a few years to get over, was the fact that I got quite a profound influence over artists once I got this job. You don't have a profound influence over artists when you are a copyright owner. You're at the mercy of what the record companies do with the copyrights. Is very, very rare that a publisher can put his hand on his heart and say "that copyright became successful because of the work I did" as opposed to "that copyright became successful because of the work the record company did""[103]. That quote justifies the observation of researchers that publishers have little role to play in the music industry besides one of "milking" royalties (Klimis 1998, Wallis & Malm 1984).

Perhaps the biggest danger for the incumbents in the recording industry is the tendency for new artists to be funded by other artists. This is the type of re-intermediation that the labels should fear more. It is already in operation by George Michael and TAFKAP *in the marketspace*, as evident by vignettes 1 and 5, but also in the marketplace for years now with labels set up by such stars as Madonna (Maverick Records). The trend is easily explained. While bonds can lure away the big stars, new entrants with no history to apply models to, will not easily raise finance from the conservatively thinking financial institutions. They could easily get funded, though, by somebody who besides having the resources, also knows the industry from the inside and can thus make less risky decisions. The distinction between superstars and new artists entering the market was made clear by virtually all the interviewees.

[103] Interview, record label executive

"...and I see it, that is a threat to us, but not in the new bands. But where is a double threat to us of course is where the small bands are funded by the big ones"[104].

[104] Interview, record label executive

6. Discussion and Conclusion

The analysis of the case studies and the interviews in the previous chapter point to the fact that neither intermediation nor disintermediation were the outcome to any marked extent of the use of multimedia technologies in the music industry. All the technical systems that were surveyed were in an experimental, trial stage as opposed to being fully working and generating revenue. In the interviews conducted the prevalent belief was towards retaining the status quo rather than abolishing it. Since the data collected suggest that the theory does not apply in this industry, it is now time to attempt to explain why.

6.1 Possible explanations

Interviews data presented a variety of reasons which permeate all cases and hold true for all patterns.

One factor is **time**. Hess and Kamerer (1994) point to the possibility, in their own study, that the results predicted by the EMH "require a longer gestation period". That was the deterministic view that prevailed in the industry as well. As one executive told the researcher in 1995:

"I'm not afraid because it is coming. You know that its got to happen. It won't probably happen in my time so it has to be set up in the back rooms. You can't stop the wheels of time moving onwards"[105].

The other factor is **consumer acceptance.** Consumers traditionally build libraries of music but not of videos, which they tend to rent. This trend is confirmed statistically since purchase always accounted for a greater proportion of industry revenue in

music than in films[106] (Hoare Govett, 1994). Nearly every record industry executive that was interviewed believed that consumers would like to stick to the habit of collecting the tangibles. A retailer interviewed in 1995 for the pilot research reinforces that notion:

"We did some research, 4 years ago on the notion of having a central base, everything on hard disk where you can store a lot of information and download onto our smallest stores for reproduction of whole albums onto cassette. The customers said that even if it was on a CD they would not be too happy unless they got the original artwork for the inlay. So it is not just the music, it is something very tangible about buying music".[107]

The trials that took place both in Germany (DT) and the UK (BT) also failed to confirm or refute the hypotheses that consumers would rather pay each time they want to listen to recordings, than owning them. This ambiguity is reflected in the words of an executive:

"The other thing that is unresolved about what the transactions are like is: is ownership a critical issue for consumers, in relations with the transactions as they take place? If you can access Paul Simon's "Graceland" whenever you want it, do you need to own it at home, and therefore is the transaction a transfer of the ownership at £15 or is it access to that material at £1, or pay per view basis, given that you can have it whenever you want it."[108]

Without exception interviewees confirmed that the need for socialising in retail outlets and the expenses involved in setting up hardware, software and making calls over the Internet were all considered as inhibitory to the take off of Ecommerce on a large scale.

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[105] Interview, record label executive

[106] World music industry Report Hoare Govett U.K Investment Research, 1994

[107] Interview, music records retailer

But as the researcher argues, these are not satisfactory explanations of the phenomena encountered, or more appropriately not encountered in the research. Timing can not be an adequate explanation for the failure of these technologies. Consumer behaviour can only be a speculative cause since the consumer did not have the chance to try out the new technologies so it is probably premature to write them off.

The following sections will attempt to sum up the findings of the research presenting conclusions on the adequacy of previous frameworks for explaining or predicting the effects of the technologies on this particular industry.

The frameworks presented in this chapter should contribute to both theory and practice. After the analysis of the two main issues, the chapter will proceed by developing Ecommerce patterns and scenarios for the future.

6.2 The two main issues

6.2.1 Two forces at play: Technology vs. Content

The most important outcome of this research is the debunking of the myth of technology as the great equaliser and the Internet as promoting "friction -free capitalism" (Gates et. al., 1997). This is a very crucial finding considering the technologically deterministic rhetoric inherent in speeches, consultancy reports and EU and US government policy documents. Information Technology and communications alone or in combination are definitely not going to lead to disintermediation or to electronic markets or to re-intermediation. Neither will they radically alter the industry structure. The first mistake that companies such as Cerberus made was to consider the technology as a silver bullet that was going to lead

[108] Interview, record label executive

to more democratisation of the music business and allow them to profit in the process. There is little evidence so far that this has happened.

The recording industry was highly ambivalent about taking the step of selling direct to the consumer even thought there were proven cost savings and profits (see Figure 17). Furthermore, no clear cut strategy was evident in the matter. As one of the executives interviewed said, there were major uncertainties that had to be resolved:

"the big uncertainties are:
when the bandwidth issues are going to get sorted out
how are we going to solve the piracy issues
how are we going to solve the territorial issues
who these middle bodies[109] are going to be and
how this is going to work
so all of it is uncertain and that's why we cannot have a clear strategy because if we decide today we have a clear strategy it could be wrong tomorrow. All we can do and that's why we put up the website, is try and keep aware of the issues so that when it begins to solidify we are there, we are not 5 years behind. And that's the philosophy that we are taking in [name of record company omitted] and I think there is a similar view being taken all over the world."[110]

Although the executive has highlighted what is the official view of all the major labels, i.e. the one that is circulated in the press, in reality there are issues other than

[109] He means the intermediaries between artists and consumers. See also another snippet later in the same chapter.

piracy at play[111]. The majors, as evident from the interview below as well as the case studies, understand the power of controlling content; therefore they believe they can afford to just "sit on a fence and do nothing"[112] or even try to stop digital distribution of music from taking off. Other technologies have had the same fate before:

"The majors in general have taken a view which says "No, no access, you are not going to take our repertoire, we are going to strangle this baby at birth". And in truth, technologies such as DAT for example were restricted effectively to the professional sector because nobody was giving access to the material. I think there is a feeling that can be done again. I think this is a tough call, myself. I think that when bandwidth provides the flexibility... [pause]. Clearly one of the debates going on at the moment is whether or not being there first, which is normally a major competitive advantage, look at EMI and their interaction with CD, they came last and they took them years to recover, but there is an argument going on there, whether being on the Internet first is the competitive advantage that you need to have."

Not all executives held the same opinion. Some were interested to see how they can exploit the opportunities.

"I think there would need to be somebody in between the consumers and the artists and it remains to be seen how layered that body is and what form it takes. That's why when I said that you still need A&R and promotion, that's what that body will do. I think that's the ultimate position. This is a personal view, if you have a multitude of

[110] Interview, record label executive

[111] Piracy is of course a serious problem in the recording industry. IFPI estimates that sale of pirate cassettes and discs amounted to almost 4% of all soundcarrier sales (in terms of value) in Europe in 1995.

artists and a multitude of consumers going direct to each other, that anarchic structure, if you like, will result in frustration. It's all very well to say that you use a search engine to find Madonna, yes you can but you have to know about Madonna in the first place, so you need something in the middle and I think the question for all of us is what that thing in the middle is going to be and how many layers it would have, because it can have one or it can have more. So I think it is exciting for consumers it is exciting for us. I don't think its the end of the record industry as we know it, as lots of people are predicting. I think we can embrace it and increase our business rather than decrease it".

The way the industry has evolved, a few players have control over the majority of content and copyright. Control of content via copyright is of paramount importance for the future of the music industry since the whole survival of the various "species" is dependent on that. The battle at the WIPO Diplomatic conference between the two camps of "copyright maximalists" (i.e. the producers mainly record labels and publishers) and "copyright *minimalists*" (*i.e. the users such as media companies and* telcos)[113] is a testament to that. Furthermore copyright industries are of major importance to the governments of both the US and the UK since they generate more export income than traditional industries and also help to curb unemployment. (see Appendix D. Chapter 10.5).

Two trade bodies of the recording industry, IFPI (International Federation of Phonographic Industries) and BPI (British Phonographic Industry Ltd.), both held the same opinions in our interviews. The Copyright, Designs and Patents Act 1988

[112] Interview, record label executive

[113] see www.wipo.org for a list of the varius organisations. In their individual sites there are various documents chronicling the events.

(CADP) was found inadequate in terms of addressing the current issues. Bodies such as PPL (Phonographic Performance Ltd.), which collect performance royalties for record labels, recording artists and session musicians (as opposed to composers) refused, back in 1995, even to deal with the licensing of Cerberus as they would with any other broadcasting medium. Music-on-demand, according to those bodies, "should be subject to primary not secondary licensing"[114]. That means that licences should be granted by the copyright owners themselves and therefore PPL could not grant Cerberus a blanket licence (i.e. for the whole repertoire).

Telecommunications companies stand to lose a lot if the bargaining power shifts to the content owners who already have amassed precious copyright. As one telecoms company executive explains, disintermediation of the record labels by the content creators, for example, will be difficult if the labels try to set up shop on their own, and that is due to the monopoly position of the content owners:

"... when people are going to choose the sites that are going to give them the choices they would like to have, they are choosing the sites where they have already been. [This] will make it important for lot of people to put their music on those sites which will strengthen again their sites, so with the inherent monopoly on property rights, which they already have, they will have a market position that will make it almost impossible for the content creators to gain a position on their own".

A vicious cycle, shown in the figure below, can be regarded as a way to model the remarks above. The executive quoted above, and along with him other worried users of music, express the view that if labels are granted exclusivity for use of their recordings in a digital environment the following will happen: Labels are going to

[114] Interview, trade body executive

control distribution by licensing their material to their favoured sites, maybe their own, and sometimes exclusively. As more catalogue material is added on-line, more consumers are attracted to those particular sites, since consumer utility grows as more material available to choose from. The sites then command higher visibility and exposure than the other sites available on the Internet. Artists are attracted to the labels that can "put" them in those sites and sign their rights away because they want the increased exposure. As more artists are signed the copyrighted material expands for the site and therefore more consumers are attracted and the cycle reinforces itself locking in both consumers and artists.

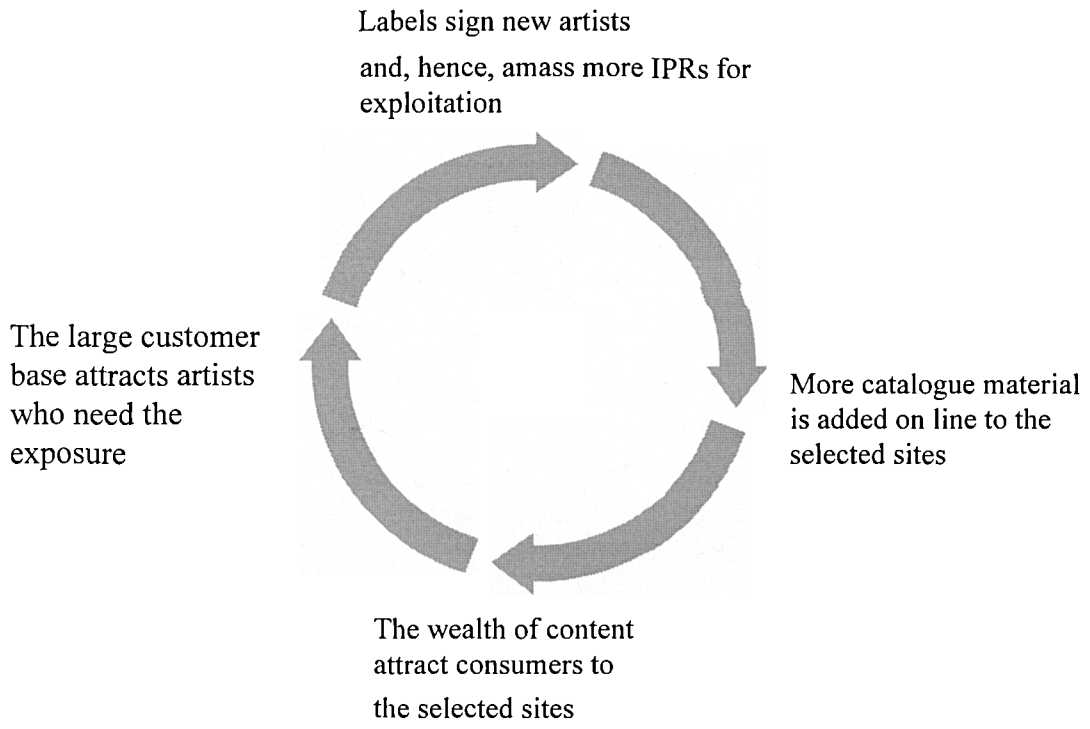

Figure 21 The Vicious Circle

The possibility of technology giving small independents a chance to distribute their product globally and artists adopting a DIY approach disintermediating labels and retailers was dismissed on other grounds as well. "A&R has an investment and the only way to get that investment back is to build the artist as a brand name and that

costs money to build". It will always be easier for a big company to split the risk of investing in 100 different brand names than a smaller company pinning its hope in two or three. So there will be a leverage effect and according to the telcos the Big 5 have already got that leverage.

The whole battle is disadvantageous to the artists as well. With the majors trying to avoid being made redundant and the telcos and software houses insisting that copyright grants monopoly power to the majors, the artists, the people that are "at the beginning of the food chain"[115] are squeezed at both ends caught in the middle of an ensuing battle. One of their main sources of income, royalties, is under threat both by the concept of buy-outs, and by the concentration of the world's copyright in the hands of 5 major companies.

Buyouts are especially dangerous as a trend since it signals a return to the Tin Pan Alley era, when publishers could buy out a copyright for its lifetime without giving any royalties to the composer. Concentration of IPRs and content in the hands of few companies also means a shift of bargaining power to the latter and therefore, lower rates for music distributed via the new technologies.

The danger of entering a the vicious cycle in Figure 21 was also implied by the composers in the interviews. A classical composer explained:

"[composers] have to be better informed because now with all the new technologies and the various ways that music can be disseminated, they simply have got to understand what's happening, otherwise you do what the publishers would prefer, the Internet provider to do, just to buy out, to give up the concept of royalties which is completely wrong."

