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# The Dynamics of the Media and Content Industries: A Synthesis

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## Shake (up), rattle (along), and roll (about)<sup>1</sup>

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<sup>1</sup> "*Shake, rattle and roll*", was first recorded by "blackface" artist Al Bernard in 1919. It was released by Edison under a Blue Amberol cylinder 4 minute format (1912-1929), a new cylinder medium--celluloid due to the rapid rate of technological development in the cylinder era. It was published by Jazz musician W C Handy, who tried to copyright the song under his name. Jesse Stone who wrote the hit for Big Joe Turner in 1954 was also involved earlier in the vaudeville scene: the song alludes to a scene in a minstrel show about playing dice (Tosches, 2001: illustrating the connection of minstrel singers with [American folk music](#), [country music](#), and [the blues](#) : 233-234). The same year Bill Haley & His Comets recorded the song. Elvis Presley recorded the song twice in 1955.

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Although these contributions were substantial, the responsibility for this final version clearly remains with the author.

## **Preface**

Media and Content Industries (MCI) carry out an array of heterogeneous economic activities, which encompass publishing (including music), sound, motion picture and video/TV production, programming, distribution and broadcasting industries, as well as diverse information services.

The common thread in these activities is that they are all conducted by establishments primarily engaged in the creation and dissemination of information and cultural products. Also, the last decade witnessed a progressive intertwining of these activities amongst themselves and with the ICT sector, which increasingly provides the means for disseminating MCI products. At the same time, there was rapid change in the way these establishments worked and their business models (production and distribution processes, key players, organisation, etc.). Last, but not least, there was a substantial increase in the overall weight of MCI in the EU economy.

While understanding and mastering the descriptive quantitative tools that we have to hand is important, it is even more essential to grasp the current dynamics in the various industries in the Media and Content sector, possibly in relation with those in the ICT sector, in order to adapt our metrics and analysis to the current and emerging transformations of these sectors.

Therefore in 2009, IPTS launched a research project on the "Statistical, ecosystems and competitiveness analysis of the Media and Content Industries". This research initially included the preparation of a statistical report, a historical report and three subsector case studies, each supported by a dataset and technical annex. In 2010, IPTS decided to complement the initial case studies (cinema, music and newspaper) with two additional subsectors (book publishing and broadcasting) in order to provide a comprehensive view of the sector. In 2010, IPTS had already released a case study of the video games industry, a fast growing segment of the sector.

This set of studies has two objectives:

1. To offer a quantitative statistical approach to the Media and Content Industries, including their extension or blurring boundaries due to: offline and online activities; innovative activities deriving from recently developed technological applications (i.e. P2P, WEB 2.0, social computing or other related current or emerging trends and technologies); specific sub-industries, companies or products that would not readily fit existing taxonomies.
2. To offer an industrial and economic analysis of the Media and Content Industries, and their dynamics. The case studies investigate the past and current ecosystems of these industries, looking beyond value chains or major actors to those aspects that are relevant to the understanding of the transformations themselves: emerging challengers, past and new threats and ways of responding, new business models, major investments, major failures or successes and their causes, technological changes affecting the industry, radical innovations if any, etc.

The six reports<sup>2</sup> are based on a review and synthesis of the available literature and (official

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<sup>2</sup> See <http://is.jrc.ec.europa.eu/pages/ISG/MCI.html> for the following reports:

1. Leurdijk, A; de Munck, S; van den Broek, T; van der Plas, A; Manshanden, W; Rietveld, E (2012) Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: A Quantitative Overview".

and unofficial) data of the MCI sector, desk research, and several workshops<sup>3</sup>. The results were reviewed by experts and at dedicated workshops. The reports aim to offer a reliable set of data and analysis, and also to contribute significantly to the debate about the economic health and development conditions that will support the future competitiveness of the European Media and Content Industries.

In 2012, the IPTS launched a call on “Media and Content Industries: Changing regulation for changing industries”, with the following aims:

- Describe impacts and lessons from digitalisation,
- Draw synthetic lessons about the impacts of digitalisation and give an integrated view about the resulting transformations in the Media and Content Industries, differentiating these impacts within and outside Europe.”
- Propose an overview of value creation in the media and content industries and identify emerging business models from the various subsectors”.
- Debate main policy-related issues, consequences and ways forward”, with a main focus on copyright.
- Compare/confront the economic, industrial and other observations gathered in those studies with the above mentioned European and other non-European policies and regulations.
- Offer a series of policy options or recommendations.

This report offers a synthesis of all the six case studies together as well as some new features based on further research, interviews and conferences. The report underlines the specific dynamics at work within the media and content industries after a succession of disruptive technological waves. This first report is complemented by a more detailed report on copyright issues: “*Changing modes of asset management: IPR and copyright in the digital age*”.

Contract title: Media and Content Industries: Changing regulation for changing industries

Contract number: 152 849 2012 A08 FR

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Joint Research Centre, European Commission

Main contractor: JPS Public Policy

Project leader: Jean Paul Simon

IPTS MCI research team: Giuditta de Prato, Esteve Sanz.

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2. Leurdijk, A., Nieuwenhuis, O., Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: **The Music Industry** (2012).

3. Leurdijk, A., Nieuwenhuis, O., Slot, M., Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: **The Newspaper Publishing Industry** (2012)

4. De Vinck, S., Lindmark, S., (2012). Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: **The Film Sector** (2012).

5. De Prato, G., Simon, J.P, Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: **The Book Publishing Industry** (2012).

6. Sanz, E., Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: **European Television in the New Media Landscape** (2012).

<sup>3</sup> First MCI workshop, IPTS Sevilla, 30-31 May, 2011: “The economics of Media and content industry (MCI). Approaches, case study, economic effect of the digital transition”. Second MCI workshop, IPTS Sevilla, 27-28 October, 2011: validation workshop. All the presentations at the two MCI IPTS workshops are available at: <http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

## **Executive summary**

This report underlines the impacts of the specific changes brought about by digitalisation on the media and content industries (MCI), which have taken place in three disruptive waves. As a result of these impacts, there has been a proliferation of strategies and bets on the evolution of the market. These are driven by a growing number of players, which contribute to a multiplication of competing business models based on different, often clashing business cultures.

These economic dynamics have resulted in an industry with numerous gravity centres (devices, networks, contents and intermediation among others). This report explores the ways the different layers of the media and contents industry (technological infrastructures, distribution and intermediaries, and contents) are being (re)articulated within a new “ecosystem”. It analyses the industrial aspects and how this new ecosystem and its value chains are being restructured in a global market with emerging regions like Asia. It shows how the cost structure has been altered, paving the way for different business models. The report follows the evolution of the market structure and of the revenues.

### **Digital upheaval in the media**

The current digital upheaval of the media sector is driven by two main features: the emergence and intermingling of sectors and players that were earlier focused on their core business, and the shift of power towards downstream rather than upstream activities.

Digitisation is not new to any of the MCI subsectors: they all went through a transformation in their production processes (digital recording, computerised editing of films, desktop publishing) during an early stage of digitisation, not to mention the transformation resulting from the mere introduction and development of computers in firms. This phase varied in scope and scale across sectors; it was implemented through different agendas, but seemed to mostly affect upstream activities. The first digital innovations of the 80s and 90s did not have the disruptive character of today's transformations. This phase did not extend to distribution, and hence it did not directly affect the customers or the management of commercial relationships with them.

What is new, however, is the progressive intermingling of sectors (media, telecommunications, IT) that were separated before, thereby creating a new ecosystem. There are very different types of firms in this ecosystem and their performance also varies. It includes highly profitable IT companies, network providers with declining revenues and media companies with often rather tight margins (though some are also highly profitable).

In the “old” world, each of these sectors focused on its core business and managed its own assets accordingly. Typically, telecom providers provided services to all segments (residential and business), media companies bought the services they needed to reach their final customers (some production services, agents, wholesaling, logistics, transmission/distribution, and retail).

In this new “ecosystem”, each segment is now competing with all the others under their own business models for the final consumers. They are fighting to become the primary gateways for content navigation and provision. Acting as dis-intermediation agents, the new players provide, or will provide, content aggregation and distribution and advertising management. Moreover, they will provide additional services that may compete with other services provided by legacy players, often removing revenues that subsidized the

production of contents (such as the revenues from classified ads and advertising with newspapers).

Hence, there has been a significant change in the dynamics of the sector, shifting the balance of power downstream away from the upstream: i.e. away from the “production” side of the media toward the distribution side. In other words, two different kinds of economics are colliding: the economics of production of cultural goods (and prototypes) and the economics of distribution of digital goods and services.

This move toward a greater control of the downstream is a feature of more mature markets where the marketing/ distribution takes backward control over production (engineers, artists). This is illustrated by the emergence and domination of large retailers such as Carrefour since the late 60s, and more recently, the Walmart phenomenon. Large retailers tend to impose their own conditions on their suppliers. Amazon, one of the fastest growing IT companies since its foundation in 1995, had revenues of 34 billion US \$ in 2011<sup>4</sup> while the revenues of the entire French book sector added up to a mere 5 billion euros in sales (in 2009). Downstream players, such as Apple or Walmart<sup>5</sup> can operate at a loss on the sales of these goods and thus encourage people to purchase other products (such as iPods) in their stores.

This evolution has been enabled by IT technologies since the introduction of computing for the management of these enterprises. With a digital good, the entire value chain can be digitised. It becomes homogenous, with no physical disruption due the production, storing, or distribution of the good. Online distribution in a digital world, characterised by huge economies of scale and scope, further strengthens the position of IT players (social networks included). This evolution is ongoing: cloud technologies, for instance, make server-based distribution of video services possible. This reduces the cost of making additional programmes available to the customers, unlike traditional multichannel video programming distribution (cable, satellite), because the costs of the additional capacity requested are lower.

In these circumstances, most legacy media players are trying to re-invent themselves in ways that are reminiscent of what telecom operators went through over a decade ago when telecom markets were opened up. The players come from different fields, but all are competing to own the screen and/or the user. This redistribution of power is having a huge impact on the value chain.

Businesses, formerly constrained by geographic boundaries and the scarcity of certain kinds of resources (e.g. spectrum) are now under pressure, as new services (such as server-based distribution of content) are ‘location agnostic’: customers can access, for instance, Netflix or DailyMotion from any location. The ubiquity of the Internet is turning the legacy media logic upside down. Because of its digital architecture and organization, the Internet has created a major schism from that legacy model.

The traditional, oligopolistic and vertically-integrated market of the media industry is being challenged, as the industry moves towards a value chain with many participants. The traditional value chain was dominated by the publisher/ aggregator segment, which was largely made up of integrated firms (production/ publishing/ distribution-retail). Some

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<sup>4</sup> To be noted: Amazon turn-over represents only 4% of that of Walmart (US \$ 422 billion), also a retailer introducing cultural goods on the market.

<sup>5</sup> Walmart offers its own online video service: Vudu, a pay-per-view (PPV) streaming to computer or Vudu-equipped devices.



aggregators even owned the technical segments of the industry.<sup>6</sup> The only element that was not under some kind of control by the publisher/ aggregator was the enabling device (radios, TVs, record, CD and DVD players).<sup>7</sup> Working under a closed shop model allowed publishers/ aggregators not only to keep their major influence on the distribution and retail segments but to manage their customer base as a major asset, selling additional services or products to improve revenues.<sup>8</sup> It also offered better protection of other assets, like copyrighted contents.

### **Three waves of changes**

The upheaval of the MCI sector initially came from outside - from the telecom industry, which was looking for new streams of revenues to mitigate the loss of its more traditional revenues from fixed networks (voice telephony). In the 90s, telecom operators started offering other services when deploying their broadband networks (ADSL), adding data and video services sold in bundles (triple or quadruple play) to voice telecommunications and access.

In a second phase, after 2000, IT companies (search engines, e-dealers like Amazon and eBay, then social networks and manufacturers like Apple) took over and led the digitisation process. This second phase disrupted the legacy model in two ways. First, the switch to digital distribution drastically cut the need for physical logistics. A whole chunk of former business has shrunk, disappeared or will disappear: i.e. physical goods (CDs, DVDs, books), part of the legacy logistics (trucks...), and retailers (e.g. Tower records (CDs), and the companies Borders (books) and Blockbuster (DVDs) have filed for bankruptcy in the US).<sup>9</sup>

In addition, the new players are granting access to their distribution platforms on their own terms (sharing of revenues, prescribed retail prices, type of sales). New intermediaries are circumventing the traditional industry through their direct access to the consumer (re-intermediation). The role of these new intermediaries has become compelling; avoiding their intermediation is more and more difficult as they turn into the main access providers in a global market where scale matters. Retaining control of the commercial aspects of their digital sales channels has become key for legacy players, in order to manage their main asset, the content.

However, a third phase is opening up: legacy media players are establishing new relationships, and signing commercial agreements with new entrants to become more proactive players in the 'apps'<sup>10</sup> age. The Internet is no longer seen as a threat but as an opportunity to offer new streams of revenues. There are new programmes, new services, new distribution channels and new devices. All the media sectors have witnessed these new dynamics over the last few years.

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<sup>6</sup> For example, printers in the case of newspapers and book publishers, technical industries in the cinema

<sup>7</sup> Although historically when radio was introduced, manufacturers were subsidizing contents to sell their devices. Later, the role shifted to advertisers (soap manufacturers), the notorious "soap operas". The videogames industry, probably because "born digital" is an exception: hardware manufacturers such as Sony, Nintendo and Microsoft dominate through their consoles, and exercise a lot of power over the other segments.

<sup>8</sup> For instance newspapers used their customer data base for direct and indirect marketing.

<sup>9</sup> In the UK, in 2009 1000 outlets closed down. See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>10</sup> "Apps" is used for application software developed for specific purposes e.g. "mobile app".

*Newspapers publishers* intensified their efforts to bring out tablet-based apps throughout 2011. In 2011 in France, the newspaper trade association<sup>11</sup> launched the French consortium ePresse and opened its digital kiosk.<sup>12</sup> The same year, in Spain, a consortium of companies<sup>13</sup> set up a similar service, Kioskoymas<sup>14</sup> (30 dailies<sup>15</sup>), for mobile and PCs. In the US, publishers announced tablet-based apps throughout 2011. Time Inc., announced tablet versions of all 21 of its publications (PEW, 2012).

In the *book sector*, the leading French book publishers, Hachette, signed a deal with Google for e-books in August 2011 to put a large number of out-of-print books on its Google Editions eBook store. The company has also come up with innovative applications for its magazines. Lagardère Active is the leading media group in Mobile Internet in France with 18 brands. In the EU, some major digital platforms, which brought together several national companies, were launched in 2010: e.g. in Italy (Edigita by RCS, Mauri Spagnol and Feltrinelli), France (Eden by Flammarion, Gallimard and La Martinière) and Spain (Librandia by Planeta; Santillana and Random House Mondadori). In Germany, Bertelsman is preparing a platform in cooperation with another German publisher, Holtzbrinck. This evolution may pave the way to a faster switch to digital in the trade book sector. It should be noted that scientific, technical and medical (STM) publishing is already in digital format (90%).<sup>16</sup>

*Connected TV*<sup>17</sup> is growing fast. Over-the-top television of all kinds is becoming a real alternative to the linear distribution of video (cable or satellite subscriptions), as illustrated by the growth of Netflix in the US. Nevertheless, linear TV still dominates and customers are mostly viewing catch-up TV rather than other kinds of non-linear programmes. According to the Luxemburg-based media group, RTL, broadcasters must move with their audiences and use all relevant digital platforms, as audiences become more flexible. The German group ProSieben provides another example of this kind of diversification with online video and online games, which account for a growing portion of the group's revenues. The Canadian audiovisual firm, TVA, based its growth on the integration of various distribution channels. Apps are companion services on BskyB's Sky Player. Despite fragmentation, consumption is steadily increasing: 222 minutes per day/ per person in 2009 in the EU (275 in the US), a growth of 19 minutes since 2000. Even though there is such a high degree of fragmentation and there is an amazing number of available channels, the main legacy channels are still dominant on each national market in the EU.

In the *music sector*, Virgin Media UK launched a mobile music store based on the book club model: for a monthly fee (3.36 Euros), subscribers can download five tracks per month (PWC, 2011). Other examples of subscription models for music are Spotify, an EU firm, and Last.fm. (both of which are streaming platforms in the music sector). On Pandora, a free

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<sup>11</sup> Syndicat de la Presse Quotidienne Nationale : SPQN.

<sup>12</sup> ePresse brought up eight titles: five dailies ("Le Figaro", "Le Parisien" and its national edition, "Libération", the sports daily "l'Equipe" and the business paper "Les Echos"), and three newsweeklies ("L'Express", "Le Point", "Le Nouvel Observateur").

<sup>13</sup> PRISA, Vocento, Heraldo, La Información, La Voz, Intereconomía, Godó, Zeta, Última Hora, Axel Springer, RBA, América Ibérica y G+J.

<sup>14</sup> <http://www.kioskoymas.com/epaper/viewer.aspx>

<sup>15</sup> Among which the leading Spanish papers: "ABC", "AS", "Cinco Días", "El País", "La Vanguardia" and 60 magazines, "Lecturas", "Muy Interessante", "Saber Vivir".

<sup>16</sup> See the report on the book publishing industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>17</sup> Connected TV (or smart TV) refers to the delivery of broadcast and broadband content to the consumer through connected TVs (direct access) or set-top boxes and game consoles (indirect access).

music service, customers specify what artists or songs they enjoy listening to, and similar music is then streamed to them.

*Cinema* studios are benefiting from online distribution with increased margins. The number of VoD services has increased overall over the last couple of years. In 2012, the number of online video on demand channels was estimated at 251 (E.C., 2012).<sup>18</sup> "Le Meilleur du Cinéma" is a French collective that was set up in 2001 by twelve independent producers and distributors. Today, it has around fifty partners and represents about 40% of the French annual film production output. In 2006, its VoD platform "Universciné" was set up, and a web site was launched in April 2007.<sup>19</sup> In 2012, US VoD companies Netflix and Hulu started offering original TV series on their platforms.

### **The changing nature of competition and consumption: a clash of cultures**

Drastic changes have taken place over the last decade in the telecom services and equipment sub-sector. These have been driven by the entry of more recent players from the ICT sector (e.g., Apple, Microsoft, Google or Yahoo).

The deployment of broadband networks, as well as the diffusion of new devices (smart phones, tablets), have been major enablers of the growth of new services and markets. The role of telecommunications operators has developed beyond the mere provision of networks and services (e.g. they have become enablers of innovation for other players, backing the creation of new market opportunities such as applications on smartphones). In the mobile telecom sub-sector, smartphones outperformed the overall mobile devices market in 2009 and 2010. The release of the Apple iPhone in 2007 played a key role in triggering this upgrading of devices, while mitigating the expectedly negative impact of the financial crisis.

The smartphones phenomenon not only contributed to the upgrading of devices but it also changed the way customers use their mobile phones, e.g. by shifting the patterns of use toward the Internet world<sup>20</sup>. It paved the way for the creation of an array of new applications, numbers of which have multiplied by 6 in just one year (2010). Similarly, consumption grew with iPhone users spending almost double the time on data intensive applications that they spent on other mobile data uses (A. T. Kearney, 2011).

Mobile has become a significant way to distribute news, and music. It is certainly one of the fastest growing platforms for these contents and assorted mobile services (smartphones or tablets). In the US, in 2011, more than three-quarters of the adult population owned laptops or desktop computers, and 44% of adults owned a smartphone. The number of tablet owners has also grown by about 50% since the summer of 2011, to 18% of Americans over 18 (Pew 2012). PCs remain the primary access point but mobile access is growing fast. It should be noted that China and India are the fastest growing mobile markets in the world (de Prato et al, 2012). The 3G market started growing in China and India.

We are moving toward a five-screen world: TV, PC, game consoles, connected TVs and mobile (be they smartphones or tablets).

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<sup>18</sup> This figure does not include catch-up TV, news-only services, adult programmes, films trailers, home shopping programmes and branded services such as YouTube, Dailymotion and iTunes; at 2.

<sup>19</sup> See the report on the cinema industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography: Annex C.

<sup>20</sup> Or even allowing access to the Internet in emerging economies with a low fixed line penetration.

*The weight of the downstream: competing business models, clashes of culture*

This emerging new global ecosystem blends the telecommunications, the media and the information technology industries together. However, the relative economic size of the media component, although it is evolving over time, remains small compared to its industrial IT counterpart, the legacy telecom players (network operation and service, equipment) and the new players from the IT world (intermediation and IT services and software). The total sector (network operations, hardware, IT services and software, content and intermediation) has grown from 2006 at the rate of 8.4%, up to 1.207 US \$ billion, despite a 2% decline in 2009 (Booz&co, 2011).<sup>21</sup> The content sector grew "only" by 4.9%. This growth is mostly due to new digital business models and takes into account the negative impact of the recession on advertising revenues.

However, the emphasis is too often on the technological side of the supply side, paying too little attention to the demand side. These technologies, as enablers, do not operate in a vacuum. As a shift is happening from products to services, toward more "dematerialisation", it is all the more important to take into account the evolution in patterns of consumption. Consumers are being empowered and interact with the content in novel ways. They can even produce some of the content themselves (user-generated contents).

New forms of interpersonal communication (instant messaging, chatting...) are emerging with new kinds of contents being added to the legacy kind. More broadly, consumers are looking for/ accessing items rather than a legacy bundle: an article rather than a newspaper, a tune rather than a DVD,<sup>22</sup> a film rather than a cable network (growth of Netflix), catch-up TV rather than linear TV. For instance, younger customers are listening to music in a more itemized way, creating their own repositories. Customers are moving away from the physical product as long as they have ways to access to the product as a service anywhere, anytime as illustrated by the example of browser games<sup>23</sup> in the video game industry<sup>24</sup> (de Prato et al., 2010, 2012). The huge memory of portable devices (mobile, USB key, hard disk) enables consumers to plug in their playlist wherever they go (at home, at work, travelling...).

The status of ownership of a media product has been transformed. New cross-media products and services, with numerous combinations have become possible. Consumers reveal patterns of a wider consumption scope. However, future patterns of behaviour remain uncertain.

### **Cost structures, benefits but uncertain revenues**

Due to digitalisation, many costs are being re-allocated, and cost structures are changing. Some costs are disappearing: e.g. manufacturing of the physical good, physical transportation, storage. Some costs remain unaffected (creation/ development, editorial process, marketing and sales<sup>25</sup>) while others are shifting. For example, part of the

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<sup>21</sup> Described as the the global telecom, media and technology (TMT) ecosystem.

<sup>22</sup> Although Page et al (2010) put a note of caution about this trend, stressing an upward trend for digital albums in 2009 in the UK, reaching the same value as digital download.