[115] Interview, composer

Despite the potential long-tem disadvantages, many composers are accepting buyouts, just saying "I'll do it and then you can do whatever you like with it, just give me a nice big fee". It's a way of doing business I suppose."[116]

A British composer of popular music sees the collecting societies as counterbalancing those threats:

"I think the consensus is that we support the collective administration systems and the continuity of collecting societies against direct licensing, although, and this is one of our biggest threats, telecoms and other new media in the world will put us all under serious pressure for direct licensing thus cutting out all intermediaries and this will inevitably drive the value of copyright down"[117].

Such composers argue that the importance of cases such as David Bowie's bond issue gaining publicity is that composers can be informed of the potential future value of their copyrights. The benefits of this approach are easy to see. Copyright can get its full market value and it could render the financial aspect of the recording business obsolete in the near future.

But this approach is not without dangers for the composers' community. First of all, it would create a precedent whereby composers, particularly the young ones just entering the system, will engage in "chequebook publishing". Feeling that they won't be stars for long, since the turnaround of stars is far more quicker now than ever, they would basically "take the money and run". This creates a dangerous environment for the working composers in the middle who see composition as their main and sometimes only source of income throughout their working life.

[116] Interview, composer
[117] Interview, composer

The other, and potentially more serious danger, would be that banks or other financial institutions which buy publishing rights or issue bonds on them, would demand a place on the board of a collecting society. Because they are benefiting from the exploitation of copyright, they would demand to oversee the administration and collection processes in order to avoid the classic problem of moral hazard. In their search for efficiency two things might happen: they might destroy the system of solidarity and reciprocity on which the collecting societies' collaborative activities are based, or they might endorse such principles along the lines of global credit card companies such as VISA.

Even though the majors have not been willing to license their content for digital delivery, the idea that this strategy could be effective in the long term seems absurd. It will take only one major label to break the implicit collusion of signing acts for the life of copyright and then the recording industry will follow the path of the publishers where "there is no contract that is 50-50 [split between author and publisher] for the life of copyright anymore"[118]. Some enlightened people in the recording industry have understood that trend:

"...I've seen them the last couple of years here. Some of the so called Holy Grails with contract signing like "you must get it for the world", "we don't license product", I've seen all of these crumbling under competitive pressure because in the same way as [name of record label omitted] started all this thing about giving away singles, someone is going to break the unwritten rule of offering great big fixed term long contracts and some of the majors are effectively doing it already, through their small

[118] Interview, publisher's executive

label deals that they have. So that is probably going to be the driving force between breaking down this so called monopoly".

6.2.2 The role of distinctive competencies

Even if nothing dramatic as yet has happened, it is evident that the roles of the different players in the music industry are in a state of flux. Labels become retailers, sites of production become sites of consumption and vice versa with media companies becoming copyright owners etc. The patterns and the scenarios developed later in this chapter offer a first glimpse into the way the dust might settle. One certainty is that the incumbents have to redefine themselves and the new entrants have to develop the roles they are going to play in the new landscape that is being formed. A redefinition of who does what is eminent. This evolution in the music industry, however, has started long before the new technologies became a threat:

"Before, record companies, publishers, professional writers and recording artists, each had their own support systems and everything worked very nicely. Over the last 20 years it has been an evolution commercially in that it [the system] has become blurred. The legal profession has been relied too much on for contractual matters, now lawyers have become managers, managers have become publishers, publishers are now writers and recording artists, there is no further clear demarcation and this has served to make real composers much more responsible for their future...."[119]

[119] Interview, composer

The last remark is very important since it recognises the role of the composer as an entrepreneur with all the obligations and responsibilities that this entails. Nowadays, it seems, the composer has to be a businessman as well. A classical composer reaffirms that:

"Even though classical composers are known to be otherworldly, they just sit and write music, it is still absolutely essential to know something about the business, otherwise simply you are going to get ripped off all the time.

GMK: Do you negotiate your own contracts?

Composer: I'm 60 now I've been doing it for the past 35 years, so I publish my own material and now I use a computer to print it and I negotiate all my contracts etc. I've done it for so long now."[120]

As an executive told the researcher in an interview, the industry is probably complacent when sticking too much with the ownership of rights instead of developing the core competencies of the future. Monopoly in copyrights is eroded as a competitive advantage and other core competencies such as marketing should be nurtured:

"....it is that very monopoly [in IPRs] of these five companies that make them so lethargic and slow to react and un-competitive, because if we were a true FMCG[121] company we would have to move much, much faster in order to improve our marketing and selling skills in the way you described earlier in order to satisfy the retailers, because it is true that in the final analysis you can only buy [name of a

[120] Interview, composer

[121] Marketing term from the initials of Fast Moving Consumer Goods

famous band omitted] from us and that is probably an unsatisfactory position. I think that's key as well. I'll start a record company!!!"[122]

Artists at the forefront of technological development such as Thomas Dolby, one of the superstars of the 80's, are preaching for the reversal of the relationship between artist and publisher/record label.

"There are some very skilled marketeers , and yes, some of them do have ears, and yes, they are very good at positioning an artist. But, if I'm in a position where I could sell my music directly to the public they should pitch to me how they add value to that. And if they make a convincing case, maybe I'd be prepared to give up some commission on my sales to them"[123]

A telecoms company executive echoes the same thoughts:

"I think that even if the new distribution environment lessens the cost for technical distribution and technical production etc. [then that is] what makes the remaining costs, ... marketing and A& R, the most important".

6.2.3 Conclusions

The "industrialisation" of the music business made the artists dependent on the recording industry and the music industry in general for provision of services such as financing, marketing, manufacturing, distributing and selling physical objects. Technological developments in IT and communications have not changed that so far for two reasons. Firstly because the major labels have not made their content available and secondly because the core competencies of a record label cannot be easily replicated by third parties within the current system. But as the interviews revealed,

[122] Interview, record lable executive. It has to be noted that shortly after the interview the executive left the record company and started his own!

more artist-favourable copyright contracts can weaken the grip of record labels on the exclusivity of ownership of master tapes. Furthermore the system of stardom is expected to change when, due to the fact that music is a credence good, various other media companies (such as MTV for example) can be seen as providing a better service in marketing and promotion.

Starting at one end of the value chain with the content creator, the following sections will hypothesise on the possible structure of the industry by assigning functions to institutions and proposing a template that can be applied to guide further research.

6.3 The E-commerce patterns

This chapter focuses on the creation of new theoretical frameworks and patterns which will help to expand existing e-commerce theory by including credence goods such as music. Those patterns can then be used to develop hypotheses to be tested by case studies in further research. The first section defines the Multimedia industry. The patterns are then developed followed by brief scenarios about the future of the industry.

6.3.1 "Definition" of the Multimedia Industry and the three layers

The conceptualisation of a multimedia industry as an industrial complex (Astley 1985) offers a better way to understand the frameworks to be developed than if the industries were considered separately. The industries that comprise the Multimedia industrial complex were all previously independent. Technological developments in Communications and Information technology facilitated the interlocking of mutual

[123] Music and Media, February 21, 1998, p.8

reinforcing technologies, and thus the Industrial complex came in existence. The following illustration has been developed in order to help clarify the concept:

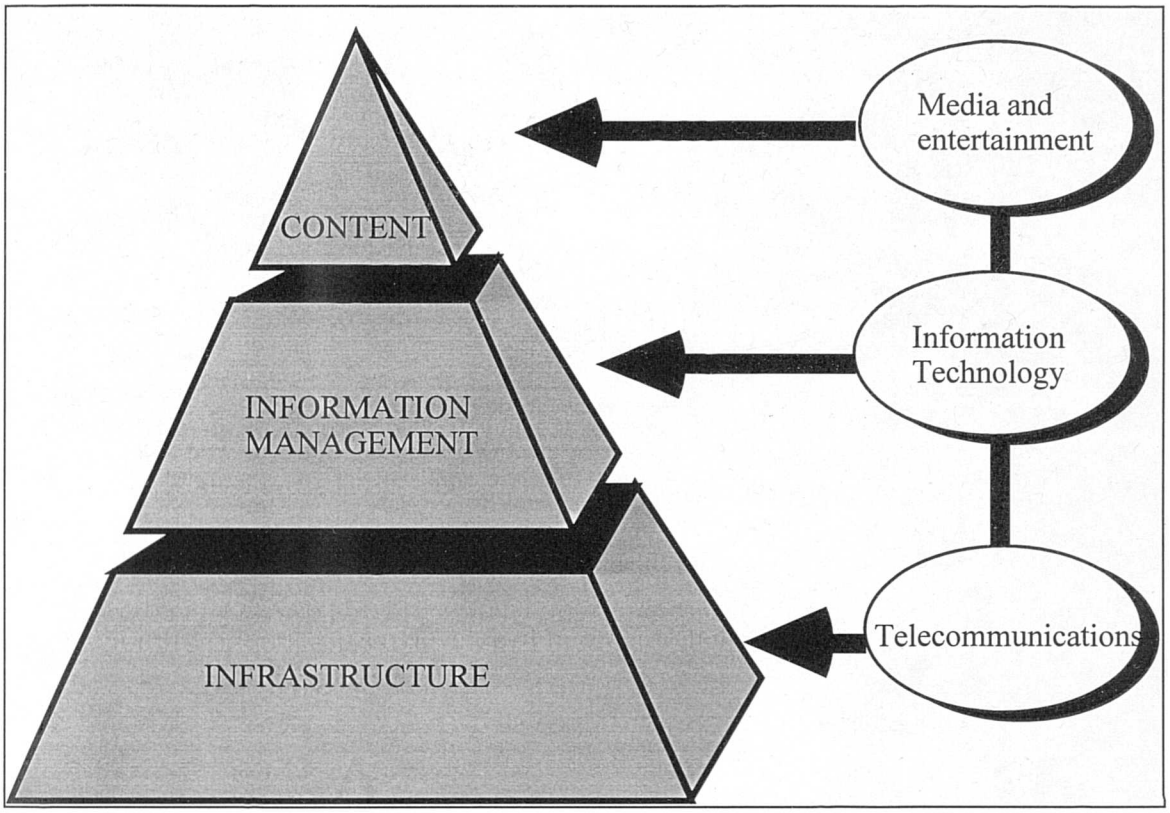

Figure 22 The three layers of the Multimedia complex

The players, which are defined later in the text, operate in 3 aggregate but distinct layers in the Multimedia industrial complex:

1. Content
2. Information Management
3. Infrastructure

The *Infrastructure* i.e. the hubs, routers and pipelines into the cyberspace, is provided by the telecomms and cable providers and operators and also the various hardware manufacturers. These include companies such as BT (telecomms), Nynex (cable), UUNET (Internet backbone) and IBM (Computer hardware + network operator). BT alone is willing to invest £15bn in fibre-optic networks that could connect 80% of the UK population by 2000 (the company views it as economic viable only if they are allowed to broadcast entertainment, which current UK regulation prohibits but the 1997 Labour government has been expected to revise that policy). Cable firms plan to lay cable adjacent to 12m homes and gain 6m subscribers by the year 2000. The debate on how the consumer is going to be served seems to be coming to an end since a mixture of different infrastructures can be deployed to serve the local loop thus eliminating potential bottlenecks (Wallis, Choi, Klimis et. al 1996). These solutions could range from fibre-optics to wireless applications and from cable to ATM networks and satellites etc. But increasingly the infrastructure businesses feel the threat of commoditisation. Arbitrage opportunities abound. In California people make a good living out of switching long distance telephony providers and pocketing the monetary incentives[124]. Furthermore the competition in places such as the UK is becoming more fierce as the cable companies provide telephony as part of their service bundle and even as a stand-alone offering. The various firms in the industry have realised that it would be impossible to survive alone in this turbulent environment. This explains the many alliances and joint ventures such as WorldPartners which will allow their members to co-operate in providing seamless connectivity globally.

[124] Personal communication with Professor Katz, ex-Chief Economist, FCC, USA

Another potential bottleneck in the infrastructure layer would be the battle between the different hardware systems that seem to be waiting to earn the consumer's franchise (Wallis, Choi, Klimis et al. 1996). These would range from TV to the PC, the Network Computer and even games consoles and other hardware such as the CD-i and Nintendo's consoles and Sony's Playstation which can be optionally connected to the Internet. Competition in this area is essentially fierce due to the nature of the offerings.

The next layer, *Information Management*, is the domain of the software companies that traditionally provided the software that could manage the information on a PC. Traditional players have been Microsoft, Oracle, Sun, etc. All these players extended their presence to the provision of Internet software and some of them went into head-on competition with start-ups, as they realised that the Internet presented a huge opportunity for profit (cf. the longstanding battle between Microsoft and Netscape for the domination of the browser market). The layer also includes search engines, such as Alta Vista and Yahoo and intelligent agents such as Bargain Finder from Andersen Consulting. Also Internet Service Providers such as CompuServe and AOL that aggregate content and digital jukeboxes such as Cerberus which are digital distributors of music. It also includes the various media ventures such as MTV from Viacom who select content for their subscribers.

Last but not least is the *content* layer. None of the services could look attractive to the customer without content provided by the Media and Entertainment industries. There is much consensus amongst industry representatives and analysts that "content is king". This is the layer that accommodates those individuals/firms that provide the content, i.e. the *producers* and the *creators*. The distinction with the other layers is

that the content layer players own the content, by having established the relevant property rights, either temporarily or permanently.

6.4 Towards a new value system

The purpose of this section is to explore this new landscape as it is being formed. The first step towards that goal is to hypothesise about the possible structure of the industry in an e-commerce environment. The following diagram depicts the hypothetical framework developed:

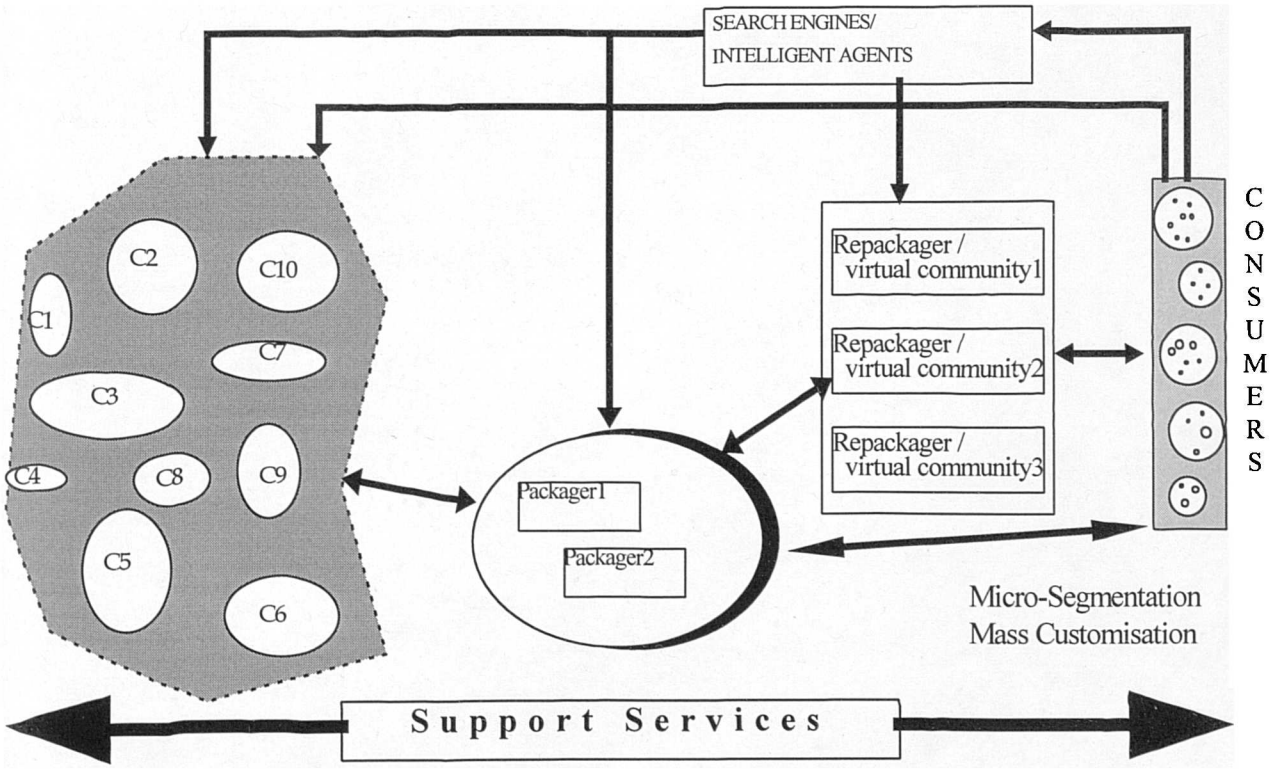

Figure 23 Value constellation and transactions in an Electronic Commerce Environment

The figure above is general and can be applied to other industries, such as financial services or publishing, in an Electronic Commerce environment. The actors in the figure are defined according to their function and they are not tied to any of the existing institutional ones, as yet. That does not preclude record labels, for example, from becoming packagers, nor software house becoming re-packagers. According to the definition of the Multimedia Industry given before, only the layers are given but the actors can belong to more than one of them.