<sup>23</sup> Casual games, not very complex, easy-to-use games, an important and rapidly growing subset of online games.

<sup>24</sup> See the report on the video game industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>25</sup> In the case of music, marketing and promotion also have a large share in the total costs: 28 per cent in 2009. See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

production costs of music are shifting with the emergence of "homestudios",<sup>26</sup> as are promotion costs, with the surge of blogs and other tools. New costs are appearing mostly on the software side of the equation (security, rights management...), bringing along a growing segment of enabling technology providers (web hosting, content delivery networks, billing).

All in all, the real costs of distribution in the various segments of a partly online industry are still unclear and difficult to gauge properly. It is certain, however, that the shift will be characterised by tremendous decreases in the price of media distribution and information. In addition, these new technologies are likely to bring further broad gains through flexible pricing, low delivery costs and virtually unlimited capacity (server-based and cloud applications), as well as higher efficiency.

Historically, some of the media industries in the US, like broadcasting, have benefited greatly from the introduction of technologies over the last four decades. The revenues from the distribution of films in the US followed a similar pattern, with the introduction of each new technology triggering additional streams or revenues (broadcasting, cable, pay TV, DVD...).

However, a closer look at the long-term evolution over a sixty year period of commercial media (edited media only) revenues in the US shows that revenues measured as a percentage of the US GDP went up until 2000, then reached a plateau and decreased thereafter to return in 2010 to the level of 1950 (Waterman, 2012). Revenues are consistently falling (or flattening) especially in newspapers and music, and revenues from the Internet or from the newest segment of the media, video games, have not compensated so far the decline. Unfortunately, we do not have similar data for the EU market.<sup>27</sup> It is possible, however, to compare the average growth of value added for newspaper publishing, books, and recorded music in the six largest EU markets between 1995 and 2007: a similar pattern of decline is revealed.

Therefore, questions about the extent to which potential new sources of revenues will compensate for declining revenues remain unanswered. Revenues have been falling or flattening for quite some time in the media and content industries for many reasons: changing patterns of consumption, "generational effects", evolving willingness to pay, increased competition. The decline does not coincide with digitisation and in most cases started earlier. However, neither digitisation nor the economic crisis has helped, especially for the industries that rely most on advertising revenues.

The global growth of the sector forecast by specialised consultancies is modest at best and unevenly distributed between segments and regions. Even if the digital share of global entertainment is growing steadily, for most content industries it remains modest or plainly low: less than 2% in the EU for e-books even in the fastest growing market the UK. The revenues from new streams of activity such as interactivity of the leading European commercial television groups are thin or nonexistent (European Audiovisual Observatory, 2010). The online market is relatively marginal for Pay VOD. Online revenues (VOD online and SVOD) are growing but revenues from VOD and SVOD accounted for less than 1% of the total European audiovisual market in 2010. In the US, since about 2000, online video

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<sup>26</sup> Traditional studios are closing, id music report.

<sup>27</sup> See the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

streaming has become widespread, but its overall proportion of all TV viewing remains under 2% (Waterman & al, 2012), with a revenues share of only 1.5%<sup>28</sup> in 2010.

The music industry, in the US only, is an exception with a 43% digital share of recorded market. This share is only 13% in the EU (IFPI, 2010). The video games industry is another exception due to its digital birth: mobile and online will reach 50% of the global revenues in 2015 (PWC, 2011). It is no surprise that some consider that value has not only shifted but has been destroyed in the old media by the capture of consumers and traffic, and can no longer be regained as was the case with previous technological changes.

Online distribution of physical products is not a major distribution channel. Retailers (small and big) still constitute the main channel, typically for books and on both sides of the Atlantic. The exception is again music, especially in the US and the UK, where retailers and retail chains are closing.

Looking at media segments, some are faring better than others. The video game industry is growing steadily. Broadcasting remains a profitable business. The music industry (at least its recorded segment) was badly hit: down 7.3% in 2009, digital spending is expected to overtake physical spending in 2014 (PWC, 2011). However, the global 'music' industry revenues rose from \$51.2 billion to \$74.1 billion between 1998 and 2010. Newspapers went through an even worse recession in 2009: down 10.9% for newspapers and down 11.2% for magazines. The fast decline of newspapers does not appear to be slowing down, as a compound rate of -1.5% is forecasted for the period 2011-2015. For magazines, the subsector seems to be recovering and a moderate growth of 3% is forecasted for 2015. One can assume that these data are even more dramatic in mature markets as the average data include growing spending in emerging economies (India, for instance). In sharp contrast, the Internet segment is predicted to grow fast with a compound growth rate of around 13% over the same period (2011-2015) (PWC, 2011).

From a regional viewpoint, only emerging markets (with Brazil and China being the fastest growing) are seeing growth, while mature media markets are declining (EU, US). It is worth noting that Asia is in the lead for digital sales: the share of digital music sales reached 85% of total music sales in South Korea.<sup>29</sup> Japan is an interesting case: sales of Japanese mangas on mobile in digital format have reached 65% of the total market. Asia-Pacific has three of the largest world markets for video games, out of four in the following order: USA, Japan, China and South Korea. The fastest growing social networks are Chinese: Tencent<sup>30</sup> and Baidu (In-Stat, 2010, b). By the same token, in 2010, cinema admissions were falling in mature markets such as the US (-5.2%) and EU (-1.6%) but rising in growth markets such as India, China, Russia. India is the largest market in terms of admissions with nearly 3 billion (2009), far ahead of both the US (2010: 1,341 billion) and the EU (2010: nearly 1 billion).<sup>31</sup>

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<sup>28</sup> Adding online TV sales (0.2%), online video subscription (0.8%) and online TV advertising (0.3%: Hulu and TV.com).

<sup>29</sup> See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>30</sup> The Chinese site overtook Facebook reaching 637 millions active monthly users as of 2010.

<sup>31</sup> The Chinese market is still small (264 million) but likely to grow. *Source*: Florence Hartmann, EAO, presentation at the IPTS MCI May 2011 workshop: <http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

## **Changing markets structures and innovative business models**

“Re-intermediation” through the new gatekeepers often means working under the conditions they are imposing on legacy players (be it under an agency model as offered by Apple, or wholesaling like in the case of Amazon). For the content industries, becoming wholesalers of contents rather than direct distributors to customers creates tensions as retail is no longer under their control. Their position is all the more uncertain as the new entrants can offer contents in various kinds of bundles, pushing their own products or services first. They can even sell existing contents at a loss as Amazon did with books (with e-books and its Kindle reader), thereby reducing publishers’ already low margins.

Even if content of all kinds is clearly a strategic asset for new entrants it does not provide the bulk of their revenues. Apple with global revenues of 57 billion US \$ derived only 4.9 billion US \$ from all types of contents in 2010. In the music business, in 2007, Apple derived 8 billion US \$ from the sales of its iPod but only 1.7 billion US \$ from the sales of songs. This should be compared with the 4.4 billion euros 2010 annual revenues of the Universal Music Group, the largest music label worldwide. For most of these players, contents are just another important application within a more global strategy.

On the disintermediation side, direct sales from the producer/ creator/ developer become possible, for instance in the case of video games, or in the case of the film industry. It opens up a window of opportunity for studios to directly distribute their contents on the market. Bloggers may find various means of monetizing (or not) their contents. Nevertheless direct provision, while beneficial to some, may not be the ultimate solution for all, especially for smaller companies or companies without strong brand names as increased marketing costs are likely to follow.

A radically changed cost structure paves the way for different business models. For instance, server-based distribution of video services reduces the cost of making additional programmes available to the customers than the traditional multichannel video programming distribution (cable, satellite) because of lower costs of capacity. As a result, customers may be more willing to pay for an increased choice.

During the first phases of online distribution, the “natural” tendency was to duplicate the legacy business models from the analogue/physical world in the digital world. Now, however, it has become possible to introduce new forms of advertising, providing an opportunity for magazines and also for e-books, video games and music online. It illustrates the path toward a service model where the consumer is buying a service linked to some editorial content rather than plainly the media per se. New business models were introduced by new entrants from other sector or “pure players” (YouTube, Netflix, Hulu) have been slowly adopted by traditional media companies.

Online distribution offers novel ways to monetize contents and to test the willingness to pay of consumers as illustrated by the video games industry. This industry, for instance, saw the birth of the virtual item model: basically any item can be sold as virtual. Under the “Freemium” business model, the content is made available for free online. Some customers may be willing to buy items as illustrated by the example of video games. The model is built on economies of scale. This is an innovative use of a two-sided market with segmented pricing (or non-pricing scheme): most customers will get free services, supported by those who are willing to pay. Innovative non-commercial models are also to be found: maintained by a community, as illustrated by the well-known example of

Wikipedia or sponsored by voluntary contributions paid by music fans to be connected to artists, as illustrated by “Patronism”.

Some other business models are built upon user-generated contents (UGC), for instance commercial distribution platforms for amateur or semi-professional content: Bildunion or iStockphoto, where users can upload their pictures and offer them for a fee or free-of-charge. For their on-line editions, most newspapers frequently rely on their readers' contributions. However, these various forms of crowdsourcing in the media can obviously be perceived as an easy option to reduce the overall costs of labour in order to better adjust to the sea of changes, for instance for drastic cost reductions in the newspaper industry (Pew 2012, Waldman 2011). In segments where most of the workforce was not employed on a permanent basis (like authors in literature or music), distributed labour may nevertheless offer some opportunities.

### **Reviewing policies**

From an economic viewpoint the core question is: do these new forms of distribution contribute to increased media production, more diversity and enhanced consumer and producer surplus?<sup>32</sup> If the answer is negative, then the question may become: how can production and consumption of content and media goods and services be supported in a sustainable way? This raises the issue of public intervention which is a common feature in most of these industries.

Cultural goods are considered of special value to society, and as such, deserve to be treated differently from other tradable commodities. The production of these merit goods generates further externalities for society as a whole (cultural, societal...). This often justifies public intervention beyond the mere correction of an imperfect market and market failures. Governments intervene directly (subsidies in the case of cinema in France, or zero VAT on books in the UK, for instance) or indirectly (various tax breaks, and reduced postal rates for the distribution of newspaper or books).

#### *Towards public intervention?*

This issue of public intervention has generated hot debate, often characterised by rigid but predictable positions. The debate on the funding of production or on cultural diversity is often confused and confusing, plagued with entrenched positions. However, before considering any intervention one should carefully look at how these digital markets work. In an efficient market, the production of such goods should eventually find an adequate financial resource.

Measures to support the legacy players are usually implemented through a tax levied (typically hardware-based levies) on some segments of the industry (the growing segment) to fund another one (a declining or more troubled segment), a rather distortive approach with potentially negative effects on new markets. The outputs of such measures are usually difficult to assess properly: in the case of copyright levies, their effectiveness in achieving the assumed goal has been questioned.

In addition, industrial policies meant to prop up legacy players have not had an impressive track record. It is thought that the fixed price policy for books has successfully maintained

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<sup>32</sup> A difficult side of the issue is how to find the proper indicators to answer to these questions in the absence of reliable data.



the network of retailers in the countries where it was implemented.<sup>33</sup> This may be linked to the fact that the major EU book markets like France, Germany and Spain are “*markets of bookshops*”.<sup>34</sup> Such structural factors cannot be overlooked.

However, it does not follow that policies designed for the physical world will be effective in a digital world, as it seems was assumed when the same policies were applied to e-books. Distribution is very different in a digital world from physical distribution; these supply-side policies may reach their limits. Therefore, not surprisingly, competition authorities are not willing to give any protection against (new) competitors. Instead they aim to enable a diversified offer (prices and features). In an emerging market, it would be unwise to freeze the market: the burden of proof remains high on policy makers to set policies out of the market mechanisms. Therefore, it is still necessary to clearly identify market deficiencies as a prerequisite to selecting adequate remedies on a case-by-case basis.

*Global/ multi-domestic/ local: where does the EU stands?*

The trend toward globalisation has been going on for quite some time and not only in digital markets. EU legacy players have been leading in some sectors like the publishing industries. Unlike the audiovisual (film, TV) and the music industries where US companies dominate, European companies have achieved stronger position in publishing than US companies with a small number of very large players being world leaders. Of all the media and entertainment markets, the book market is the only one where EU companies (Bertelsman, Hachette, Pearson, Wolters Kluwer) lead. In the videogames industry, European players, absent in the console hardware segment, supply a large share of world's middleware needs. European middleware providers even dominate the important South Korean market (EGDF, 2011). Europe hosts a large number of game developers' studios, often the creators of major market successes. All in all, however, the trade balance for the European MCI was negative in 2007, with a total trade deficit of 1,291 million euros.<sup>35</sup>

In the EU, the level of demand for TV or video originating from other EU markets is low (EC, Enders, Plum, 2012). The proportion of European TV fiction broadcasted by European TV channels was only 40% and for films the single European market seems to work best for European subsidiaries of US firms. In fact, there is no single market as such, because the US or national films have the largest share in the domestic markets: “*the common European film market remains Hollywood-oriented*”.<sup>36</sup> Most of the national films and TV series do not cross borders.

Equally, local music has an important share in its domestic market, but does not cross borders either. Therefore, firms will logically develop multi-domestic strategies based on their knowledge of local markets. The use of the territoriality of rights is one of the strategies but not the only one. Reformatting content locally is another,<sup>37</sup> as are local storefronts. Although the easing out of the clearance of rights is a welcome move, multi-

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<sup>33</sup> See the report on the book publishing industry, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

<sup>34</sup> F. Benhamou, “*La France est un marché de librairies*”, presentation at the Jornadas del libro digital, Sevilla May 17, 2012, “*L'économie du livre confrontée au numérique: le cas de la France*”?

<sup>35</sup> See the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

<sup>36</sup> See the report on the film industry, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

<sup>37</sup> See the report on the broadcasting industry, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

territory licensing for online distribution of audiovisual works in the European Union may not be a panacea to make up for the lack of demand for non-national works. Firms will licence first and foremost attractive international contents (Plum, 2012), mostly from the US. Hence, there is a paradox: the less “attractive” national contents are likely to cross borders easily, being more widely distributed but less often watched.<sup>38</sup>

Digitisation for distribution brings cost savings which also seem to favour US companies on the content side: allowing, for instance, Hollywood to strengthen its economies of scale and blockbuster strategies. In addition, the same holds on the distribution side, allowing companies like Amazon to dominate in some segments, raising concerns about an extension of this domination to other segments. This could, however, be addressed by competition law and would not necessarily have to be dealt with ex ante. For instance, the book industry fears that the existing EU policies designed to foster online distribution may even strengthen this domination allowing the US to dominate as it has with audiovisual content. Other measures such as the harmonization of reduced VAT for digital goods seems to be lacking or difficult to achieve at EU level, triggering tax shopping by US companies to establish themselves in the country offering the most attractive tax regimes. The European Commission has flagged this lack of fiscal harmonisation as a barrier to intra-EU trade (EC, 2011).<sup>39</sup>

#### *Digital media worlds of “co-opetition”*

The world of edited media is moving toward a world of aggregation, keeping some dimensions of the earlier world(s) like editing, but adding new ones. The digital media world is also becoming more global with emerging regions like Asia, which lead in some markets. At the same time, the domination of US companies is also increasing in both the audiovisual and the IT sectors.

In an on line world, numerous services will be bundled together, to bring in secondary and additional revenues. Some of these services will be provided by new entrants and suppliers. App stores are offering brokerage services, indirect marketing (like newspapers used to do). New entrants such as telcos could offer billing services. As a consequence, economies of scale will matter more and more, and major media firms may morph into coordinators, integrators, and financiers for the specialist firms. Innovative business models will offer novel ways to monetize the service(s). However, we are not there yet and the sustainability of most business models is still a question mark.

Achieving stable relationships within a given “world” or ecosystem is vital for the system to function well. There is a need to create a network of cooperation between the different players. New forms of “co-opetition” are likely to emerge between vertical ecosystems as there are clearly limits to the overlapping between different activities, especially in terms of integration. This provides some space for policies to enable both cooperation and competition.

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<sup>38</sup> In the case of TV, these less attractive/ less watched contents are often broadcasted by public channels.

<sup>39</sup> “Towards a simpler, more robust and efficient VAT system tailored to the single market”, COM (2011) 851 final,

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## Introduction

*"Because something is happening here but you don't know what it is  
Do you, Mister Jones",  
Bob Dylan, "Ballad of a Thin Man"<sup>40</sup>*

This report is trying to face the challenge of giving a horizontal view of vertical sectors, keeping in mind that any of the involved industries are highly specific, displaying various production cost functions and features. As nicely stated in one of the main output of a working group<sup>41</sup> set up by the US regulator, the FCC, on the future of the media: *"fully describing the current media landscape is impossible, failing to try is irresponsible"* (S.Waldman, 2011). To make matters even more complex, the various subsectors of media and content are characterised by both polychrony (each sector has a different pace) (Delmas-Marty, 2011) and dischorny (within each sector the speed vary as well between players).

However the digitisation is bringing some communalities, threats and opportunities. Over past decades there have been significant advances in the area of digital media. These advances have affected the traditional models of production and consumption and forced through major restructuring within a number of industries as the pattern of demand has significantly changed. Traditional channels of communication and distribution have been supplemented by new opportunities which have enabled producers to go beyond the physical and geographical constraints associated with the concept of the market and to serve a larger customers base at lower costs. Also, the removal of geographical and physical constraints has opened up possibilities for development of economic activity in areas which would otherwise be deemed unfavourable due to low levels of demand or poor infrastructure. The evolution of digital media also has had a major impact on consumers. The increased and more diverse supply offers greater variety of products and services at lower prices.

The evolution of digital media has had different impacts on firms in different parts of the value chain. In some industries, such as those producing recorded content this has constrained the ability of firms to generate new jobs and investment while in others such as the video games industry it has created a massive potential for increased investment and new jobs. These developments have imposed a need for restructuring on modern businesses which is reflected in their adaptation to the terms of doing business in the digital segment of the market and also through the development of new business models which can bypass the traditional obstacles. This restructuring has been particularly challenging for the creative micro and small sized enterprises which constitute a majority of firms in the media and content sectors and by and large in the broader cultural and creative industries.

The report is an attempt to give an overview of the dynamics of the media and content sector within a more global ecosystem of telecom, media and technology. It implies taking a look at the changes that took place over the last decade, putting them in some historical perspectives. The IPTS initiated a research programme on the media and content

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<sup>40</sup> Out of the album *"Highway 61 Revisited"*, released 30 August 1965. The quintessential Dylan album? See Mark Polizzoti, *Highway 61 Revisited*, London, 33 1/3, Continuum, 2010.

<sup>41</sup> Working group on information needs of communities.

industries.<sup>42</sup> The report is based on the findings of the case studies, desk research, interviews and conferences.

The report underlines the features of the specific dynamics at work within the media and content industries: a succession of disruptive technological waves. As a result the sector was in a way blown out giving birth to an array of strategies and bets on the evolution of the market, contributing to a multiplication of competing business models based on different often clashing business cultures.

The economic dynamics at work appear designing a multicentre world, organised along numerous gravity centres (terminal, networks, contents and intermediation among others). From this angle on, the report explores the ways the different registers and technical layers (technological infrastructures, distribution and intermediation and contents) are being (re)articulated. It analyses the industrial dimension and how the new ecosystem and value chain are being restructured in a global market with rising regions like Asia.

Beyond the new equilibrium, the structural changes are studied taking into account the new cost structures, the new value creation mechanisms and the new models of production, organization and the business models of the firms. The report attempts to clarify the available options challenging media and content companies: convergence seen from a vertical integration strategy, erratic evolutions linked to an essay/error process making it difficult to anticipate future situations, complexification linked to growing entropy resulting from an increasing growth of alternative innovative solutions.

The total sector (network operations, hardware, IT services and software, content and intermediation) is still growing from 2006 on at a 8.4% rate, up to 4,360 US \$ billion, despite a 2% decline in 2009 (Booz&co, 2011)<sup>43</sup> (Figure 1). Emerging markets are on the rise in this sector (Simon, 2011a)<sup>44</sup> and play and will play a growing role. They are developing at a 12.6% rate with an overall share up from 20 to 24% during this period, three times faster in telecom markets (20.1 instead of 7.3) (Booz&co, 2011). For instance, in 2010, cinema admissions were going down in mature markets such as the US (-5.2%) and EU (- 1.6%) but up in growth markets such as India, China, Russia. India is the largest market in terms of admissions with nearly 3 billion (2009) far ahead of both the US (2010: 1, 341 billion) or the EU (2010: nearly 1 billion).<sup>45</sup>

Nevertheless, mature markets still account for 76% of the total revenues in 2010 and network operators still account for 41% of the total revenues within this sector (see PwC, 2011). The intermediation sector grew over 17%. The content sector grew 4.9%. This growth is mostly due to new digital business models and takes into account the negative impact of the recession on advertising revenues. New devices and emerging markets are fuelling the growth of manufacturers

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<sup>42</sup> See Preface.

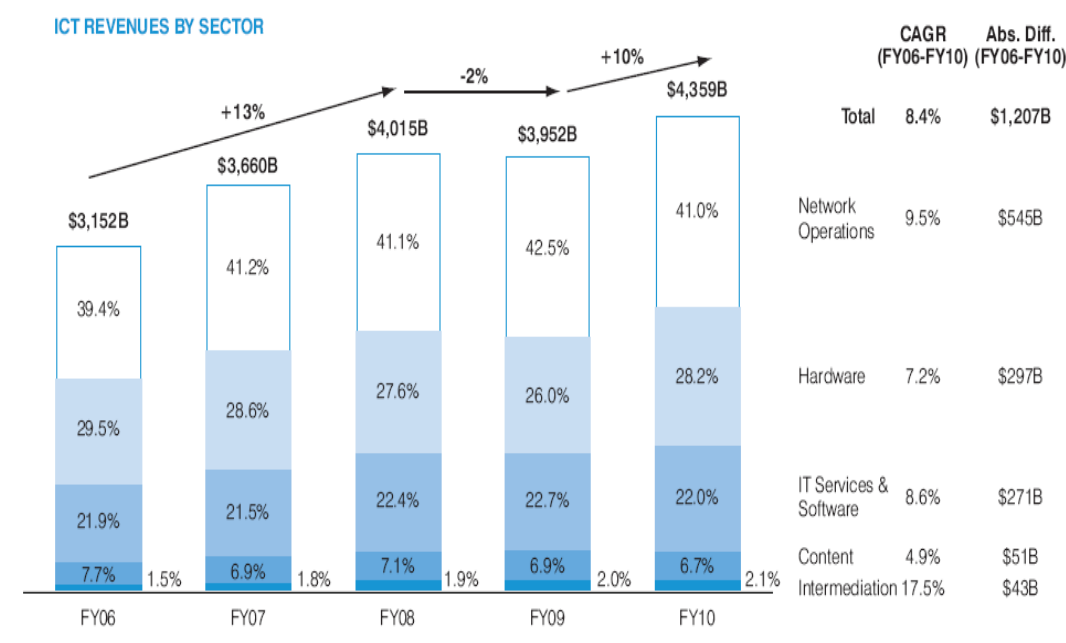
<sup>43</sup> Described as the global telecom, media and technology (TMT) ecosystem.