Content is created by individual artists or groups and produced by them or by packagers who can be either incumbents (such as record labels for example in the music industry) or even third parties, such as banks which are interested in owning and trading copyright. The content is "packaged" in a form of multimedia presentation (including text, pictures or video clips) marketed and promoted by the packagers or the "repackagers" and distributed to the various proprietary networks or virtual communities (Hagel and Armstrong 1997, Alstyne & Brynjolfsson 1997) and individuals who are interested in buying/renting the content. The figure includes all the possible transactions that can take place in an environment like that. Consumers can search for content directly, either through a search engine or through an intelligent agent. They can also find content in a virtual community, where they can interact with likely minded individuals. The possibility of the packagers reaching the consumers directly is also accommodated.

Special mention should be given to the Support Services which are defined as all these actors that act behind the scenes as it were, by supporting the "flow" of electronic commerce activities. These are services such as those provided by collecting agencies which monitor and collect monies for the other actors, one stop

shops for copyright, UNIs (unique number issuers), standards organisations (such as the W3C[125] etc.). They facilitate the interactions between the other actors and their customers by providing the relevant infrastructure, such as payment and billing mechanisms, rights clearance etc.

The role of the content packager is more complex and it has to be defined precisely. Packagers aggregate content and package it, i.e. they make it into a final product that is ready to be sold or rented. Having established the appropriate rights, the packagers can decide what would be the final form of that by actually producing it.

The distinction between all these players can be better illustrated by using a classic example from the broadcasting world. The artist (content creator) supplies the label (packager) with music by assigning the exploitation rights to them. The label produces a video clip to advertise the music to the public. The video clip is further selected by the gatekeepers of a TV station (repackagers) to be included in a programme such as, say, "Top 100" together with other material such as interviews etc. Both artists and label have established intellectual property rights on the actual music that is heard in the program and both get remuneration for that whenever the programme is aired. The TV station does not (unless they own the rights themselves which according to the framework will make them packagers).

The following table clarifies the roles of the different actors as far as IPR ownership and gatekeeping are concerned.

[125] WWW Consortium is a standard setting orgnisation

	Content Creators	Packagers	Repackagers
IPR ownership	+	+	-
Gatekeeping	-	+	+

Figure 24 The roles of the different players

Using this framework one can start to hypothesise about the different kinds of interactions and transactions between players within the different layers of the multimedia complex.

6.4.1 The emerging patterns

Having these definitions in mind, a plethora of different types of transactions can unfold. Content creators have to make the decision whether or not to part with their rights by transferring them to the packagers or to become packagers themselves. They could then license the content to the repackagers so the latter can sell it to consumers. They can even decide to become all things to all people, thereby becoming both packagers and repackagers, selling the content directly to the consumers.

According to the different roles that were developed in the previous chapter and based on the discussion so far concerning disintermediation, four patterns emerge that are mutually exclusive on the transaction level.

	TRANSACTIONS	DESCRIPTION (Music)
ECP1	CC ⇔ C	Disintermediation of Packagers, Repackagers
ECP2	CC ⇔ P ⇔ C	Disintermediation of Repackagers
ECP3	CC ⇔ P ⇔ RP ⇔ C	No Disintermediation. Maybe Re-intermediation
ECP4	CC ⇔ RP ⇔ C	Disintermediation of Packagers

Where *CC = Content Creator*
P = Packager
RP = Repackager
C = Consumer

Figure 25 The e-commerce Patterns

Two broad categories of transactions can be distinguished according to Figure 25.

ECP1 and ECP2 are the *disintermediated* owner-consumer transactions where the content owners are also distributors (the reader should be reminded that packagers actually own rights to content as a result of creators assigning some or all the rights to them). CC assign their rights to P who disintermediates RP selling directly to consumers. CC can also assign their rights to RP who becomes then P. If RP decides to sell directly to C then the pattern is ECP3 (because the actor is both P and RP).

ECP3 and ECP4 are the *intermediated* owner-consumer transactions where the transaction to the consumer is mediated by the repackager. CC disintermediates P keeping rights and licensing to RP for promotion etc. The other pattern ECP3 is a "business as usual pattern" with different players or the same player adopting the two roles of P and RP.

It has to be noted that the above patterns serve only as conceptual benchmarks with which one can compare the situation in real markets.

The section that follows uses the patterns above and the definitions to develop scenarios for the future. The idea is to super-impose everything discussed so far on a framework that will include both the demand (consumers/repackagers) and the supply side (content creators /packagers) and their possible dynamic relationships in the future.

6.5 The four scenarios

In periods of uncertainty any search for definite answers is in vain. In the evolution of recorded music industry, and its technology in particular, there are various cases that demonstrate this. History tells us, for example, that Edison intended the phonograph to be an office dictation machine. But the entrepreneurial spirit of some drug store and café owners altered that intention. Coin operated phonographs, serving as primitive jukeboxes, soon proved to be a very profitable business. The invention failed to enter the offices but the new application, finally, made a killing for its inventor (Frith 1987a). Quadraphonic sound is another case where the failure to establish a technical standard led to consumer frustration and the technology never took off. Part of the blame falls on the recording industry who either by greed, or some say intentionally, killed the effort[126].

Conspiracy theories apart though, there are valuable lessons to be drawn from these cases about the power of predictions and the disillusion of executives and decision makers. These are especially didactic for the various industries that encompass the current multimedia industrial complex.

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[126] For a short but comperhensive history of the recording technology the reader is advised to visit the University of San Diego History Department page at http://ac.acusd.edu/History/recording/notes.html. Also the RCA page at http://www.rca-electronics.com/story/ and Allen Koenigsberg's "The Birth of the Recording Industry" at http://members.aol.com/allenamet/BirthRec.htm

Uncertainty and complexity contribute to the difficulty of making predictions, and therefore strategic decisions. An established method for avoiding this is to develop scenarios that can guide strategic thinking (van der Heijden 1996, Shoemaker 1992, Schwartz 1991, Wack 1985). The scenarios serve as a firm base for the development of long-term strategies, not only for companies in the music sector, but also for telcos and software companies as well as third parties (such as banks or financial institutions) that see business opportunities within the production and distribution of music in a digital environment.

These scenarios are in reality hypotheses since after only two years (1995-1997) the predictions embodied in the scenarios have started to become reality. The framework presented in the scenarios has been tested in interviews with high ranking executives in both the music and the telecomms industry and also communicated by the author in two panel discussions on Music on Demand (Freiburg EuroPop Days 1996 and London Music Week 1997). This version presented here is more recent (as of early 1999) updated after the new data from the final interviews have been analysed. The framework incorporates EMH's different hypotheses about electronic markets and electronic hierarchies.

6.5.1 The framework

Two major uncertainties, or driving forces, were identified that will significantly influence the way on-line digital delivery will affect the music industry.

1. How the demand side (consumers) are going to position themselves in the future (Choice or true interactivity?)

2. How the supply side (content creators) are going to position themselves in the future (centralised or decentralised content?)

The following figure depicts the four scenarios:

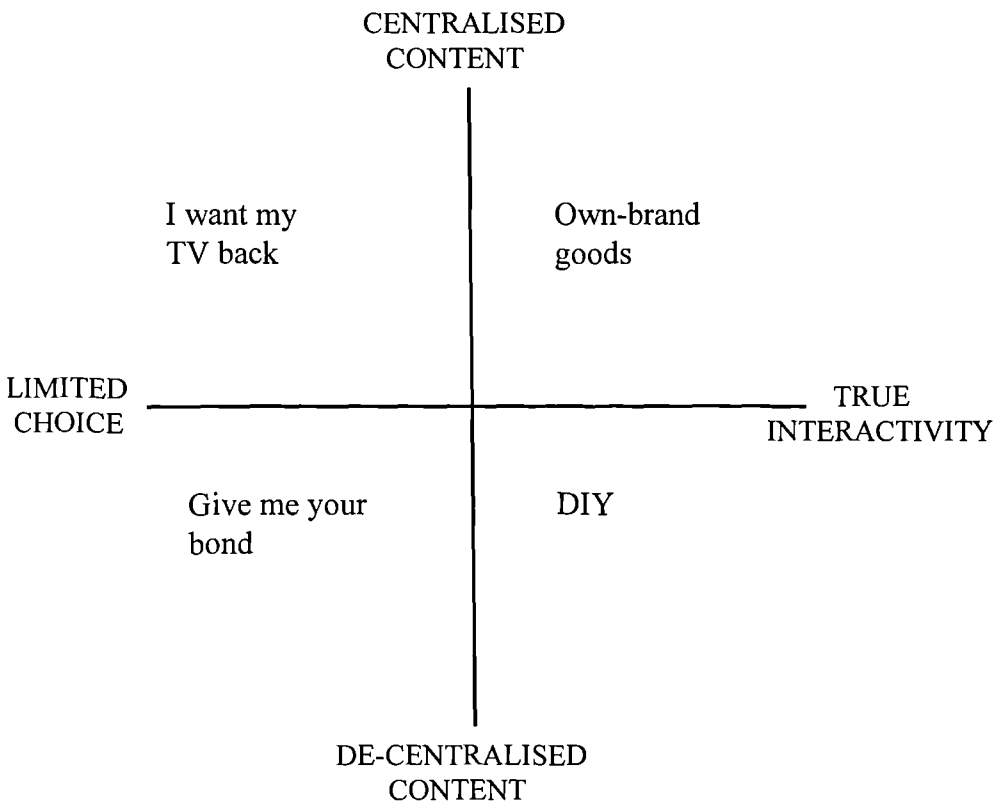

Figure 26 The four Scenarios

The horizontal axis shows the consumer's positioning. They either accept to choose from what is on offer (limited choice), or they demand to control and even produce the content (true interactivity). In the extreme end of the limited choice segment consumers are verging on becoming "couch potatoes". They don't actively seek music

but they are happy to buy whatever is suggested to them by the repackagers. This was the situation envisaged by Time Warner, Microsoft etc. at the beginning of the digital era, i.e. even before the Internet became a mass phenomenon, with the release of Mosaic (the first web browser) in 1994. This involves proprietary networks where the consumer is locked-in by heavy switching costs (Electronic hierarchies in the EMH theory). As a result of positive externalities both companies have since migrated to the Internet (Time Warner with Pathfinder and Microsoft with the MSN brand), but the possibility of lock-in in an open network is not impossible. The latest "fad" after the failure of push technologies (Marimba etc.) is that of branded portals (as of mid 1998). The supply there is again controlled by means of an electronic hierarchy.

As one moves along the continuum, consumers become more active, passing through a "couch commando" state and finally reaching the other ultimate end of true interactivity. This is where they not only actively seek new and old music but they help create it by dictating their preferences to the content creators and/or packagers. The consumer controls the market choice box (Benjamin and Wigand 1995), through intelligent agents or collaborative filters, or through the exercise of his/her discretion in an electronic market. The use of these technologies and IT in general help diminish the search costs.

The vertical axis reflects the way content creators position themselves in a multimedia e-commerce context. The continuum is between the extremes of "centralised" and "decentralised" content. At one extreme, with "centralised content", content creators decide to continue assigning their intellectual property rights to the packagers for exploitation. At the other end of the continuum, "decentralised content", they decide

on a more DIY approach. They retain the rights, especially the digital ones that are of interest in this study, and decide to exploit them themselves.

An analysis of the scenarios follows.

6.5.2 I want my TV back

Consumers are passive "couch potatoes" who try to make sense of the abundance of networks and content that digitalisation and increased bandwidth have "imposed" on them. Faced with the complexity of choice they pay attention to only a few of the available channels/outlets that are competing for their ears and eyeballs. This is the pattern that developed in the US radio and TV market where with the proliferation of channels, consumers engaged in "zapping", only to settle to 3 or 4 channels after a while.

The traditional "gatekeepers", such as specialist magazines, radio shows, DJs or Music TV shows, diversify on the web and digital TV. New ventures lured by the opportunity of setting up shop with a meagre investment keep trying to establish themselves sometimes only to be swallowed up by the few big ones. Content is in the hands of a few packagers since, with the exception of a few megastars, the artists do not have the clout to negotiate deals directly with the repackagers. The balance of power has shifted towards the repackagers and some of them have even moved upstream into packaging when the majors refused to license them with content. Music is an ancillary product and is mostly treated as a loss leader to generate traffic for the repackager. Since competition for the consumer's franchise is fierce, competing repackagers aim to satisfy as large a part of the population as possible and therefore need the superstars to lure consumers, and consequently advertisers. Content therefore

is driven by advertising and is chosen to appeal to the segments that the advertisers want to reach, which excludes a large part of the available content, a development which clearly can impact negatively on cultural diversity. Channels reach the home through closed networks and controlled conduits. Most of these sites become retailers capitalising on their brand name and reputation for choosing the "best" for the consumer. One of the most followed practices is for programs to include, on the screen, a "link" to a store. Consumers can download the video clip that is being played, or buy the song on the current format by clicking on that link. Branding and consumer's trust are paramount for success. The artists and labels are effectively little buttons on the interface of the service that the consumers trust to make the choices for them.