<sup>44</sup> In 2010, BRIC countries accounted for 13% of global demand, with spending of about € 328 billion in ICT (EITO, 2011). Therefore, they are becoming major players as producers of ICT goods and services. China has become the world's largest producer of ICT products (exports of ICT increased fourfold between 2004 and 2008). (Simon, 2011,a.). For the role of Asia in the IT sector see de Prato et al (2012).

<sup>45</sup> The Chinese market is still small (264 million) but likely to grow. *Source:* Florence Hartmann, EAO, presentation at the IPTS MCI May 2011 workshop:  
<http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>



Figure 1: Revenue growth of the global telecom, media and technology, 2006-2010.



Source: Bloomberg data; Booz & Company analysis

Source: Booz&co, 2011.

The first two chapters deal with the evolution of the sector on its way toward a digital world, it documents the evolution of the strategy of the legacy players from a defensive behaviour to a more proactive one, striking deals with new entrants, creating new products online. The first chapter explores the disruptions. The second chapter underlines the positive changes that took place recently and the weaving of new interactions between legacy players and new entrants. The third chapter focuses on core economic issues such as the costs structure; the mechanisms of value creation. The fourth chapter stresses the difficult transitioning away from legacy business models but points to the appearance of new innovative ones. It describes the business models and stresses some innovative ones fitted to a digital world. The fifth chapter concentrates on other trends such as patterns of consumption and production; it follows the evolution of the labour force. The sixth chapter deals with the infrastructure as enabler of the transformation and takes a closer look at the recent changes that affected the telecom-IT ecosystem so as to better identify the trends that are most likely to impact the content sector in turn. The last two chapters introduce regulatory and policy issues. Chapter 7 relates to the funding of creation and the protection of creation (copyright as asset management)<sup>46</sup> and innovation. Chapter 8 concentrates on the protection of consumers and competition.

<sup>46</sup> Complemented by a more detailed report on copyright issues: "Changing modes of asset management: IPR and copyright in the digital age".



## 1 Moving to Digital Media Worlds

Within the ecosystem, further growth is predicted to come from the content side, especially video entertainment. According to E. Noam, "*Content is not close to peaking. To the contrary, it will become the driver*".<sup>47</sup> He considers that any new media technology had two basic effects: first, to enable to do more of the same, and two, to do new things. Applied to video media, this translates into two dimensions of use: a widening (expansion of regular TV, more at different time), and a deepening. He described "*deepening*" as the extent of signals to sensory receptors, to eyes, ears, nose/skin/mouth, toward the entertainment of total immersion with the user participation. For the first time content/ media will be based on an individualistic experience as opposed to the times where such experience has to be shared (theatre, music). Examples of the new content model are: immersive films/ games (like "*Pirates of the Caribbean 2*"), immersive sports, marketing test drive cars, travelogue... This dimension more than the apps and the telecom services will require full fledged networks with more bandwidth.<sup>48</sup>

### 1.1 Upheaval in the media

Traditional broadcasters are trying to re-invent themselves in a way that is reminiscent of what telcos went through over a decade ago when telecom markets were opened up. The move of traditional broadcasters toward media organisations is enabled by the mix of broadcasting and broadband. This hybrid is blending networks (broadcast/broadband hotspot and BC overlay networks, offloading of broadband traffic to broadcast networks, data broadcasting solutions), devices (connected TV sets, hybrid radio sets) and services (HBB.TV,<sup>49</sup> connected TV, VOD, second screen interactivity and personalisation). Players are different, coming from different horizons, but all compete to own the screen/ the user and the redistribution is having a huge impact on the value chain.

An upheaval is taking place in media circles globally. Television, once the traditional mainstay, is under assault from virtually every angle. There are new programme services, new distribution vehicles, new devices, financing sources are being eroded with a growing competition for advertising revenues. The companies must deal with changing expectations of the viewers, especially younger viewers. The two most important factors are the demand from consumers (contents wherever and whenever enabled now by technologies), and the overall distribution models. These models, formally based on geographic boundaries and scarcity of certain kinds of resources (i.e. spectrum...), are under pressure, new services (server based distribution of content) are location agnostic (customers can access for instance to Netflix or DailyMotion from any location). Ubiquity and rise of the Internet are turning upside down the legacy media logic (Busson, 2010); media and telecommunication networks were hierarchical and had centralized architectures. Because of its digital architecture and organization the internet has forged a major schism from that model. The Internet has a decentralized architecture, which is open and flexible, allowing interaction at both ends so that the receiver can become the transmitter.

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<sup>47</sup> E. Noam at the International Institute of Communications (IIC) Annual Conference, Barcelona, October 2010.

<sup>48</sup> See Chapter 6.

<sup>49</sup> HbbTV is a pan-European initiative aimed at harmonising broadcast and broadband delivery of entertainment to the end consumer through connected TVs and set-top boxes. In 2010, ETSI approved the HbbTV specification.

This poses significant challenges for the legacy industry players as easy access to inexpensive tools and web services not only allow the new entrants to duplicate the old ones but with lighter weight technologies, but they allow consumers on their own to rate, distribute, share, recommend, comment on content, receive, modify and reuse the content of others, legally and illegally. Even when duplicating familiar services, new entrants will usually provide the services at lower costs, under different business models. In turn, it stimulates another kind of media economy: disruptive but nevertheless a continuation of progression in media.

It also creates real challenges for policy makers and regulators. Until fairly recently, because of the physical limitations (scarcity) of the broadcast spectrum, of the expenses of physical storage medium devices required to play the media types; these constraints worked to the benefit of the digital models based on scarcity, for advertising dollars or production dollars. Essentially scarcity drove production budgets in a certain direction; drove selection of content that was commissioned in a certain direction and this is eroding today. The technical obstacles to prevent distribution of the media via the internet and local networks onto multiple devices are gone and as an output the role of the distributor is being redefined with different players along the value chain competing for this enhanced role under different business models (see next chapter).

A. Preta noticed four main issues with this on-going transformation.<sup>50</sup> The first is a tension between the need to protect and preserve the creator and the rights holder on the one hand, and on the other the right to competition and the wide circulation of content as a means of spreading knowledge and awareness. As a consequence, it is difficult to define the boundary that can make practices commonly held as a monopoly acceptable, through legal means such as intellectual property rights. The geographic and technological based rights businesses are being challenged. The second is the uncertain move toward more competition or more concentration. In other words, do these dynamics generate the maximum efficiency of the market (consumer welfare) or transfer income and market power of old incumbents to other parties, even fewer in number and operating on a global scale, the so-called aggregators (Apple, Google, etc.)?

The third is about the future of networks: does the spread of increasingly pervasive IP-based networks with the greater availability and supply of video content, lead to the transfer of entertainment to the Internet, or will traditional digitalized networks (e.g. broadcasting transmission) continue to have a weight in the primary transmission of content?

The traditional, oligopolistic and vertically integrated market structure of the media industry is being challenged, as the industry is moving towards a value chain with many participants. The traditional value chain<sup>51</sup> was dominated by the publisher/ aggregator segment with most often integrated firms (production/ publishing/ distribution-retail), some aggregators even owned the technical segments of the industry (printers in the case of newspapers and book publishers, technical industries in the cinema). The only link that was not under some kind of control from the publisher was the enabling devices (radios, TVs, record, CD and

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<sup>50</sup> "Catching up with the Digital Impact", presentation at the first MCI workshop IPTS Sevilla, 30-31 May 2011.

<sup>51</sup> Unesco describes a similar value chain under the term "*value chain of cultural expression*": creation, production, dissemination, exhibition/reception/ transmission, consumption/participation.

DVD players). The only notable exception<sup>52</sup> comes from the "new sector" of videogames where hardware manufacturers (consoles: Sony, Microsoft and Nintendo) dominate and also exercise a lot of power over the other segments (De Prato et al, 2010,<sup>53</sup> 2011). Other middlemen were also active such as agents in the book and cinema sector.

**Figure 2: Simplified value chain**



One should stress that digitisation is not new to any of the subsectors; they all went through a transformation of the production process (digital recording, computerised editing of films, desktop publishing) during a first phase of digitisation, not to underline the mere introduction and development of computers within the firms. This phase which varied in scope and scale across sectors was implemented through different agendas but apparently remained upstream. This phase did not extend to the distribution part, hence not directly affecting the customers and the management of the commercial relationship with them. Working under a closed shop model allowed publishers not only to keep a major influence on the distribution and retail segments but to manage their customer base as a major asset, selling additional services or products, for instance newspapers using their data base for direct and indirect marketing. It also allows a better protection of other assets like copyrighted contents. The sharp decline to sales of recorded music shows what happens when the value chain is opened up and when the main players are unable to maintain a hold on their strategic assets, for various reasons. Piracy, as pushed forward by the recording industry is one but not to be overestimated, the failure to create a new business models is another, but changing patterns of consumption is key as well with a move toward an itemized, non-linear consumption (see Chapter 4).

## 1.2 Waves of changes

The change came from the outside of the sector and was initially brought by the telecom industry looking for new streams of revenues to mitigate the loss of their more traditional revenues from the fixed networks (voice telephony). They started offering other services when deploying their broadband networks (ADSL) adding to voice telecommunications and access, data and video services sold in bundles (triple or quadruple play). A move described as the end of the 90ies as convergence.<sup>54</sup> The burst of the Internet/ Dotcom bubble led to some drastic readjustments exemplified by the AOL-Time Warner case, initially hailed as

<sup>52</sup> Although historically when radio was introduced, manufacturers were subsidizing contents to sell their devices. Later, the role shifted to advertisers (soap manufacturers), the notorious "soap operas". Sony Paramount is another exception, but the synergy content/devices is far from obvious.

<sup>53</sup> See the report on the video game industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>54</sup> The move was accurately summarized in the EC 1997 green paper.

the model of the converged media-telecom firm of the future.<sup>55</sup> The "model" on the verge of bankruptcy was partially demerged shortly after.<sup>56</sup> As A. Busson (2010) sums up: *"the reasons given for the breakup of these conglomerates were always the same; a lack of synergy between the component activities, questionable profitability, accumulated debt burdens resulting from acquisitions"*, stressing that convergence *"can work in technology but as a strategy for business it remains unproven"*. Telcos went through similar difficulties with their ventures in the media sector<sup>57</sup> and undertook a strategic repositioning as multimedia connectivity providers. As will be explained later (Chapter 4), boosting non-core revenues remained an issue for telecom operators.

In a second phase, IT companies (search engines, e-dealers like Amazon and e-bay, then social networks and manufacturers like Apple) took over to lead the process. This second phase of digitisation is disrupting the legacy model in two ways. First, the switch to digital distribution drastically cuts the need for physical logistics. A whole part of the former business has shrunk, disappeared or will disappear: physical goods (CDs, DVDs, books), part of the legacy logistics (trucks...), retailers (e.g. Tower records (CDs), Borders (books) and Blockbuster (DVDs) in the US filed for bankruptcy).<sup>58</sup>

A second major disruption is linked to what can be described as the decoupling of previously interlinked segments, a phenomenon that can be described as the "autonomization" of each segment. This became more obvious with the smart phone phenomenon that brought to the fore the role of manufacturers. In turn, it reshuffles the value network as it changes the existing relationships between the segments, and the legacy working agreements (the existing "art world" with different supporting activities to quote Becker (1982)). As explained by S. Drath (Drath, 2011): *"The recording does not leap from studio to radio and up the charts. There is a long and involved process and in most cases, all of the music industry parts have to be working in relative harmony in order to develop a successful career launch and a hit recording"*. The segments are not only autonomous but now compete with each other with different business models most of them being alien to the legacy media provider.

In a way, the legacy value chain and the online value chain are overlapping thereby creating a much more complex (see Figure 3) but so far unstable market structure with the media sector standing, up to now, for a small slice ( US \$ billion 16 with rights) of the entire online pie (US \$ billion 732) (A. T. Kearney, 2010). Such an overlapping and complex system was described by M. Fransman (2010) under the notion of a new ICT ecosystem to emphasize the relationships between the players. This brings a significant change in the dynamics of the sector, shifting the balance of power on a global scale. The balance of the value is shifting toward the downstream and some consider that value is not only shifted but destroyed in the old media by the capture of consumers and traffic, it can no longer be regained as was once the case (Busson, 2010). It is a drastic move as it stands in sharp contrast to the local/ domestic aspect of legacy media markets (entrenched services) with the limited exception of music. Transitioning away from homogeneous media to a variety, mixing global and local contents is not easy. Furthermore in the EU case, markets are fragmented questioning the notion of a single market for contents: *"contents have different*

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<sup>55</sup> Acquisition of Time Warner by AOL for US \$ 350 billion, January 10, 2000

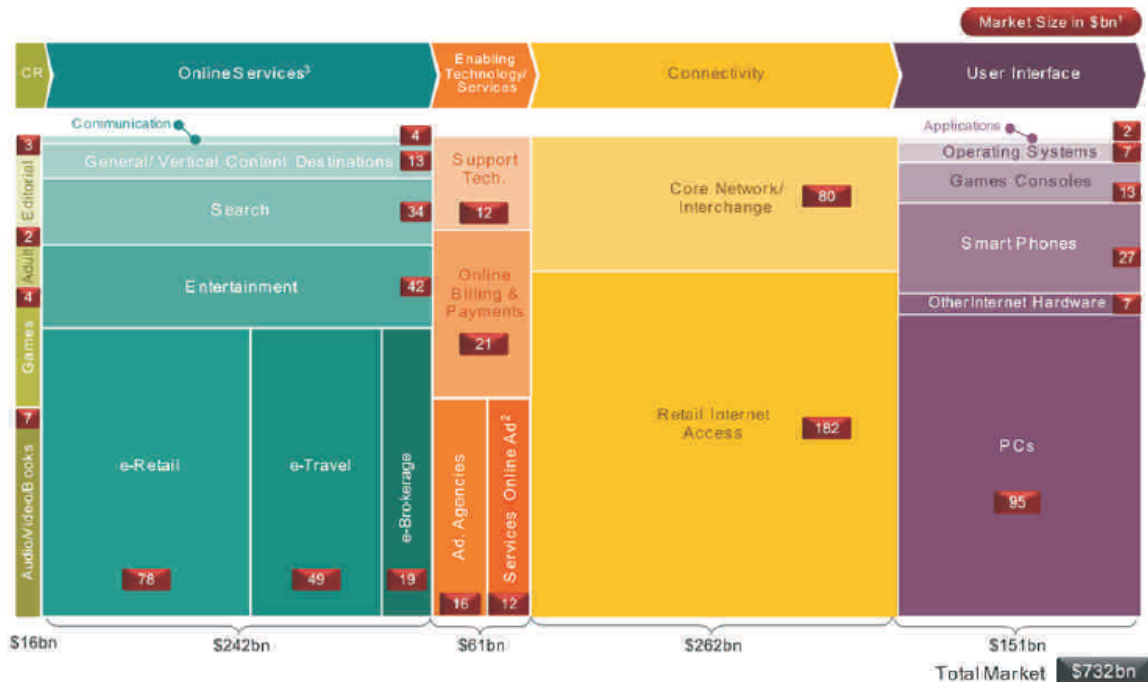
<sup>56</sup> In 2009 the partnership was finally ended with Time Warner resuming its independence.

<sup>57</sup> Telefonica bought one of the leading EU TV production company, the Dutch firm Endemol and sold it some years later for lack of any substantial synergy.

<sup>58</sup> In the UK, in 2009 1000 outlets closed down (Leurdijk et al, 2011).

value in different markets".<sup>59</sup> For instance a well established player in the field, the RTL group<sup>60</sup> does not believe in the existence of a single market for audiovisual; this differs from the music market. The company would "have been happy to have one", but broadcasting markets are national markets. Even, the highly successful Dutch TV format company, Endemol, produces a format that is left to further customisation to finely tune the content to the tastes of the national audience throughout Europe.

**Figure 3: Revenues along the value chain of online services- consumers, 2008.**



Source: A.T Kearney, 2010

### 1.3 New competing business models in a new value network

The consultancy BCG (BCG, 2011) distinguishes between five typical business models competing and generating revenues of more than 360 billion euros in the EU in 2009, battling for becoming the primary gateway for consumers for content navigation, for controlling the access to consumers and for collecting consumer data (cross-platform collection and monetisation). The companies compete but do not confine to their core business. They have to rely on each other assets to provide their services. They will seek this access under the most favourable conditions.

The first one, the distribution-centred is the largest segment of the total, accounting for over 260 billion euros (see Figure 3), is build upon an infrastructure capacity (cable network, telecom networks, and satellite operators). This infrastructure (performance and capacity) together with its billing capacity constitutes its main strategic assets. This sector was declining (-1%, 2004-2009, (see Figure 1), and is not expected to grow: 0% for 2009-2014 (C. Hutchins, 2011). They deploy new networks and offer new services with a higher quality of service nevertheless.

<sup>59</sup> J. J. Sahel (Director, Government and Regulatory Affairs, Skype) at the IIC Telecoms and Media Forum, Brussels, 2010.

<sup>60</sup> According to O. Herrgesell (EVP, Corporate Communications, RTL Group, IIC Telecoms and Media Forum, Brussels, 2010.

In the US, Verizon is delivering a combination of services, including those in the clouds and through VDMS (Verizon digital media services) an automated, content-to-consumer digital workflow engine, for personalized rich media.<sup>61</sup> Specific specialised sub networks such as content delivery network (like Akamai, Limelight networks or Level 3) are being deployed to offer enhanced services to content providers, placing content on the "network edge" closer to the customer (instead of a central server) to reduce the latency for video delivery. In the EU, Liberty Global, the leading cable company, speeds up the deployment of Interactive DTV and broadband (DOCSIS): at 21 million customers served digitization is gaining pace (leaving another 40 million analogue customers to serve).

**Box 1: Content Delivery Networks (CDN)**

A content delivery network is designed to distribute content over a network and maximize bandwidth. Its purpose is to improve quality of service, by taking data traffic off the major backbone of the Internet.

These specific specialised sub networks (like Akamai, Limelight networks or Level 3) are being deployed to offer enhanced services to content providers, placing content on the "network edge" closer to the customer (instead of a central server) to reduce the latency for video delivery. Strategically placed edge servers decrease the load on interconnects, public peers, private peers and backbones, freeing up capacity and lowering delivery costs. Instead of loading all traffic on a backbone or peer link, a CDN can offload these by redirecting traffic to edge servers. CDN technologies give more control of asset delivery and network load.

Due to the rapid growth of streaming video traffic, telecommunications service providers (TSPs) have begun to launch their own content delivery networks as a means to lessen the demands on the network backbone and to reduce infrastructure investments.

*Source:* Idate and IT Media (2011)

Telecom operators play a major role for the development of IP-TV, a market predicted to grow fast. The consultancy SNL Kagan (May 2011) estimates that the number of IPTV subscribers will reach 70 millions as of 2014, from 40 millions in 2010. France appears like a peculiar market, most of the growth of the pay-tv market comes from subscriptions to pay TV. With over 10.5 millions subscribers as of March 2011, France is the first IP TV market in the world.

The second model, the aggregation-centred model is based on the marketing of its valuable contents (application software, games, film, music, video...) under its own brand (Sky, BBC, RTL, Hachette...). Platforms may be linear (TV, cable) or non-linear (online). The third model, the search-centred model (Google, Bing, Yahoo) is build on research algorithm offering navigation through the available content and being an entry point to the Web. Grounded in network effects (direct and indirect), it requires the creation of platforms of multisided markets, "*Google economics*" (A. Perrot, 2011) to drive traffic to its ads monetisation engine (97% of Google's revenues, BCG).

The fourth model, the device-centred model is trying to circumvent the other players by luring in customers within its closed ecosystem, like Apple<sup>62</sup> with i-tune and above all the Apple apps, but also Nintendo, Microsoft, Sony with games and now Samsung with connected TV. It gives birth to new form of vertical integration, "*Apple economics*" (A. Perrot, 2011). This "closed" model (as opposed to open ones), based on a proprietary platform raises concerns about potential anticompetitive effects, just like the search one taking into account the dominant position of Google. Within its ecosystem, Apple is able to design and manage the customer experience which also raises concerns among regulators and

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<sup>61</sup> See, <http://www.verizonbusiness.com/vdms/>, <http://www22.verizon.com/wholesale/vdms/landing.html>.

<sup>62</sup> Described by BCG as "the" creator of this model.



consumers associations. They point at the lack of interoperability and the limitations to the potential uses compared to the physical/ analogue world. Such an uncertainty about the main characteristics or normal functioning of digital content is common to all the new digital services, customers do not know what to expect from an eBook, or an MP3 file, or a game.

Content providers also have to abide by the conditions imposed upon them including specific technological requirements (applications providers too). Besides, as noted, some of these players already have stakes in the production of contents (console games or phone apps). This model was initially introduced by Apple for the music business for the launch of its iPod, but also by Sony, Microsoft and Nintendo for games. It was again successfully reintroduced by Apple again for mobile app. Recently, the launch of the iPad opened up the e-book market (PWC, 2011). Apple appears to act as the game changer in these digital markets.