Problems:

- Content providers simply won't have enough clout to negotiate advantageous deals since they would need to have a presence in those sites or networks. Marketing strategies and media planning will be of paramount importance as would be cost management.
- The strategy can backfire for repackagers/packagers. While information overload and search costs diminish in this segment the risk is that consumers could feel manipulated and restricted.
- Music can be used as a loss leader just to generate traffic on the branded sites where revenue might come from other more profitable services. Supermarkets in the UK are already using that device by selling CDs a lot cheaper than in the high street. Music can lose its value and so would digital rights.

- Loss of control over marketing mix will be catastrophic for the labels/content providers. There will be demand to mix and match songs from different LPs and labels, for bundling purposes for example, regardless of those labels' promotion plans. Another potential threat would be the refusal to accommodate certain artists because they don't match the demographic profile of the customer that the advertiser desires to target.
- Content providers might want, for the above reasons, to restrict access to content (for digital delivery) in order not to lose control. The Deutsche Telekom trial is an example of how such threats could lead to similar ventures becoming non-starters.

6.5.3 Own-brand goods

Consumers are more active in searching for content that would satisfy their needs. They demand and get control of the market choice interface. Meanwhile artists find the trade off between autonomy and exposure beneficial and so continue to assign their IPRs to the labels for exploitation. That is due to the critical mass of content packagers command. Record labels decide to disintermediate the retailers and sell directly to the consumer. Thus they vertically integrate into retailing by turning sites of production into sites of consumption. Consequently they brand themselves or establish their own branded sites to showcase their artists and sell directly from those. Consumers armed with a plethora of intelligent agents roam the various networks (mostly the high speed Internet II) and cherry-pick the best content suitable to their taste and at the most affordable price. One price prevails at the end since retailers have long been eclipsed and product can be sourced directly from the producers. The big media sites end up being disintermediated. Label-owned record clubs battle with one

another for dominance while alliances are formed between labels with the purpose of achieving critical mass in specific genres. The excluded ones form their own alliances to counter-attack. This situation mirrors exactly the 90's cut throat competition in compilations.

Labels maintain a steady cash flow by regurgitating back catalogue material into different packages. However they also experiment more with new releases, since the barriers to entry are really low for the more adventurous independents, thereby increasingly threatening the majors' dominance. The battle for new signings is fierce and the reputation of the label is of paramount importance to the artists. Competition is based on amassing a critical mass of content and also on maintaining good relationships with the artists and the consumers. Some of the traditional broadcasters such as radio and TV prepare for the digital age by buying up rights themselves, turning in effect into record labels.

Problems:

- For the content creator/artist it is still business as usual. The only thing that might change could be that new labels such as George Michael's Aegean (see Vignette 1) will become more artist friendly and more daring in their signings.
- Branding a label is difficult and potentially dangerous. It would mean losing the ability to release different genre's repertoire than the one with which the label is known (since the only way to brand a label so far is to associate it with a certain genre). A branded label loses flexibility in a world in which tastes change constantly according to a fashion agenda that can be set by competitors. The

control by a record company of a number of niche record labels, which experiment in different genres, is a strategy for keeping options open.

- Labels wishing to own consumers might restrict choice. Consumers' relationships with BMG Direct's site (see 5.2) is a good example of that. Locking in consumers will be very difficult in the true interactivity quadrants. The only viable product is classical music because the product is a commodity differentiated only by the performers (a fact that Britannia music club exploits to the advantage of their owners Polygram, see 5.2) The biggest problem in this case is the lack of critical mass enjoyed by any of the labels. If critical product is not available, market forces sooner or later will induce re-intermediation unless a collusive agreement between the labels is reached (a dangerous move which might attract the wrath of the regulators especially in the US).
- Physical retailers will retaliate, especially in those markets where they have the necessary clout to do it (e.g. UK). With the majors planning to sell music globally, i.e. in places where digital network take-up is slow or even non-existent, global retailers can retain some power in the short term. As the world slowly becomes more connected, however, the advantage of investment in bricks and mortar will disappear. Global retailers such as Tower Records will probably survive the longest thanks to the power of their brand name. But it is likely they will move to the first quadrant " I want my TV back" and become e-commerce facilitators.

  An alternative strategy for survival is for retailers to become a trusted consumer intermediary. Nevertheless, the balance of power will change favouring the suppliers (labels/artists). If active consumers engage in comparison shopping using intelligent agents (e.g. Bargain Finder) then non-added value intermediaries will

be made redundant very quickly and the price of the CD or single will fall dramatically (or the label's margin will become "fatter" if they decide not to pass the savings to the consumer). One of the on-line retailers when asked to comment on this scenario said that "we don't want to sell to this kind of customers"[127].

6.5.4 DIY (Do-it-yourself)

An artist's dream, more than anything else, is the ability to disintermediate everybody and have a direct relationship with the consumer. Technology has long liberated the artist by providing access to cheap means of production (Wallis and Malm 1984). A record released by Nine Inch Nails in the US in the 90's sold millions and it was recorded in their bedroom! The new multimedia technologies do the same for the distribution of music. What is left is marketing and promotion. The dream becomes reality as active consumers can use agents and search engines to find the artists directly. Artists on the other hand have become more informed of business matters since the 80's following the cases of groups like Nirvana and artists such as Coolio[128]. In the DIY world the artists retain, at least, their digital rights. The bargaining power shifts to the stars who rely on their brand name to sell directly. Lesser known artists co-operate in building communities of interest which are location or genre specific and involve selling directly to the consumer. The emphasis now is more towards live

[127] Answer by on-line retailer to audience question at MusiCom 97, London

[128] Nirvana are rumoured to have got in total US$30,000 for their multi-million selling "Nevermind" album (TechWire 07/07/97). Kurt Cobain, the lead singer was quoted in Melody Maker August 1993: "But I'm not nearly as wealthy as people think. I know it's to be expected that people think I am wealthy, they'll think, 'You sold 10 million albums, so that's 10 million dollars.' But it's not. I made a million dollars off that record. Over 300,000 dollars went on taxes, there were legal problems and medical bills because we didn't get insurance in time. I found myself spending all that money, all at once, all in that one year. I also bought a house, too". Coolio, a rap artist, started Crowbar Management, a company that advises new rap acts. He is quoted in Forbes 25/9/95: "I sold 1 million records and 2 million singles and in the end I owed them $63,000,". The "creative" accounting practices of the majors are blamed for these results, as well as the naivety, in spending, of the artists themselves (see Passman 1998).

performances. The dominance of the record labels is increasingly seen as an anomaly in the history of music.

Problems:

- Very few artists can command the economies of scale and scope needed to make direct delivery of music profitable. But crossover superstars with a loyal fan base (TAFKAP is a good example see 5.3) can make it work.
- As a record label's new media executive interviewed said "No artist has been broken by one medium alone". Its all very well when anyone can put up a web site on the Internet but can they place their song in the local/national radio playlist? After all people will have to know of the artist's existence before they are ready to download/buy the song online.
- New artists have to be "discovered" somehow. When everybody can get online then everybody will and it would be difficult to distinguish between the worthy and the junk amongst the information overload. If the lowest common denominator prevails then music would lose its value and will be seen as another pastime or hobby. A new industry of reviewers and InternetJs could then spring up with a goal of cutting through the fog. In other words disintermediation will probably induce re-intermediation.
- Executives in the recording industry also believe that the artists have an inertia problem. "Artists just want to play their guitars" and that means that they are not interested in becoming entrepreneurs. They care less about the business side and more about the creative side of the business - this of course is the equation that

drive artists into assigning their rights to record labels. As for the possibility of forming communities which co-promote their products, the interviewees believed that they would encounter major collaborative problems. "Artists have huge egos" as one executive explained.

6.5.5 Give me your bond

Demand for music would appear to be insatiable since the media companies are anxious to fill their big fat pipes to satisfy their consumers and their advertisers. But the artists and the financial markets have become more aware of the value of IPRs. More formats, and better enforcement of copyright rules have meant more money for the artists. The view of the record labels as a necessary evil no longer holds. Commenting on a scenario like this one presented in an FT management report in 1996[129], some artists stated that the record labels are nothing more than banks and that they would be better off if they went to the real thing directly for financing. If this revolutionary idea should catch on all the artists would have their own bonds on the market sooner or later. The true value of music, according to the market, is revealed and the market decides for the price of each song in real time. IPRs are traded as futures and options by a new breed of traders/financiers who price options for songs they think are going to be hits in the future. All sorts of financial instruments are available for trading. Ratings vary and the smaller or new artists can get financed by issuing junk bonds, following the example of cable networks in the US in the past. In

[129]R. Wallis, C.C.Choi, T.Cross, G.M.Klimis and K.Theocharis (1996) "The impact of Multimedia on the Entertainment Business -Implications for TV, Video, Music and Games" FT Management report

a world were individual investors own more wealth than the institutional ones, everybody loves to own a piece of their favourite artist. Another trend sees third parties acting as brokers for copyright to the media.

Problems:

- Few artists have enjoyed the luxury of retaining their rights. Managers and legal advisers could change that for both the new groups and also for older acts. As far as the latter are concerned there have already been several lawsuits in the industry. Arthur Brown (composer of "Fire"), the Bay City Rollers, Eddy Grant, Tim Rose (co-author of Hendrix's Hey Joe) and Chumbawamba among others claim non-payment of royalties as a basis for claiming restriction of trade.
- Even if the artist owns his rights, the cash flow stream has to be in the range of six figures or higher (in $) and predictable before an issue can be discussed. That excludes most of the artists. It won't be long though, before junk bonds would be issued.
- A major problem would be that of credibility for anyone that wants to approach artists for similar deals. Artists are not fond of dealing with the "suits". Two alternatives assert themselves. Either the artists change or the bankers do. Both are equally probable.
- Transaction costs of dealing with each and every artist will be enormous. Media companies would rather deal with aggregators of content such as OML (see vignette 10) for example.

- The value of certain artists would rise so much that only big media companies could afford to showcase them in their channels. This might lead to small media interests leaving the market or getting swallowed up by the big players. It would also lead to concentrating the market in the hands of a few artists.

6.6 Suggestions for further research

The creation of patterns and the scenarios can be used to inform additional hypotheses that warrant further research. This short section is an attempt to propose an agenda for such an endeavour.

6.6.1 Different research settings

One of the most important points that need further research is the generalisation of the patterns in other industries. That would mean that this study needs to be replicated in different research settings using the patterns developed in this study. Some evidence of the parallels and differences between the music industries and the retail financial industries can be found in a forthcoming article co-written by the author (Daniel and Klimis 1999). The difference between the two industries lies mainly in the type of offerings. Financial services products are highly commoditised and substitutable, while music offerings aren't.

An example can clarify the difference. A consumer can search for the best terms and the cheapest deal for a mortgage and then buy from one provider therefore substituting one lender for another. Buying only one music product, though, does not mean that the consumer will not consume other products simultaneously or at a different point in time. Stravinsky is not a substitute for Mozart, nor Madonna for Janet Jackson. Taking into consideration these differences, comparison across

industries would allow researchers to re-asses the role of packagers and repackagers and the different competencies needed as well as the balance of power among the different parties.

It would also be interesting to compare the music industry with other cultural industries such as the film and book publishing since they both offer credence and non-substitutable goods. An interesting experiment in the publishing industry would be to compare substitutable goods, such as reference books (e.g. maps and dictionaries) or even news stories, with non-substitutable, credence goods such as novels. We can hypothesise, following this research, that electronic markets would develop easier for the first rather than the second category. Given the different concentration ratios in those industries, though, the results maybe surprisingly different.

6.6.2 Institutions and their role

One other point that needs clarification is the role of institutions and legal regimes such as Intellectual Property Rights in easing or hindering the development of new markets. Whilst not questioning the economic significance of copyright industries (see also 10.5) or the need for protection of the creator of intellectual property, an indisputable conclusion of this research is that concentration of copyright in the hands of the few is hindering rather than promoting new multimedia and e-commerce industries. As evident from the interviews, repackagers thought that the concentration of ownership of IPRs can confer an unfair monopoly on the few recording firms that control the market, while content creators were forced to surrender their rights in order to participate in the system.

When supply of content is controlled by a few firms in a seller's market, then whole sectors of the economy, such as telecommunications, media and advertising are prohibited from creating new markets for IPRs.

Further research is therefore needed in order to find an appropriate IPR regime that would satisfy the interests of all the stakeholders, i.e. the content creators, packagers and repackagers. The need to redefine the rules of the game seems to be more pressing than ever.

Another matter that was not tackled in sufficient detail was that of the fourth element of the value constellation described in 6.4. namely the support services, which were defined as actors "supporting the "flow" of electronic commerce activities". It can be hypothesised that if supporting services in the marketplace include collecting societies in a purely administrative role rather than as a cultural edifice then the consequences could be close to what is happening, at the time of the writing, in the marketplace (see also Wallis, Baden-Fuller, Kretschmer and Klimis 1998) leading to the "Microsoftisation"[130] of digital distribution of music. What is the role and the responsibility of an IPR appropriating regime in the marketspace is not yet clear. Research has indicated that the idealistic form of a collective licensing system for music copyrights could serve as a prototype of a rent capturing device for other knowledge intensive industries such as consultancy (Wallis, Baden-Fuller, Klimis and Kretschmer 1998), with huge consequences for society in general and the future of organisations in particular.

[130] The phrase "We are isking a micosoftisation of the digital music distribution" was found in an FIPI (International Federation of Independent Phonographic Producers) press release.

6.6.3 Cultural diversity

While this thesis focuses on different subject matter, the researcher expects a spill over effect into other disciplines such as cultural and mass communications studies. The E-commerce patterns can serve as a useful structured way to monitor services and sites and help answer the ever elusive question of "what is the effect of E-commerce on cultural diversity?". Will dis-intermediation and re-intermediation alter the global cultural landscape? Some light is shed on that matter by the four scenarios. Meanwhile researchers in ethnomusicology, such as Krister Malm in Sweden, for example, are monitoring Assyrian music communities on the Internet resulting in some impressive findings. It is hoped that the patterns developed here would be of some help towards that stream of research.

6.7 Conclusion

This research has proved that contrary to the predictions in the literature, multimedia technologies and E-commerce did not change the face of the music industry within the timeframe examined.

The obvious change, the creation of electronic markets for music, and consequently, dis-intermediation and re-intermediation, were only marginally witnessed in the fringes of the music industry.

Furthermore the tensions in the system seemed to come from sources other than technology, such as the financial markets and their increasing understanding of the value of IPRs. The landscape has also changed since many composers have become

more professional, signalling a departure from the practices akin to those of the Tin Pan Alley era.

Even though within the time frame changes were minimal, due to the resistance of the labels and content owners to participate in digital delivery of music, this might only be a step in the evolution of E-commerce. There is both a threat and an opportunity, then, that future developments in market structures, influenced by multimedia technologies and E commerce would alter the landscape. The researcher hopes that this thesis and the frameworks and scenarios developed in it, will help all stakeholders to make more informed decisions when that happens.

Final thought - the conflict between the individual creator and the industry structure/institution.

Consider the example of a young composer in Athens, Greece, who recently completed recording her work in a studio and feels that she is ready to try and attract the world's attention. Regardless of whether her claim to fame is justified or not, the structure and the institutions always come between her work and the potential buyers (be it consumers or institutional investors, developers etc.). They can thus hinder or facilitate the dissemination of the work and the flows of money that her livelihood depends on. One can only wish that the various stakeholders understand the importance of those institutions and the power they posses and try to increase access to creators increasing thus, one can expect, the diversity of our cultural life.

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8. Appendix A

8.1 Publications

Daniel, E. and G. M. Klimis (1999) The Impact of Electronic Commerce on Market Structure: An Evaluation of the Electronic Market Hypothesis, (forthcoming in the June 1999 issue of European Management Journal)

Wallis, R., C. Baden-Fuller, G. M. Klimis, and M. Kretschmer (1998): New Strategy Combinations in the Intellectual Property Rights Arena: The Challenge to Established Principles of R*eciprocity and Solidarity* in Music Copyright. Forthcoming in the March 1999 issue of European Journal of Communications

Kretschmer,M., Klimis G. M. and C.J. Choi (1998) Increasing Returns and Social Contagion in Cultural Industries. Paper presented at the British Academy of Management (BAM) annual conference at Nottingham Business School UK. September 14-15, 1998. Won the prize for "the most innovative paper" of the year 1998.

Klimis, G.M (1998) *Music Publishers: Useful or endangered species? Intellectual* Property, 1998 issue Vol.2, AEPI: Athens. (in Greek)

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Kretschmer,M. and G. M. Klimis (1997) Managing Increasing Returns in Cultural Industries. Paper presented in "Research Perspectives On The Management of Cultural Industries" conference at Stern School of Business, New York University May 9-10, 1997

Wallis, R., Choi C.J., Cross T., Klimis G.M and C. Theocharis (1996). The Impact of Multimedia on the Entertainment Business: Implications for TV, Video, Music and Games. Financial Times Management Report. Pearson: London

8.1.1 Pending Publications

Wallis, R., C. Baden-Fuller, G. M. Klimis, and M. Kretschmer (1998): Capturing Rents from Intellectual Property Rights: The Challenge to an Established Regime of Appropriability, City University Business School working paper

8.2 Seminars and conferences participated

Participated as speaker/ delegate at the following:

5th International Workshop on Electronic Markets. Brunel University, Uxbridge, 14-15 September 1998

Imprimatur 4th Consensus Forum. London 1998

"In Tune In Europe". Seminar and 2 Workshops organised by the British Music Rights, EC and the UK EC Presidency, London, 20-22 May 1998

"The music industry and Multimedia: An exploration into Electronic Commerce and its effects on the organisation of economic activity". Seminar presented at: CID, Centre for User Oriented IT-design, Royal Institute of Technology, Stockholm, September 1997

"Futurewatch-Music on Demand (MOD) and the Internet", Panel discussion at: London Music Week conferences, London, May 1997

Multimedia & the new technologies- challenges and opportunities for the music industry, Panel discussion at: Europop Days 1996, Making Music Work Congress for the European music industry, Freiburg May 1996

Globalisation and Symbolic Power: the case of the music industry. Seminar presented at: ESRC Media Economics and Media Culture Colloquium "Corporations and Creativity", Lancaster University,19 September 1997

8.3 Seminars and conferences attended

Beyond Media 2000 International Conference, Royal Society of Arts, London, 16-17/04/98

Intellectual Property Law & Policy, the David Hume Institute, Edinburgh, 31/10/1997

Internet Economics, London Business School, London, Thursday 9/01/1997

The economics and regulation of pay-broadcasting, London Business School, London, 10/01/1997

Measuring the Value of the Music Industry, British Phonographic Industry, London, 28/06/97

Various music industry conferences such as : PopKomm (Cologne, 1996), MusiCom (London, 1997) etc.

8.4 Interviewee List

[List of Interviewees omitted for confidentiality reasons. Available only to the examiners.]

9. Appendix B. Research instruments

9.1 Pilot Study Questionnaire

These are the questions that were asked in the pilot study. The multiple choices are only indicative of the potential answers and serve as reminders of prompts for the researcher.

1. Given the tremendous cost savings that digital distribution could realise for the recording industry, why have the firms been reactive rather than proactive in the implementation of MOD?

2. Which of the statements below are representative of what you believe about the future of On-line services and/or the Internet?

a. It is going to introduce new consumer behaviour patterns but without destroying the old established ones
b. It is all hype. The Internet is going to flop in a few years
c. Imagining life before the virtual world is like imagining life before the telephone
d. DK/NA

3. Do you think that consumers are likely to change their behaviour patterns of buying music if they have the option of downloading songs over the Internet?

a. Not at all. People will continue shopping in record shops because they like collecting CDs and browsing in shops
b. At the end of the day both physical shopping and on-line shopping will survive
c. Downloading songs or records from on-line services is going to be the only way that consumers are going to purchase music in the future
d. DK/NA

4. Do you think that the digital distribution of music is going to have the greatest effect on:

a. Major record labels
b. Independent record labels
c. Both will be greatly affected

5. Which artists/songwriters do you think ate more likely to use service providers to digitally distribute their music?

a. Top artists (i.e. stars)
b. Less known artists
c. Artists without a record contract

6. Which companies do you think are more likely to use on-line services to distribute their products?

a. Major record labels
b. Independent record labels
c. All labels regardless of size
d. Consortia of artists
e. "Solitary" artists

7. Will the digital environment/digital distribution make piracy:

a. Easier
b. Harder
c. No Difference
d. Piracy will disappear completely

8. Would you put your artist's song in an on-line service such as Cerberus?

a. Yes
b. No
c. We are going to run our own service
d. DK/NA

9. How would you like yourself/your artist to be included in a database:

a. Alphabetically
b. Label name
c. Artist's name
d. Composer/lyricist name

e. Genre of music
f. In all possible ways
g. DK/NA

10. What do you think you can do to distinguish your artist among all others in a database

a. Enhance the artist's image
b. Enhance the label's image
c. DK/NA

11. What artists would you include in the database?

a. Top established stars
b. One hit wanderers
c. Artists at the beginning of their careers
d. All/any artists

12. Do you think the producer of a phonogram should have the exclusive right of authorising its digital distribution?

a. Yes
b. No
c. DK/NA

13. Do you think that in practice the producer will be able to "police"/enforce this right?

a. Yes
b. No
c. DK/NA

9.2 Research protocol

Brief introduction to subject

Current strategies of the firm for Music on Demand.

Role in multimedia/E-commerce environment. Is it changing from current one in marketplace?

Core competencies and added value in a multimedia environment. Is it changing from current one in marketplace?

Relationships and balance of power vis-à-vis:

- Artists/composers
- Record labels
- Publishers
- Telecommunication companies
- Software companies
- Collecting societies
- Consumer

Comments on significant incidents in the industry during 1995-1998.

- Cerberus Digital Jukebox
- Securitisation of copyright revenue streams (the so-called" Bowie's bonds")
- Capital Radio developing own artist(s)
- Prince selling directly over the Internet

Which of the following will characterise future developments in music on demand:

- Disintermediation or re-intermediation
- Narrowcasting or broadcasting
- Closed or open networks
- Branded content or branded context?
- Exclusivity or license to all?
- Resource or structural advantages? (e.g. Artists nourishment or consumer's lock in?)

10. Appendix D. Case studies

10.1 Developments in music delivery technology

An understanding of the future of the music industry and the passage into the e-commerce era, has to be based on the technological and competitive forces that shape the industry. The purpose of this chapter then is to briefly examine the available technologies that facilitate music on demand and the different players in the market, as well as clarifying the "ecological" nature of the competition that is unfolding. To explain the latter remark it would suffice to say that the companies analysed below are not competing alone against each other, but are parts of systems, created by alliances and partnerships (some obvious, others not so). The domination of the particular technology and the creation of a standard plays out differently in different strategies of the different firms involved.

10.1.1 Technological forces

The two main technological forces that drive the evolution of music on demand are:

1. The availability of cheap recording devices
2. The increase in consumer bandwidth available, coupled with the parallel decrease in average bandwidth occupied

Both these trends are examined below:

The availability of cheap recording devices

In 1995 Cerberus became the first commercial digital jukebox to distribute music on the Internet. Most of the music industry executives interviewed dismissed the venture at the time. Consumers, they claimed, would not opt to listen to songs stored in a computer's hard disc. CD-R and CD-RW[131] prices were high, even though people were starting selling entry level models for about £400. But prices for both the hardware and the media (blank CD-Rs) have fallen dramatically since.

At the same time Sony and Philips were engaged in a fierce format war. The two companies battled to establish a "disposable" format that would appeal to the same consumer as the cassette did and eventually replace it. At the end of 1995 everybody thought the war was over. Both DCC and MiniDisc were considered dead.

But this last trend reversed quickly. MiniDisc began to take off. By 1997 half a million devices were sold in Europe alone following the tremendous success in Japan. Pundits projected that about 2.5mn would be sold in Europe alone by the end of 1998. Sales have been helped by the availability of content from the technology owners Sony, but also by the release of products based on the standard by manufacturers such as Sharp and Aiwa.

The release of systems such as MD X8H by Sharp, in particular, will have the greatest impact. The latter can interface with a PC and thus record music digitally directly from the Internet via a PCMCIA card. The mobility of the MiniDisc and its random access capability will greatly help consumers bypass their reluctance towards downloading music from the Internet.

[131] CD- Recordable and CD-ReWritable

The same can be said of the CD-R manufacturers who will eventually follow Sharp's lead and offer cheap recording devices to consumers. With all the technologies around for printing CD "labels" and sleeves, it won't be long before the last barriers of resistance by the consumer will fall and downloading music from the Internet will take off as an alternative to buying CDs (if the content consumers want is available).

The increase in consumer bandwidth available coupled with the parallel decrease in average bandwidth occupied

These two trends are inexorably linked in time. The increase in bandwidth though, is largely determined by the average prices to the consumer. Leasing ISDN lines in the UK is still prohibitively expensive for the typical consumer. xDSL technologies (the current telco choice) are more promising while the promise of fibre optic with in theory, unlimited bandwidth looms in the horizon. It is expected that the battle between telcos, cable and other industries to wire the home (i.e. the local loop) with high bandwidth connections, will only be beneficial for the consumer in the long run. In the short term compression technologies largely compensate for the deficiencies of the carrier infrastructure. The following table gives the download times for a CD or a song uncompressed and then compressed with a ratio of 15:1. Different infrastructure technologies are considered.

	28.8 Kbps	ISDN 56Kbps	ISDN 2B+D 112 Kbps	Satellite 400 Kbps
Full CD 477 MB	36 hours	18 hours	9 hours	2.6 hours
Compressed CD 32.4 MB	2.5 hours	1.3 hours	38 minutes	11 minutes
Full 5 minute song 53 MB	4 hours	2.1 hours	1.05 hours	18 minutes
Compressed 5 minute song 3.6 MB	16 minutes	8.5 minutes	4.25 minutes	1.2 minutes

Table 5 Music Download times

Source: AT&T http://www.a2bmusic.com/about/PacAcc.asp (assuming 96 kbps 15:1 compression ratio)

The differences in download times clearly seen in Table 5. Companies such as Liquid Audio, Cerberus and a2b use compression algorithms (some based on standards such as MPEG) to cut download times. Their technologies are scaleable and so can work in all the available infrastructures.

The infamous MPEG-1 layer 3 compression format has become one of the real threats to the music industry. This allows for very small (compressed) files of near CD quality sound to be easily downloaded by anyone with a simple telephone connection. It is precisely this high fidelity and the manageable download times that are creating a headache for the industry. The web is literally littered with sites that contain even whole albums available for download.

The author expects the bandwidth problem to be resolved in the very near future. Players belonging to the telco or cable industry but also utilities such as water companies and electricity companies, which have the right of way, will invest in building the new infrastructure. The abundance of consumer bandwidth will render the compression technologies redundant.

10.2 The Players

Four players in the music on demand market were chosen to be examined. Only one (Real Audio) comes from the streaming camp while the other three adopt the pay-to-own model. Those players are examined in more detail below.

10.2.1 Real Audio

The main player in streaming technologies is Real Audio from RealNetworks (formerly ProgressiveNetworks). This is a Seattle-based start-up which debuted its technology on the web in September 1995, with the broadcast of a US baseball game. Real Audio uses streaming technology that allows consumers with a PC to listen to live or recorded audio and video (the later with Real Video) over the Internet in real time without having to download anything on their hard disk.

The company's Real Audio player, which is needed to play the sound clips, can be downloaded for free from the company's website. More than 500,000 copies of the new RealPlayer 5.0 software are claimed to be downloaded each week since it was made available on October 6 1997. An estimated 30 million copies of all RealNetworks products are claimed to be in distribution.

Its lead in streaming technology has made Microsoft select it as the supplier of streaming technologies in Internet Explorer and Netshow servers while Real Networks in return adopted Microsoft's ASF standard. Xing Technology (Streamworks) and VivoActive are the main competitors.

10.2.2 AT&T's a2b format

Launched at the Musicom in November 1997, this format is owned by the US telecommunications company AT&T. The technology was developed in AT&T Labs and it claims CD-quality music over the Internet using fewer than one-tenth of the

bits. The compression algorithm can therefore greatly reduce the file size and consequently download times. Specifically the company claims that consumers are able to download a 5 minute song in 16 minutes using 28.8 Kbps modem. The song is compressed, using the proprietary compression algorithm, to a mere 3.6 MB.

The format includes advanced security features. a2b's platform's security is designed to protect distributors, artists, record labels, and consumers from electronic theft, while allowing for flexible licensing (single, multiple or shared uses of digitally distributed music).

Using a2b

There is a standard procedure for downloading a song form the server. The consumer has first to download the player. The user has then to register with the service by giving his name and e-mail address. The information is stored in the PC with the keys unique to the copy that has been downloaded (effectively turning the player into a unique piece of software). After browsing the site and choosing the songs, and the preferred payment mechanism (credit card, debit account or digital coupon), the song is encoded using a special key that makes it usable only by the user's player.

Content and alliances

1. *BMG*: In November 1997 the company's label RCA made "Reverend Girl", a single from the alternative rock band Verve Pipe album "Villains", available for free download over the Internet. The venture was a well crafted marketing plan

which involved a physical retailer (Trans World Entertainment) and an online one (Music Boulevard) who sold the album of the band.

The plan was to make the album available via every available route to the consumer. The routes were:

a. an 800 (freephone) number from a2b's site for mail order fulfilled by a wholesaler
b. direct link to Music Boulevard (on-line retailer)
c. "digital discount coupons" at the band's site which can be redeemed at record stores owned by Trans World Entertainment (Coconuts, Record Town, Strawberries)

2. *Global Music Outlet (GMO).* This is the first licensee (content provider) of a2b. The company's CEO, Antony Stonefield, is a consultant to AT&T and worked also for IUMA. It was the first company in the US to sell "electronic songs" in a downloadable format. The songs cost 99c each. GMO is using what they call "Electric Record Player" system. The company has used an earlier version of the a2b technology to sell singles by artists such as Todd Rundgren from its website, for less than $1 each. The latest showcase for the technology came from GMO promotion of the Bammies Virtual Music Festival. This was supported by BAM Magazine who host an annual California Music Awards show by the same name.