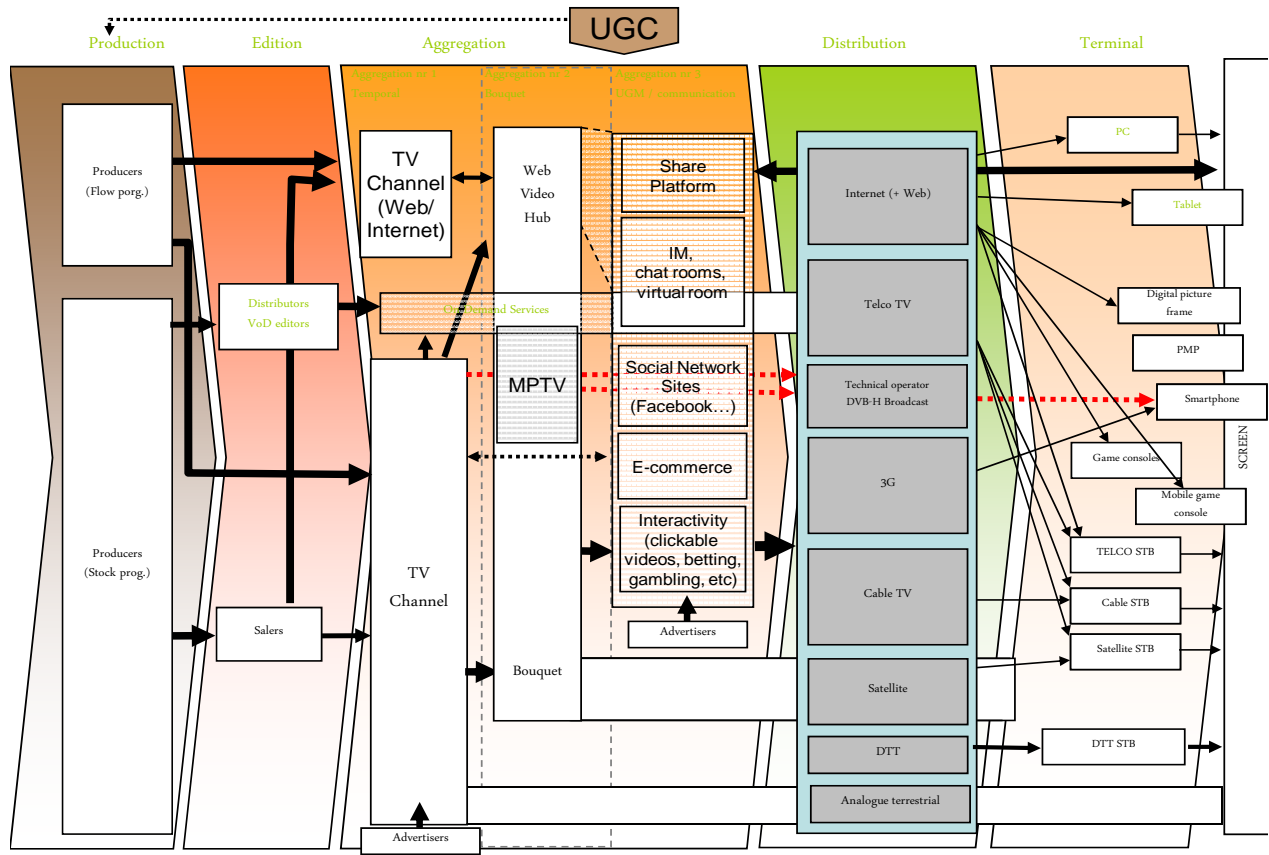
The device centric model is now appearing tentatively in the TV market. Manufacturers of TV (Samsung, Sony) and other type of access devices (hybrid receivers, set top boxes, digital media players) are now trying to replicate the success story of Apple within the realm of broadcasting with the introduction of connected TV. With pre-installed apps on the connected TV devices, customers do not need to use a browser locking the traffic in the proprietary platform, away from the public Internet. Now, all major EU manufacturers have launched internet-enabled TVs on the market (Preta, 2011). According to BCG,<sup>63</sup> by 2012, up to 40% of European homes will have access to some type of connectable devices, mixture of consoles, connected TV and stand-alone devices. In this case again, availability does not equate take up, if one takes a look at the UK, one of the most vibrant market, it accounts for less than 1% (Ofcom, 2012) with linear services and viewing still dominating.

The fifth one, the community-centred model (YouTube, Twitter, Facebook) derives its strength from economies of scale and scope (networks effect) on a global scale as well, aggregating contents produced by others and users (prominently for social network sites), generating interuser communication (comments, posts and sharing), meanwhile building their core strategic asset, data gathering. As the scale is central (Facebook claims 600 million users worldwide as of 2011), concentration is also taking place raising similar antitrust concerns. Above all, policymakers are worried about privacy issues. Other players like the telecom operators fear the impact of these social network players as they do not play by the same rules i.e. Facebook dealing with privacy in a way that will most likely trigger criminal prosecution for a regular telco (based on the 1995 data protection and the postal code).

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<sup>63</sup> Quoting Idate research forecast.

Figure 4: An example of complex value chain: broadcasting in a digital world



Source: Busson (2011)

## 2 Riding the Third Wave

This chapter takes a closer look at the current initiative coming from the legacy players; it deals with the fast evolving relationships between "old" and "new" players. It also underlines the recent changes in the behaviour of the legacy players, and their more proactive attitudes, the new modes of cooperation. In 2011, Yahoo, US No. 1 online news site (with 39 million monthly unique visitors),<sup>64</sup> partnered with ABC news (owned by Disney) and it turned out to be an achievement for both companies.<sup>65</sup> YouTube commissioned Reuters, as a leading news organization, to develop original content on the video-sharing site (Pew, 2012).

The new players described in the previous chapter are giving access to their platforms under their own conditions (sharing of revenues, prescribed retail prices, type of sales). Apple is asking for 30% of the revenues which means that the gain of distribution costs coming from the digital distribution is eaten up by the new distributor. As of 2011, Apple imposed upon the news publishers the exclusive use of its App Store to distribute their content, so far users of the iPad could access to the content publishers' services directly. For retail prices, Apple "invented" the \$ 0.99 per song uniform price,<sup>66</sup> but Apple was making in 2007, US\$ 8 billion of revenues from the sales of its iPod but only \$1.7 billion with songs (Waldfogel, 2011). In 2003 Apple convinced the music industry to open up its catalogues for digital music downloads in the iTunes online music store, and this became the first significant step into the emergence of a legal digital online music market.<sup>67</sup> Apple, is not an established player in the field, and the company is not playing by the rules either, and is introducing a complete upheaval of these rules. Newspapers are getting their revenues from their direct access to the consumers (direct and indirect marketing), but Apple is circumventing the publisher through their direct access to the consumer.

In 2007, Apple's CEO, Steve Jobs heralded the end of digital rights management (DRM), a technological protection device that the rights holder were asking for as a tool against piracy, they even perceived the protection software as insufficient. On the opposite, S. Jobs was working under the implicit assumption that if the supply improves tremendously (increase of legal online catalogues, sound quality, free circulation between terminals, reasonable flat fees...) free exchanges will not go away but the market will become profitable instead. For the CEO of the high tech group, without any compelling reason to use PtoP networks most customers will behave legally and will not object to pay for content creation and services. Amazon did the same in 2007, forcing Universal and Warner to align themselves (Cooper, 2008).

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<sup>64</sup> Source: Pew, 2012.

<sup>65</sup> [http://money.cnn.com/2011/10/03/technology/yahoo\\_abc\\_partnership/index.htm](http://money.cnn.com/2011/10/03/technology/yahoo_abc_partnership/index.htm)

<sup>66</sup> This figure is not fully set by the market, but by the record labels. They charge a wholesale price of around 65 cents per track. See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>67</sup> A Leurdijk, O Nieuwenhuis, (2012) "Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: The Music Industry" Ed. J P Simon. JRC Technical Report. Institute for Prospective Technological Studies, Joint Research Centre, European Commission. Available at: <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=5022>

## 2.1 Distributing news online: trials and errors

The role of the new intermediaries is compelling. The regional French newspaper Ouest France is receiving 40% of its consultations through Google<sup>68</sup> making it more difficult to avoid this intermediation.<sup>69</sup> The same paper when opening up its Internet service as early as 1995,<sup>70</sup> imported the press/ news contents from the newspaper. This model collapsed even on the revenues side as they found out quickly no willingness to pay on the consumer side. However when moving toward free contents online, the newspaper industry suffered, but as BCG points out, mostly from "*self-infliction*" failing to understand the impact of the open Internet on their business, the foreseeable acceleration of the decline of readership and accompanying falling advertising revenues. They are now trying to introduce some kinds of pay packages, to renegotiate the sharing agreements with the search engines and social networks, or they attempt to reset territorial copyright license fees, for instance in the EU.

So far, only the "*Wall Street Journal*" and New York Times managed to have some success with a paying online customer base, an experience not easy to duplicate. When the "*Times*" and the "*Sunday Times*", move their online site to a fully paid service in 2010, the audience plummeted from 22 million to less than 200 000. However, a more limited audience does not equate to a collapse or to losses as there is room for some niche supplier such as in France Mediapart<sup>71</sup> (60 000 online subscribers<sup>72</sup>) known for the quality of its analysis and investigation (the site established its reputation digging out some political scandals). In 2012 the website turned profitable: + 66% with a net income of 500 000 Euros.<sup>73</sup>

Nevertheless, newspaper companies seem eager to move from the free "*online age*" to what appears to be a more attractive "*app age*" (BCG, 2011) with paid for applications even it means (re) negotiating with the dominant providers. Moving from the public Internet to proprietary platforms (Apple iStore and the mobile operators) is bringing opportunities and threats for the media sector.

According to C. Beckett (Beckett, 2010) moving from products to services is bringing a huge awareness of value within the existing newspaper organisations but these organisations are often failing to understand what is happening. Journalists are adapting quickly, as nearly 50% of the permanent positions will disappear with the restructuration of the sector, and they may not have many other options according to C. Beckett. Much of the contents will come from amateurs or from companies not considered as media companies. What he called the "*end of fortress journalism*" and moving toward "*networked journalism*", "*now an integral part of British mainstream journalism*".<sup>74</sup>

One of the key issues seems to be the difficulty to monetize news in any case. Hal Varian, a well known information economist and now Google's chief economist noted that "*online*

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<sup>68</sup> A. De Tarlé, chairman of the newspaper publishing company Ouest France at the "économie de la culture", Paris, conférence.

<sup>69</sup> The chairman of the New York Times compared Google with oxygene, quoted by Ramonet (2011).

<sup>70</sup> Ouest France, a leading French regional newspaper, is a well-known pioneer of the electronic distribution of news. The company was an established leader for "télématique" in the 80s.

<sup>71</sup> Founded in 2008 by the former editor in chief of "Le Monde" (1996-2004), E. Plenel. Source: GQ, n°49, March 2012: p.168.

<sup>72</sup> The news service broke even in 2010. Source Wikipedia. <http://fr.wikipedia.org/wiki/Mediapart>

<sup>73</sup> Other examples in France Baksheesh (founded 2006), Street 89 (founded 2007) are in the same niche, but are not currently operating in profit (Busson, 2010).

<sup>74</sup> Executive summary, Polis Report.

*world reflects offline: news, narrowly defined, is hard to monetize.*<sup>75</sup> Newspapers are another well known example of two sided markets (see Box 3 at the end of this chapter) with readers on one side and advertisers on the other one. Two sided markets seem to bring more flexibility; one can for instance contrast a one-side market such as the music market and another two-sided market such as the broadcasting market. However, what looks to (still) work properly in the case of the broadcasting market does not seem to operate any more in the newspaper market. The former subsidy scheme seem broken as customers do no appear to value edited news (the most expensive to produce) the same way the used to. According to D. Waterman<sup>76</sup> the Internet revealed that the "analytic"<sup>77</sup> part of news to be far less attractive than the news industry thought it was for consumers now accessing a huge sample of information.

Retaining full control of all commercial aspects of their digital sales channels is key for newspaper publishers, to keep their grip on their main asset, the content. However, the online news audience is enormous and growing: the top 25 news sites in the U.S. recorded 342 million average unique monthly visitors in 2011 – up 17% over the prior year, according to Nielson Online (Pew, 2012). According to the same Pew annual survey, brands matter as *"the traditional players remain the most popular sources for digital news"*.