Current artists available for download from a2b's site include Belinda Carlisle (not a single though but the "Our Lips are sealed" AT&T spot), Michelle Chappel, Jujuka, Keb Mo and Tim Thompson.

3. *Tower Records.* AT&T's a2b music web site will take part in a promotion involving various labels and the retailer Tower Records. As a part of a marketing strategy, consumers who purchase certain albums from Tower record stores, will be given a password allowing them to download an extra track, exclusive to Tower Records, for free. The first label to participate is Atlantic Records which intends to use this kind of promotion for Tori Amos's new album. Capitol Records is following suit with Bonnie Raitt while others are scheduled for release in the summer of '98.

10.2.3 Liquid Audio

Formed in January 1996 by Gerry Kearby, a former sound engineer for Diana Ross and Grateful Dead. The company seeked outside financing in May 1996 and was subsequently funded by Hummer Winblad Venture Partners by the sum of $2mn. In June 1997 the company announced the completion of a total of $6.25mn in private funding. The company has exclusivity for the use of Dolby Digital Encoding. Their technology is scaleable for 28.8 kbps modems upwards. The company hopes that its product will become the standard for digital music delivery on the Internet. They are currently (1998) in a trial phase with various collecting societies such as MCPS/PRS in the UK.

The basic components of Liquid Audio system are:

Liquid MusicPlayer CD ™ (free)

The player can be downloaded free from the company's site. It is used both to preview and to purchase/listen to music. It can also incorporates graphics, lyrics etc. It can be used to record on audio CD.

Liquifier Pro™ (~ $ 995)[132]

The audio mastering software. This is used by the professionals, Artists / publishers / labels etc. to "press" their recording in a Liquid Audio format.

Liquid MusicServer™ (~$ 20,000)

This is the system software component that ties up all the parts into a coherent proposition for music delivery over the Internet. It functions as the "publisher" of content, since it is there that all the copies (masters) of audio and media data are held and streamed from. Includes an SQL database that can interface with publishers labels etc. Back end capabilities include royalty tracking and reporting.

The company has made the Liquid Indie™ Package available for sale from November 1997. This is a cheap solution (valued at $5,000 but offered initially for $1,000) targeted at the independent sector (labels, distributors and retailers).

Using Liquid Audio

The procedure of downloading music is simple. The player, as usual, can be downloaded for free. A Liquid Passport has then to be downloaded which, as the

[132] The prices quoted were taken from a press release dated March 10 1997 (found at http://www.liquidaudio.com/readon/PR/1ohpr.htm). For further information the Liquid Audio site can be found at http://www.liquidaudio.com

name implies, is needed in order to allow online commerce transactions. The Passport is based on RSA Data Security technology which licenses the purchase and playback of the track and also allows it to be "burned" on a CD-R, but only once.

There are two levels of protection in the system. One is the unique piece of software that the consumer downloads first from the web site. Songs downloaded are encrypted for this specific software only and cannot be played by any other player.

The second level is the digital watermark that can trace illegal copies to the original owner who paid for them.

Content and alliances

1. *BMG:* The company utilises Liquid Audio technology for allowing consumers to download 30-second samples from the company's 3 genre specific sites. BugJuice (rock, pop and dance), TwangThis (country), Peeps Republic (R&B, hip-hop, gospel).
2. *Microsoft:* The software firm and Liquid Audio announced a joint development of marketing plans and standards for the delivery and sale of music over the Internet. At the same time Liquid Audio has agreed to adopt Microsoft's Active Streaming Format and its NetShow server software as well as co-operating with Microsoft in incorporating the Liquid Audio Server products with Microsoft Commerce Server. Liquid Audio gets exposure to all the Microsoft web sites and it will also be bundled with other Microsoft software in new computers. Liquid Audio for example will be bundled with the Windows 98 OS when it starts shipping.
3. *Capitol Records (EMI):* Liquid Audio Provided the technology for downloading the first commercially available Internet single "Electric Barbarella" by Duran

Duran. The promotion took place in summer 1997. The single retailed online for 99c[133]. Capitol Records viewed the whole exercise as having more to do with promotion than retailing. As the Senior director New Media of the label, Robin Bechtel, said "Selling the single online via Liquid Audio is a promotional effort to increase awareness to the upcoming Duran Duran album"[134]. Retailers became uneasy when they read in the Wall Street Journal that the single was an Internet exclusive. At the end Capitol was forced to forego the exclusivity and made the single available to retailers as well. Liquid Audio has not disclosed the number of copies downloaded.

4. *Virgin Records* Chemical Brothers made a whole album available on Liquid Audio's website for a day. The album started retailing in its tangible form the next day (8th April 97) but two singles remained on the site.
5. *Dolby.* Provided the audio compression technology as an alternative standard to the MPEG which is endorsed by the consumer electronics industry.
6. *N2K:* The company is effectively a licensee of Liquid Audio. It uses the technology as the basis for its own e_mod (encoded music, online delivery), system. N2K also maintains an independent record company, N2K Encoded Music. Artists include Jonathan Butler, Chick Corea, Stewart Copeland, John Taylor, Candy Dufler and others. There is of course a link where you can buy the whole LP via the on-line retailing business of N2K, Music Boulevard and its branded sites. N2K used Liquid Audio in David Bowie's site they developed for the artist. The single "Telling Lies" was made available on the Web for free

[133] The Internet site where the single could be downloaded was http://hollywoodandvine.com/duranduran
[134] http://www.liquidaudio.com/readon/PR/duranduranpr.htm

download. The e_mod singles currently retail for 99c each. The company encourages the use of CD-Rs or other digital recording devices so that consumers can create their own compilations from downloaded tracks.

7. *EDnet Inc.:* a digital networking systems developer collaborated with Liquid Audio for the design of Super Sonic Transport (SST). The system is used to provide online delivery, preview and download of audio (music, sound effects etc.) to professional users such as sound engineers and advertisers.
8. *Fraunhofer Institute for Integrated Circuits:* Liquid Audio has an agreement with the German Institute, to integrate Fraunhofer's audio compression technology in its software.

As far as the 5 majors (EMI, Sony, BMG, WEA and Polygram) are concerned the company claims to have them all on board except Polygram.

There is also a host of independent labels and artists using Liquid Audio to sell or promote their wares on the Internet. Among them are IUMA (Liquid Lounge), Knitting Factory (with artists such as Pat Metheny, John Zorn etc. and nearly its whole catalogue available for purchase), Aegean. Net (George Michael's record label) and others. Artists include George Benson, MC Hammer and Joan Jett and Carlos Santana

Billboard, the American recording industry magazine, is using Liquid Audio for samples and previews of its 10,000 album review.

The Internet doesn't seem to be the only another medium, though, for Liquid Audio. The company is working with several cable companies providing them with Liquid Tracks as content for their interactive ventures.

10.2.4 Cerberus Central Limited

U.K.-based Cerberus Central Limited (CCL) first made waves back in 1994 and 1995 when its venture attracted considerable publicity in the media, ranging from the trade press to broadsheets and even tabloids, TV and radio in the UK and abroad (mainly US). The company introduced its Cerberus Digital Jukebox (CDJ) advertising it as *"capable of changing the whole architecture of the music industry"*. The CDJ implemented CCL's proprietary technology for selling music over the Internet. After agreeing temporary licenses for a trial with MCPS and PRS, CCL launched Cerberus Digital Jukebox at the Reading Festival in August 95. The patent for their audio format called Coded Bitstream Reliant (CBR) was filed in August 96. Two rounds of private capital raising have been completed one in November 96 and the other in November 97. While the company didn't disclose the amount, they said that private investors own less than 10% of the company.

After failing to convince the majors to entrust their songs in Cerberus's server (the Cerberus Digital Jukebox), the company changed its strategy by releasing the Virtual Pressing Plant (VPP) in March 97. VPP is a stand-alone client/server package for music delivery which effectively distributes the system by decentralising it. VPP users can open their own jukeboxes and distribute music on the Internet or through cable TV, ISDN, satellite etc. Consumers can press CDs or MiniDiscs directly from the player. The VPP can be combined with Cerberus Compression Hardware, an optional real-time compression board, produced in conjunction with SGS Thomson and ITT/Intermetall to provide rapid compression of large audio catalogues.

CCL claims that over 2,000 copies of a free beta (http://www.cdj.com/products) have been downloaded by record labels, artists and Internet music sites since its release. Over 500 independent record labels are claimed to be already using VPP.

Available data on VPP are shown in the following table:

	Units pa.	Hardware required	Cost
Single Server Licence	1mn	1 standard Pentium™ PC	£500 + VAT
Five Server Licence	5mn	5 standard Pentium™ PCs	£2,200 + VAT
Ten Server Licence	10mn	10 standard Pentium™ PCs	£8,000 + VAT
V10 Server	25mn	Turnkey mainframe hardware solution	£140,000 + VAT

Table 6 VPP price list

The company has recently launched the Virtual Record Store (VRS), a turnkey solution for making CD compilations. The VRS kiosks are leased to places such as cybercafes, record shops or even service stations for £200 per month. Shoppers initially browse the kiosk interface for songs which they can also listen through the speakers. Using an "Argos like" system, as one music industry executive dubbed it at the launch, customers can then complete the forms with the codes of the songs they want on the compilation and then hand it in the shop's "Cyberhost" to be pressed. CDs are normally ready in 12-15 minutes. The company said that they are already turning a profit with the VRS. In what is probably the success story of Cerberus, Levis Strauss & Co. the clothing garment company, bought VRS for its flagship store in the UK and plans to introduce it to another 200-300 stores around Europe.

The Cerberus archive contains 160,000 songs from over 500 independent labels and solitary artists. The venture claims to have copyright clearance for over 4.5mn songs. None of the majors is present. CCL claims to have signed most (around 85%) of the independent dance labels in the UK. Currently CCL is operating servers in London, Tokyo, Melbourne, Rio de Janeiro and S.E. Asia.

Using the System

Upon registration with the service, the customer gives his credit card details to Cercure ATM, a "virtual" ATM machine which is CCL's credit card transaction software. This in turn sends it to the Jukebox. The latter creates a unique Cerberus Audio Player for the client. The player also allows customers to connect to the Cerberus server from the Internet and get the piece of music they requested. The process goes as follows: Each time a request is made for one of the tracks, the server encrypts that track specifically for the player that ordered it and at the same time works out which artists should be paid. The music data, which is compressed, is transmitted to the end customer. The resulting file can only be played by the player that made the request. The system effectively involves the consumer in the whole process and thus ensures a piracy free environment. Since his/her credit card details are in the player, the consumer hasn't got any incentive to give the player to a third person.

Content and Alliances

1. *Audio Music Group Pte.* The company established a server in Singapore as its first step into the Asia Pacific market (end of April 1997). This is a joint venture with

Audio Music Group Pte. Ltd. The majority shareholding is being retained by Cerberus Central Ltd. (CCL). The move wants to take advantage of the abundant bandwidth of Singapore One infrastructure (cable, 10MB bandwidth) to offer music that can be downloaded in seconds rather than the 10 minutes currently over a standard modem connection. Initially it would be a test linking 5,000 users. Local content is considered important for entry, therefore both the Japanese and Singapore servers allow for access in the Mandarin language.

2. *Collecting societies.* Cerberus (as of 1997) has signed licensing agreements with the following Collecting societies, and other industry bodies that represent publishers or the record industry:

   AMCOS (Australia), APRA (Australia), ASCAP (US), BPI, BMI (US), CMRRA, GEMA, Harry Fox Agency (US), IFPI, JASRAC (Japan), MCPS, MPA, NMPA, PRS, SICAM (Brazil).

3. *EMI Music Publishing.* The publishing company has licensed Cerberus to distribute its publishing catalogue. In January 1997 the two companies completed an agreement whereby Cerberus acquired a blanket licence for 1.5 million songs.

4. *EMI International/Virgin.* Record Labels such as EMI International/Virgin have already purchased the server (it costs £500). EMI is using the software to conduct internal trials.

5. *Fraunhofer Gesellschaft Institut* (claiming to be the world's largest research establishment with over 7000 engineers) did the R&D for Cerberus's audio player and MPEG-based compression system. Cerberus said, though, that they would continue to develop its server technology in-house.

10.3 The trials

The main difference between the formats described above and the trials below is that the trials are being tested in closed networks, rather than the Internet.

There are two main trials for music on demand in Europe currently. One is by Eurodat in France and the other one by Deutsche Telekom in Germany. Cerberus and Liquid Audio had trials with mechanical societies such as MCPS in the UK.

10.3.1 Deutsche Telekom

The trial was announced by Deutsche Telekom AG at the International Funkausstellung '97 (IFA) radio exhibition in Berlin. This was also the venue that Deutsche Telekom AG announced the launch of digital TV in the company's broadband cable networks. The service will form part of Deutsche Telekom's T-Online Interactive telephone network which uses ISDN as the carrier technology. The service is called, appropriately, Music On Demand. The trial initially involved about 200 homes. The music shop will be available to about 1mn homes when the service is launched in the summer of 1998.

The venture is the result of a close co-operation with the German arm of IFPI in Hamburg and the German copyright society GEMA -thus legitimising itself in an industry which otherwise tends to view such moves with suspicion. The deal states that the licensing terms are negotiated between GEMA and the record companies participating in the service. Deutsche Telekom provides GEMA with all the relevant data necessary for collection and distribution of royalties.

Deutsche Telekom aims to have content form all the record labels in the very near future. The publishers/labels will act as "music providers". It is confirmed that all the majors have agreed to participate in the trial, making it the first ever of its kind[135]. What probably made the pill easier to swallow for the majors was the agreement that they could retain control of their assets (copyright) by having the right to specify crucial elements in the marketing mix i.e.

a. product (what is sold)
b. packaging (how it sold e.g. single, album, compilation etc.)
c. price (how much it costs)

In addition to Music On Demand the new site will offer programming from the radio station Suedwestfunk Baden-Baden.

Using the system

The customer can select form the supply of content available, listen to the song and then buy it over the ISDN line. Consumers can select if the download will take place in real time or it would be deferred for later. The song can be stored on the hard disk or any removable medium. The compression algorithm (which is based on the MPEG3 standard) allows one minute of music for 0.9 MB storage space. With nearly 650 MB of CD capacity that means about 12 hours of music on a single CD.
Requirements for the system are a Pentium PC equipped with an MPEG software decoder plus an ISDN card and a T-Online decoder for the connection.

[135] Financial Times 16/01/98

The system caters for the protection from pirates copies since the titles are encoded. Delivery costs 23 Pfennig per minute, while the price of the song is determined by the content provider (i.e. the record companies) which demand the full retail price. DT said that the price of a song/album can vary depending on how up-to-date the music is. Before ordering the music the customer is notified about the whole price, as the later is displayed in the order page. The on-line music purchase is paid via the phone bill.

10.3.2 AudioSoft

AudioSoft, was founded in 1988 by its current CEO, François-Xavier Nuttall. The company was founded as EuroDAT, and it's first venture was the manufacturing of DAT tapes. The company soon expanded into the development of interactive kiosks for records labels and collection societies. Pop star Phil Collins, and other members of Genesis are among the shareholders.

AudioSoft developed a proprietary technology for compression algorithm based on the MPEG standard. Besides the audio technology the company developed the AudioSoft File Structure (ASFS) system. This is a copyright management mechanism which allows effective collection and distribution of royalties for all the parties involved.

The trial called "Paris Music" commenced on the 2nd of April 1997 and ended in August 1997. It was rolled out on Lyonnais des Eaux's high bandwidth Cybercâble cable networks in France. The cities chosen for the trial were the seventh

arrondissement in Paris, Strasbourg, Le Mans and Nancy. None of the major labels participated in the trial. Independent French record labels on the other hand provided several hundred tracks for the consumers.

After the trial the company founded the City Music Network that provided the same services as those available in the Paris Music but also enhanced services such as mail order.

The company is currently negotiating agreements with various cable television contractors in Switzerland, Belgium and Holland.

EMI Records as well as other multinationals were rumoured to be in negotiations with EuroDAT[136] but nothing more has been heard since (early 1998).

Using the system

After listening to a snippet of the track, consumers can download them into their hard disc. Using the same idea pioneered by Cerberus, the track is encrypted to prevent unauthorised copying i.e. downloaded music can only be listened to from the server it was encoded for. Each track, retails between FFr5 and FFr25. Intelligent agents are used to make recommendations to consumers based on their history of purchases and their profile.

Users can also order the physical product i.e. CDs. Orders are fulfilled by a partner company called CD-Mail.

As far as payments and transactions are concerned the company preferred to use the Klebox virtual wallet. The technology is developed by KLELine, a subsidiary of the

[136] Webnoize Thursday, May 22, 1997 (http://www.webnoize.com)

Compagnie Bancaire (Groupe Paribas). Klebox allows transactions in any currency with a minimum limit the equivalent of 1FF. Consumers can transfer funds to the digital card from their credit cards and from then on every purchase is debited to their virtual wallet.

10.3.3 BT TRIAL

BT and the Westminster Cable Company initiated a video on demand market trial between October 1996 and March 1997 which incorporated a Music Service. The primary objective of the second BT trial (the first took place in Ipswich and Colchester in 1996) was:

"To build on and complete the VoD learning from the BT Interactive TV Trial, primarily in the context of the objectives of the first trial, which were to assess, with content and service providers:

- The commercial potential of interactive TV

- Which customers will want it?

- Which services will they want?

- How much will they be prepared to pay?

And to enhance the public's perception of BT as an advanced multimedia service company"

The presence of Westminster Cable Company guaranteed among other things an already existing customer base (which was missing from the first trial) as well as a different infrastructure technology with cable replacing copper and fibre.

719 Westminster Cable customers in 355 homes were involved and there were 3 "applications" or offerings: Movies (260 hours of films), TV (150 hours of previously broadcast programming) and Music (140 hours of both video clips and long-form videos):

There was no subscription charge and customers paid on a pay- per-view basis at the following rates:

Offering	Charge
Movies	99p-£2.99
TV	from 10p for an episode of Noddy to 75p (Children's TV was charged at 1p per minute)
Music video clips	short forms: 25p (except for two at 50p) long-forms: 99p, £1.49 or £1.99

Table 7 Offerings' prices for 2nd BT Trial

The trial showed that the revenue potential for Music video on demand was huge. The song '2 Become 1' by the Spice Girls' was purchased 35 times in its first 2.5 weeks on the trial. At a rate of £0.50 for a 8 minute viewing window, the revenue totalled £17.50 for 2.5 weeks. Scaled to the total 23mn homes that have a TV in the UK and assuming only 10% penetration of the service then the figure becomes £45,352.11 per week for just this one video clip.

BT saw the introduction of pay per view for short-form videos (which are not available for purchase in video retail shops, unlike long-forms) to become the basis for fulfilling two service roles:

1. as a PPV revenue stream in their own right,
2. as "trailers" for the same artists' long-form titles "just as singles have always acted in this way for albums in the Music business"

One of the lessons learned was that the telco should "never underestimate the importance of resources needed for content management (including validation, etc)" and "customers' perceptions would no doubt have been that content was being, for the most part, added on a very ad hoc basis". These two remarks show the difficulty that a telco can face when they move into an unknown for them territory of media content provider.

Most important were the pricing issues that stemmed from the trial. "It is the mass-market visibility of the artist or the artist's current single or CD release which has been found to most influence Video on Demand usage figures, rather than any reduction in price, however effectively advertised". "Low price implies low quality" for the consumer as BT has discovered and "not only were the music service customers not price sensitive during this music VoD service market trial, but they could be said to have shown themselves to be 'negatively price sensitive' in most cases!".

It was also felt by the executives that BT should demand some exclusive arrangements with the content providers,. Such as the ability to show titles in advance of their UK release date. This was considered crucial "in order to justify the charging

of Premium prices ... and to maximise revenues from the 'new release' video singles, which will, in effect, drive the service".

10.3.4 Telia Infomedia

Telia (recently amalgamated with Telenor of Norway) is the biggest telecoms operator in Sweden with ventured interests all over the world. As regards distributing entertainment Telia is active in the provision of a service platform; it is through their technological and other competencies that they aim to be "the cheaper network for the content providers and the consumers as well"[137]. But they also see themselves evolving towards more value added services, embracing and expanding all layers including, possibly, content ownership.

The dilemmas they face are the same as any other telco operator in the world and stem from the threat of a zero income environment when telephony markets will be open and highly contested. One of their strategies to overcome this is for Telia to "gradually develop into a new kind of "infomedia" enterprise as the transmission of video and sound expands in the networks"[138]. In pursuing their objectives though, they are faced with rights owners who are not very enthusiastic about letting their rights get exploited by others in a digital environment, for all the reasons that were advocated by the copyright maximalists in the WIPO conference. The failure of video-on-demand trials around the world proves that point. With second rate movies as the only content that the film studios would allow the telcos to get their hands on, consumer apathy was expected.

[137] All words in quotes are form interviews with Telia's executives
[138] Telia Annual Report 1996

Dr. David Philipson, Director of Telia InfoMedia ICC, faces less problems with other IPRs such as "text" copyright since the publishers are fragmented and content is easy to be sourced. The problem lies with the highly concentrated suppliers in the music and film content industries.

Telia is working on a business model for the Internet which basically represents their view of the future in a digital world. The idea is to break down all the value adding activities in a coherent representation that include all the players. In this updated version of the model, presented below, the facilitating services (e.g. the hosting and the network service) are separated from the value chain. According to Dr. Philipson they are "rather unimportant in a way. It is the value chain as such which is the most interesting". The IPR owner is also separated from the content provider, "because the IPR owner could let separate content providers for the Internet environment to exploit that environment, and another for example exploiting the CD ROM market".

A Business Model for Internet

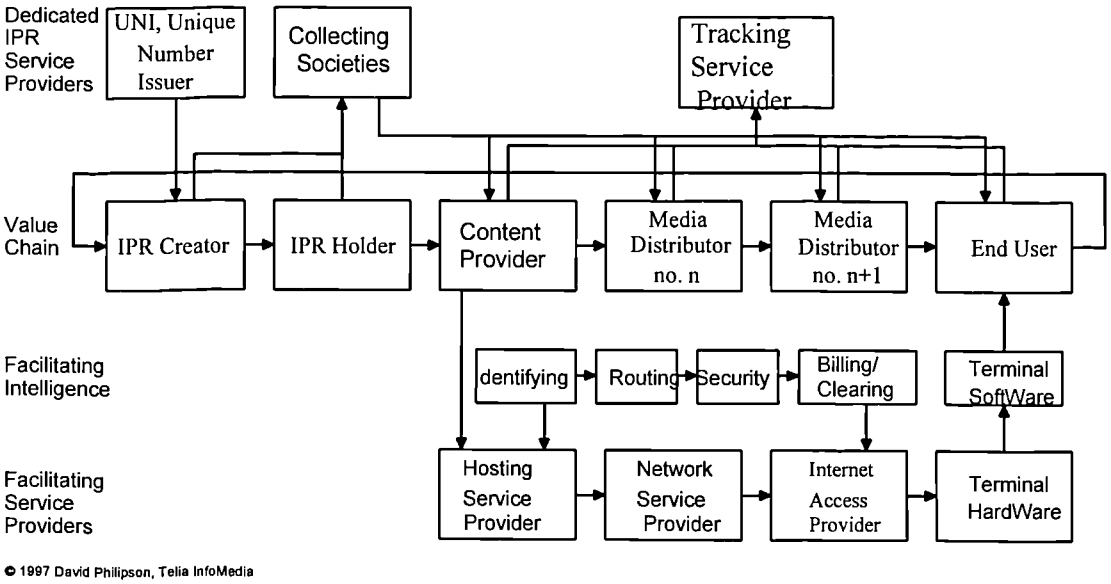

Figure 27 The internet business model

Source: Dr. David Philipson, Telia Infomedia

Media distributor No.1 is usually a Community of Interest (COI) group which places this content in a context of "little types of communication possibilities like chat and other types of interaction" together with "commercial means" like an electronic commerce "mechanism". In this model the media distributor is in reality the context for the COIs group. "An example is America on Line (AOL), which has about 14,000 COI groups. AOL is not providing services to the end users, even though they are the gateway to those COI groups. They are providing services to the COIs like mechanisms for communication, the mechanism for the moderators in the communication forums, the E-Commerce mechanism, the possibility to sell advertising etc.".

This is the value chain in the "interactive mood" of the Internet. But Telia "foresees" that the Internet "is not going to be in many parts an interactive arena". Again the use of the IPRs as a "monopolisation mechanism" are to blame. Such a monopoly is really slimming the choices. In this picture there are "lots of artists on one side, the concentration on the owner side and the, not so big but still big, spread in the distribution or the retailing site which is really monopolising all the distribution chain". One of the phrases that can capture the message that all the telcos were trying to send to the world (and it is the same that the Ad Hoc Coalition tried to sell to the Geneva 96 WIPO treaty) is that "... by concentrating the IPRs or the more important IPRs you take control of the whole value chain".

There might exist "another type of value chain" where "you have the IPR creator and then the IPR owner which make a tunnel technology to the end user". This disintermediation threatens, basically, the content providers and the media distributors. The IPR creators and owners can "physically" control the whole value chain. An example that was cited was "Kirsch and Murdoch in satellite pay TV" where ... "by buying up the most interesting rights for the soap operas the sports, and having reduced the fee, they are going to suck the life out of the terrestrial TV controlling the whole value chain".

Telia has put figures on the interactive and passive parts of the Internet or the narrowcasting and broadcasting parts of the net. According to them then " 80% [will be] more mass communicated media and 20% will be more Interactive". The latter will be the place where new talents are distributing themselves. When they become

"interesting enough" the big 5 will buy them up and then a winner-take-all market will arise which means that "the small IPR owner gets nothing and the Michael Jackson makes a hell of a lot of money".

The repackagers can have a huge negotiating power but it all depends on how the present players are using their position. "If the big five try to do something in the way of Murdoch and Kirch then they will bystep MTV".

Telia is one of the companies that are active pursuing a solution for the problems of IPR protection and proper remuneration of content creators in a digital environment. As such, they participate in the Imprimatur project initiated by a consortium of companies and institutions with the mandate to build consensus around digital rights trading.

10.3.5 Ericsson's Media on Demand

Ericsson's Music On Demand project are part of a larger framework called Media On Demand which incorporates also video, delayed broadcast and media search. As of beginning 1997[139] all those trials were destined for use on IP networks. The assumption was that the local networks will be broadband, with the Internet initially lower bandwidth, gradually becoming able to accommodate a fully distributed network.

The Media on Demand system runs on any platform that can decode an MPEG stream. The system has been tried without problems on networks wired like ISDN (128Kbps), ADSL (2Mbps), Ethernet (10/10 Mbps), ATM (155Mbps) and wireless

[139] Carlvick, O., Nygren, K., Liljegren, S., Skagerwall, R. and T. Stephanson "IP Personalised Media on Demand", Ericsson Media Lab paper.

(2Mbps). CD-quality audio needs 192Kbps and Ericsson claims that it has proved very popular. Provision has been made for the service to be fully customisable, allowing consumers to make their own charts for example. It also includes lots of metadata such as album cover, credits etc.

"Mozart" is one of the two personal agents developed by the company (the other is Chaplin used for recommending movies). This is essentially a "music recommendation" service that bases suggestion of music on the responses of the consumer to previously played music.

Ericsson's Media on Demand system is "designed with a flat rate payment model in mind", but also incorporates other alternatives such as micropayments and sponsoring for advertisements.

The company is contemplating catering for protection of IPRs by allowing consumers to download a Music on Demand interface for free and charging them to access the material.

The system is in a technical trial stage so far, and no agreement has been signed with any of the record labels.

10.4 Consumer search technologies and Internet shopping

10.4.1 Intelligent agents

One of the technological developments that are going to influence the way consumer shop and choose music on the Internet, or even closed electronic networks, is the Intelligent agents, the consumer's "digital butler"[140]. All these services are in a way "market makers" because they connect different buyers and sellers through a centrally

[140] Nicholas Negroponte "Being Digital"

maintained database or the decentralised World Wide Web and provide ways of searching the data. They help the buyers to quickly, conveniently and inexpensively evaluate the offerings of various suppliers.

There exist various intelligent agents already who act as brokers on the Internet. One of the initial applications was to allow consumers to do comparison shopping on the various record shops on the Internet. The most famous is Bargain Finder, an experimental intelligent agent by Andersen Consulting. It must be noted, though, that the Bargain Finder type only facilitates the market for goods such as CDs which are essentially commodities. Quality is assumed to be known before the purchase so the only product attribute worth searching for is price.

The author searched for a very famous recording of an artist using the Bargain Finder intelligent agent. From 10 retailers listed at the time, the agent returned only the price of three. According to Andersen, three stores are blocking out its agent, while at the same time seven others have approached the company, to be included in the Bargain Finder experiment. Despite the resistance of the retailers, and the goodwill of some such as CDLand, a basic problem remains. How do consumers "learn" about their favourite artist, if he/she or they are not already established? To rephrase the question. Using an intelligent agent to shop around for prices is instrumental, but only very late in the purchase decision process.

As seen before music is not a straightforward "search good" but rather a "credence good", because the consumer's choice depends on other factors besides price such as

peer pressure, fashion, nostalgia etc. Besides that when it comes the time to search for the best price, the consumer must already know the name of the artist or the title of the album to write on the little box in Bargain Finder (although a good intelligent agent will cater for spelling mistakes). It's of no coincidence then that Bargain Finder includes hyperlinks to a Top 40 chart (as an index of quality) and a list of stores. It is also of no surprise that the stores oppose such a development since the consumer is actually encouraged to browse the stores i.e. read all the reviews, biographies, view the photos of the covers etc., in short get all the information necessary to make up his/her mind and then come back to Bargain Finder to shop for the best price. Therefore whatever differentiation advantage the retailer had, e.g. the "shopping experience", becomes irrelevant in a setting like that. The CD becomes a commodity that can be bought from any retailer that offers the best price leaving the retailers with no incentive, whatsoever, to participate in markets like that.

Another electronic marketplace is the aptly named The Global Electronic Music Marketplace (GEMM) which boasts a "mega-catalog" of "1,730,110 new and used CDs, LPs, and memorabilia". Consumers can search the database and place orders "directly with over 1165 retailers, collectors and labels around the world!". The difference with Bargain finder lies in the fact that GEMM lists not only retailers but also labels and artists and that you cannot search by price.

10.4.2 Collaborative filters

As the above illustrates, electronic marketplaces in differentiated markets will need to provide both price and product information unlike commodity markets where price information will suffice. While it is easy to provide price information, it is rather

difficult to do so for product information. But while these market places/engines are mainly concerned with finding the best price, there are others that put more emphasis on assessing quality for the consumer.

A typical representative of the latter is the collaborative filter Firefly from Firefly Networks.

Firefly works in conjunction with virtual communities or rather it creates one. Using the personalised Firefly Passport which holds their information, users can visit any participating site. The agent leverages that community's knowledge base by allowing users to rate and review artists and albums. The engine bases its recommendations on the ratings of users with similar tastes. It also serves the advertising companies by providing easily targeted audiences.

The Bignote site (the demonstration home to the Firefly engine) which in October 1997 was sold to Launch magazine, boasts 500,000 members and 14 million album ratings.

Firefly's has licensed its software to site such as Barnes and Noble, Yahoo, and ZD Net.

10.4.3 Comparison of the two technologies

It is not easy to make verdict about anything that is still in an experimental stage. What is interesting to initially observe though, is that the two intermediaries, an intelligent agent (Bargain Finder) and a collaborative filter (Firefly), give some insight on the way both the demand and the supply side reacts with market making agents. The supply side (on-line CD-stores) had trouble accepting comparison

shopping, but the demand side (consumers) embraced the Firefly collaborative filter. That, despite Firefly's possibility of inducing herding effects and free riding problems. I remains to be seen what will be the future uses of those technologies and who is going to benefit, economically, from them.

The possibility of utilising intelligent agents changes the game between suppliers and consumers. Consumers become much more empowered to the point where they can search easily through the clutter of the Internet and do comparison shopping to the detriment of the traditional retailers. As the search costs decrease, reverse markets can be created. That means that the consumers can post their preferences (mainly price) and allow a time window for the delivery by the competing suppliers. Eventually prices will be pushed down and retailers could be disintermediated.

10.4.4 Musicmaker.com

This is an American site launched in October 1997. It offers consumers the ability to compile their own anthologies on-line and then download the songs to be burned on a CD. Musicmaker.com claims to contain more than 60,000 tracks of music available from 20 labels. Labels on offer include Platinum 32 Records, Alligator Records, Fantasy Records, Brunswick Music,Viceroy Music, Grateful Dead Merchandising, Roadrunner, Rounder Records, Sun Records, Van Richter Records, Newport Classics, Ion Records, Magic Music, Red Star and Louisiana Red Hot.

They expect to be able to offer "100,000 tracks by year-end and over 1 million tracks within the next two years". The creators of the site are not strange to the world of music since they were former senior executives of record companies such as

PolyGram, BMG, Warner and RCA (Irwin H. Steinberg for example was Chairman and CEO of Polygram Records USA)

Consumers accessing www.musicmaker.com can create their own, personalised CDs, using search engine provided by the site. Music can be searched in various ways: by genre, artist, composer, instrument or label. A short 30 second sample is available for every track. The consumer can select the music and order it to be "burned" by the company. The price ranges from US$9.95 - US$19.95 and depends on the number of tracks ordered. The CD is then send to the customers in a jewel case complete with the track listings. Customised labels can also be created if the CD is intended as a gift.

Robert Bernardi, chief executive officer of The Music Connection Corporation, owners of www.musicmaker.com says that "We are receiving tens of thousands of hits a day, and our order rate has grown steadily, proving that personalised compilation of CDs is a concept whose time has come."

The initial focus of the site is on three categories: jazz, blues and classical. As the site claims "Customers with an interest in these categories tend to be the most accustomed to searching for particular recordings or tracks, and have exhibited the greatest interest in purchasing compilations produced by speciality music companies and available through record clubs. These music genres also tend to attract older, higher income music customers. With www.musicmaker.com, for the first time they will be able to produce their own compilations".

The site is easy to use and the company clearly does not wish to alienate the record labels, having built in certain safeguards. One is the identification of the country of

origin of the consumer. The company has added a button in their website that potential customers have to click in order to identify their country of origin. That raises interesting possibilities for the way E-commerce is being handled as far as music is concerned, because it means that the company and subsequently the publishers/labels, can control for the regionality of rights and differentiate the pricing. The Credence Clearwater Revival catalogue is available only to US customers, with all the others getting a "sorry" message when they try to access it (provided they were sincere about their country of origin that is). However the author successfully logged in as coming from the US and he could, if he wanted, purchase the 155 Miles Davis songs (by Fantasy records) while if he logged as European he could access only 1. Another way to control for the major's fear of customising CDs is the way songs can be combined (coupled in industry parlance) with one another. To prevent unwanted coupling and mixing catalogues the songs are colour coded. Currently there are two colour codes in operation. The blue colour coded songs are not allowed to be mixed with the black coloured coded ones in a CD! These seem to stem from coupling clause restrictions imposed by record labels

10.5 The importance of copyright

As noted recently by a copyright specialist (Hardy 1998), changes in technology influence copyright legislation by raising important new questions. The latter tend to fall into a few familiar patterns of which the most frequent are:

1. New subject matter questions

2. New use questions

3. Decentralised infringement questions

While Hardy's report does not deal with contract interpretation the author nevertheless devotes the space of a few paragraphs to what he considers to be the fourth distinct pattern. The author concludes "These issues are troublesome and often expensive for the parties to resolve, but they tend to be self-correcting. They are matters of contract, not of overall law or policy, and parties to future contracts can adapt those contracts to changing times". European policy makers of course disagree and that was evident by the interviews with European collecting societies informants (themselves Professors of law) as well as the author's experience with the Imprimatur Consensus Forum.

The blanket licence is not a "naked restrain[t] of trade with no purpose except stifling of competition," but rather accompanies the integration of sales, monitoring, and enforcement against unauthorised copyright use, which would be difficult and expensive problems if left to individual users and copyright owners[141].

Collecting societies are generally responsible for managing copyright but this is done in a rather loose fashion, using basically the current instruments of law or relying on voluntary user compliance or even by educating the user. Technology has lead to a number of trial Electronic Copyright Management Systems (ECMSs) such as the IMPRIMATUR (Intellectual Multimedia Property Rights Model And Terminology for Universal Reference) project and IBM's Infomarket.

[141] Broadcast Music, Inc., et al. v. Columbia Broadcasting System, Inc., et al. 441 U.S. 1

10.5.1 The WIPO treaties

The outcome of the Diplomatic Conference in Geneva, organised by the World Intellectual Property Organisation (WIPO) in December 1996, was hailed as a victory for the creative industries. The significance of the conference lies in clarifying the copyright regime in the digital environment by proposing the following[142]:

- Extension of copyright to on-demand services
- granting of exclusive rights for distribution and rental to the producers
- ban of devices used for circumvention of technical controls

As was showcased, though, in the WIPO conference, the consumer electronics industry and the telcos are not very enthusiastic about the outcome. While many of the developed countries supported the US views, an international alliance of consumer electronic firms, telecommunication companies etc. voiced their opposition by advocating that ratification of the treaties will eventually strangle the growth of the Internet. Indeed the treaties, while signed by around 50 countries each, have since to be ratified (Indonesia was the only country to ratify one, as of January 1998).

10.5.1.1 The US case

The press and those that oppose the "copyright maximalists" frequently insist that Clinton supports the creative industries as a return for their support in his political campaign. But the US merely confirmed their dedication to establish a global digital copyright regime that will favour both the American interests and the American

copyright industry. This, among others, shows the commitment of the Clinton Administration to pursue the vision of a Global Information Infrastructure (GII).

Besides the WIPO treaty, the other important development was the 1997 Global Electronic Commerce Report. It is in this report that the need the need to protect creative materials against online fraud and theft is recognised. Among the directives and suggestions, is the call for ratification of the WIPO Treaties, both nationally (US) and internationally.

There is another reason though, behind the support decision, and it is a purely economic one. US's music and film industries are the largest in the world and most of the copyrighted material that dominates the media globally, comes from US companies. The US then has a vested interest in protecting their copyright industries which contribute to the country's economy in more than one ways. The core copyright industries account for around 3.8% of the total GDP with the total reaching 5.7%. Furthermore the core copyright sector outpaced the economy as a whole by growing twice as fast as the latter (2.85% annual rate of growth as opposed to 1.25% during 1987-1994). And as far as employment is concerned, there are more workers employed in the core copyright sector than in automotive manufacturing, or pharmaceuticals, for example, in the US. The following table summarises some of the economic measures.

[142] WIPO Copyright Treaty and WIPO Performances and Phonograms Treaty

	Core Copyright industries[143]	Total Copyright Industries
Contribution to the economy	$254.6 bn	$385.2 bn
% of GDP	3.78%	5.72%
Estimated annual real growth rate for core copyright industries 1991-1994	5.4%	-
Estimated annual real growth rate for rest of the economy (i.e. without core copyright industries)1991-1994	3.1%	-
% of the total US workforce employed in the copyright sector	2.5%	4.8%

Table 8 Contribution of copyright industries to the US economy

Source: 1996 study by Economists Incorporated for the International Intellectual Property Alliance (IIPA) (estimates in real 1994 dollars)

Another important benefit to the US economy comes in the form of the much needed exports which reached $53.25bn in 1995. Foreign sales witnessed an annual compound growth rate of 10.2% in 1995.

Year	1991	1992	1993	1994	1995
Growth Rate	6.4%	8.3%	11.7%	10.4%	10.2%

Table 9 Annual Growth Rate of Foreign Sales from the US

Source: 1996 study by Economists Incorporated for the International IntellectualProperty Alliance (IIPA)

[143] Core Copyright industries include the film and music industries, book newspaper and other publishing industries, the computer software industry, the theater, advertising, and the broadcasting industry. It does not include, though, other industries such as retail or manufacturing (consumer electronics) which "either create, distribute, or depend upon copyrighted works". These are included though in the "Total" copyright industries.

What is even more important is that exports of the core copyright industries exceed in value those of industries such as electronics, computers or pharmaceuticals. The only other sectors that generate more export revenue are the automotive industries (including the parts business) and the agricultural industry.

Industry	Foreign sales 1995 (in $bn)
Motor vehicles and automotive parts and accessories	62.69
Agricultural sector	54.10
Core copyright industries	53.25
Electronic components and equipment	45.51
Chemicals and allied products (excluding plastics, rubber and drugs)	38.80
Computers and peripherals	34.50
Aircraft and aircraft part manufacturing	31.13
Plastics and Rubber	21.39
Radio and TV communications and navigation equipment	9.06
Drugs and pharmaceuticals	8.21

Table 10 Foreign sales of copyright industries compared with other industries

Source: 1996 study by Economists Incorporated for the International IntellectualProperty Alliance (IIPA)

The international losses due to piracy are estimated at US$6 billion which if added to the above table brings the core copyrighted industries in the 2nd position. US Senator Orrin G. Hatch wrote an article in Roll Call[144] where he prophesised the bleak future for the copyright industries in an unregulated GII: "if familiar technologies result in

[144] Orrin G. Hatch "Copyright and The Digital, Global Marketplace", *Roll Call*, March 11, 1996

$6 billion losses in only 29 countries, the word "devastation" is no exaggeration of the fate in store for our copyright industries".

10.5.1.2 The UK case

The new UK administration is likely inclined towards protecting the copyright regime in the digital era. Following the example of the US, various organisations such as the British Invisibles, BPI and the National Music Council funded research that tried to prove the significance of the music sector for the British economy. And unlike the US where the whole copyright sector is significant, in the UK it is mainly the music sector that can boast a healthy contribution to the economy. Compare three different copyright industries in the following table:

	Film	Television	Music
Gross earnings from overseas	496	113	799
Gross payments overseas	288	228	309
Net Earnings	208	-115	490

Table 11 UK earnings form selected copyright industries

Source: CSO News release 5/10/94; British Invisibles data

The overseas earnings of the music sector contribute significantly to the economy as a whole as the following table shows. The music industry contributes around £571mn from foreign sales, making the UK, globally, the second biggest net exporter of music behind the US (see Table 2).

The importance of the music industry gains an enviable position in the top chart for net earners of foreign income. The net surplus of £571mn is comparable with industries such as steel.

The music industry is also a good employer in the British Isles with an estimated 115,163 employees working in the sector. The contribution to the economy reached £2.5bn or 0.3% of the GDP.

	British Music Industry
Contribution to the economy	£ 2.5bn
% of GDP	0.3%
No of employees	115,163

Table 12 Contribution of the music industry to the UK economy

Source: The Value of Music report

With both the main sources of repertoire (US and UK) exalting their music industries for their contribution to the economy and the global move towards what is termed as the Information Age, it's no wonder those industries will be protected. Unlike the manufacturing sector that can feel the pressure mainly from SE Asia and Japan, the creative sectors are still healthy and will continue to contribute even more as we enter the new millennium.

10.5.2 The official (so far) views on copyright

The US Government's views on copyright are to be found in a white paper written by Bruce Lehman Assistant Secretary of Commerce and Commissioner of patents and trademarks. In

the report it is made clear that "weakening copyright owners' rights in the NII is not in the public interest; nor would a dramatic increase in their rights be justified"[145].

With limited fine tuning, the report continues, the existing Copyright Act could prove functional also for the "Information Age". Apart from the arm of the law, technology and education are recognised as being equally important in addressing the issues. The EU generally views IPRs as in need of reasonable protection but without hindering growth of e-commerce[146].

On the licensing of copyrighted works the stance that is adopted is one where the marketplace decides. The paper makes it explicit that it would not resolve to compulsory licensing since the latter "disregards marketplace forces" The only instance where the law can intervene is when royalties-per-transaction are dwarfed by the transaction costs of licensing individually, as it was the case with cable TV and the broadcasting Programme providers in the US. Given the interactive nature of the medium though and the diminished importance of transaction costs the report maintains that this will not happen in the NII. Both the European Union and the British Government have adopted similar approaches with the US.

[145] "Intellectual Property and the National Information Infrastructure: The report of the working group on the Intellectual Property Rights" by the Information Infrastructure Task Force.

[146] As of beginning 1999 the EU has adopted a storng support for the control of transient copying and caching on the web, which is oposed to the mosre relaxed approach of the US administration.