In France, the newspaper trade association (Syndicat de la Presse Quotidienne Nationale: SPQN) launched the French consortium ePresse. On June 30th, 2011 its digital kiosk opened. ePresse brought up eight titles: five dailies ("*Le Figaro*", "*Le Parisien*" and its national edition, "*Libération*", the sports daily "*L'Equipe*" and the business paper "*Les Echos*"), and three newsweeklies ("*L'Express*", "*Le Point*", "*Le Nouvel Observateur*"). An iPad/iPhone app allowing per-copy purchases within the App Store will be offered later.<sup>78</sup>

In Spain, 30 dailies, (among which the leading Spanish papers: "*ABC*", "*AS*", "*Cinco Dias*", "*El Pais*", "*La Vanguardia*" and 60 magazines ("*Lecturas*", "*Muy Interessante*", "*Saber Vivir*"..) can be downloaded on a tablet. Kioskoymas<sup>79</sup> supplies services for mobile and PCs with monthly subscription fees from Euros 9.99 ("*El Pais*", "*ABC*") to 23.99 ("*La Vanguardia*"). The service was opened in July 2011 and set up by a consortium of companies: PRISA, Vocento, Herald, La Información, La Voz, Intereconomía, Godó, Zeta, Última Hora, Axel Springer, RBA, América Ibérica y G+J. A minimum discount of 30% is offered for the online format.

In the US, still in 2011, publishers announced tablet-based apps throughout 2011. Time Inc. announced tablet versions of all 21 of its publications (Pew, 2012). "*The Huffington Post*", a digital native, strongly benefited from its social media strategy with the adoption of Facebook Connect generating big traffic gains starting in 2009. The online paper announced the creation of its own 24-hour online news channel modelled on CNN. "*The Washington Post*", "*The Wall Street Journal*", "*The Guardian*" entered partnerships with Facebook. Some US newspaper companies are now taking a much more aggressive

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<sup>75</sup> Newspaper Economics: Online and Offline, Presentation by Hal Varian, Chief Economist, Google, and Professor, Univ. of California, Berkeley, FTC Workshop, "From Town Criers to Bloggers: How Will Journalism Survive The Internet Age?" (Mar. 9, 2010), at 20, available at <http://www.ftc.gov/opp/workshops/news/mar9/docs/varian.pdf>. Quoted by Waldman (2011).

<sup>76</sup> Intervention at the IPTS/TNO interim meeting, March 2011.

<sup>77</sup> He considered a news has two parts: one telling what happened and the other offering an analysis

<sup>78</sup> Frédéric Filloux, "The ePresse Digital Kiosk: First Lessons", July 10, 2011 – 6:29 pm. <http://www.mondaynote.com>. See also Rebillard, F., et al (2011) at VII.

<sup>79</sup> <http://www.kioskoymas.com/epaper/viewer.aspx>

approach to digital transition, for instance Digital First Media<sup>80</sup> is pursuing a “digital-first” strategy at the Journal Register and MediaNews Group papers: digital revenues went up from 5% of the revenues in 2010 to 30% in 2012 (leaving 70% to print revenues).<sup>81</sup>

In the book sector, the leading French book publishers, Hachette, signed a deal with Google for e-books in August 2011<sup>82</sup> to put a large portion of out-of-print books on its Google Editions eBook store (De Prato et al, 2012). The company has been leading with innovative applications for its magazines. Lagardère Active is the leading media group in Mobile Internet in France with 18 brands. On mobile applications only, they rank third in France, behind Orange and Facebook.<sup>83</sup> Lagardère Active Digital, the digital business unit<sup>84</sup> was generating 7% of company’s revenues in 2009 with over 100 web sites worldwide aggregating an audience of 80 million unique visitors (vs. 10 million in 2006). The company claims building a hybrid business model mixing revenues from advertising (75%), from “*brand experience*” (15%) and from paid content (10%) (Figure 5). Media apps will be financed by advertising on mobile, but they deem that on tablets, the business model will be more balanced between ad and paid contents. They found out that the willingness to pay increased as the product evolved, now 25-30% of weekly users are buyers. Hachette was already deriving 9% of its US revenues from e-books in 2010. Publishers have good reasons to invest in “apps” as for instance on the Apple’s App Store, news ranks first for the highest in-app adoption rate with 74% of free titles support in-app purchases, increasing to 91% of the top 300, followed by games and books.<sup>85</sup>

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<sup>80</sup> Digital First Media owns 3 companies, 800 multiproduct platform reaching 57 million Americans each month across 18 states. Journal Register Company offers local news and information in 10 US states to 21 million consumers. MediaNews Group is the second largest newspaper company by circulation in the United States. Digital First Ventures is focused on helping media entrepreneurs incubate, accelerate and validate their start-up companies in the news content, sales and audience development space. <http://www.digitalfirstmedia.com/>. John Paton, its high profile CEO told in an interview: “*La plus grande menace pour les journaux et les médias, ce n’est pas Internet ou le numérique, mais des patrons de presse nuls, qui attendent juste la retraite et ne prennent pas de risques*”. Source : <http://meta-media.fr/2012/06/03/le-numerique-d%e2%80%99abord-seul-moyen-de-sauver-les-vieux-medias/>

<sup>81</sup> Source: meta-media.fr, id.

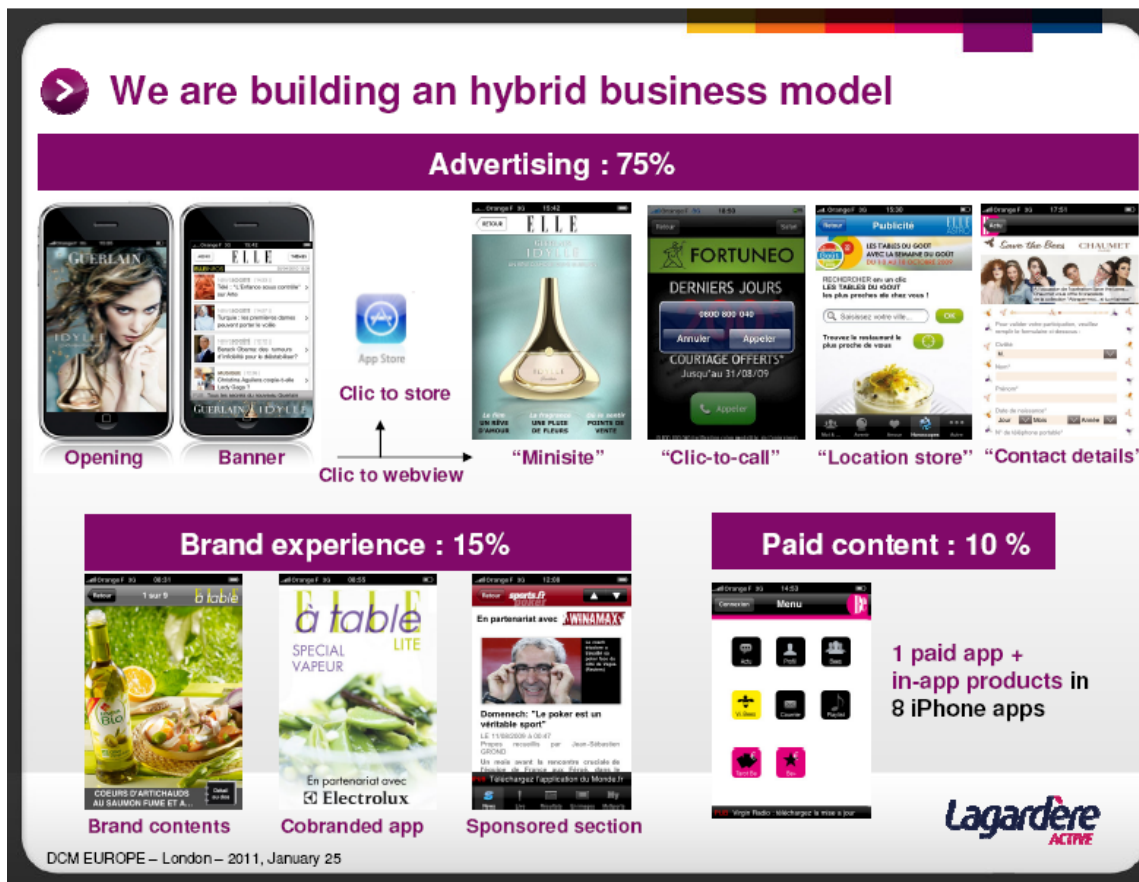
<sup>82</sup> Tom Cheredar, “Google Editions: Google Signs Ebook Deal in France”. Published: August 8, 2011. <http://www.nytimes.com/external/venturebeat/2011/08/08/08venturebeat-google-editions-google-signs-ebook-deal-in-f-29353.html?partner=rss&emc=rss>

<sup>83</sup> Source : company from Q3 2010 Mediametrie. Emmanuel Vacher, Lagardère Active Digital, Executive Vice President Development & Corporate Alliance, presentation at the Digital Content Monetization, London Januray 2011.

<sup>84</sup> Created after major acquisitions in 2007-2008 : 2 online publishers in France, (Newsweb, Doctissimo), 1 in the UK (Digital Spy), and 1 US ad network (Jumpstart automotive). Source: E.Vacher.

<sup>85</sup> <http://www.mobilebusinessbriefing.com/articles/distimo-us-losing-significance-in-global-app-store-market/24763?elq=619aa4c8411942f9ad13861b575a456e>

Figure 5: Lagardère active hybrid business model



Source: Lagardère active

## 2.2 Broadcasting on the move

Connected TV is growing fast. Connected TV (or smart TV) refers to the delivery of broadcast and broadband content to the consumer through connected TVs (direct access) or set-top boxes and game consoles (indirect access). It allows consumers to access on a single television set, traditional linear broadcasting programmes as well as catch-up and on-demand services, content and applications (social networks, widgets, webmail...) that are available on the internet. The difference with IPTV is that the content is delivered via an unmanaged internet connection and not through a managed network with controlled quality of service.

Over-the-top television of all kinds is becoming a real alternative to the linear distribution of video (cable or satellite subscriptions), as illustrated by the growth of Netflix in the US (20% of the traffic, 20 million subs, a market share of 36% for SVOD), or catch-up TV in the same market (Hulu funded by advertising is ranking n°2 after YouTube: 1 billion video watched). Customers seem ready to migrate, in 2009, around 1.5 million households substituted OTT services like the ones offered by these two US companies to their subscription to cable or satellite (BCG, 2011). Nevertheless, linear TV is still dominating and customers are viewing mostly catch-up TV rather than other kind of non-linear programmes (Ofcom 2012).



## Box 2: Google TV

In May 2010, the company, in conjunction with partners including Sony, Intel, DISH Network, Best Buy, Adobe and Logitech, announced the launch of Google TV, which enables users to search the web while watching programs and consuming web content through a new generation of televisions and set-top boxes. Google TV is based on the Android platform. It is an open platform and Google claims not be a content provider<sup>86</sup>.

Pre-installed apps include an HDTV-optimized version of YouTube called Leanback, Netflix, Pandora, Napster, Amazon video-on-demand, Twitter, the New York Times, VEVO's music video service, CNBC, and NBA as well as, for Sony's devices, the Qriocity video-on-demand service, and of course, Google's Chrome web browser. Google TV service is a blending of television programming and Internet content that marks another attempt to expand into larger advertising markets. Users will be able to conduct voice searches using the phones if they don't wish to type. Google TV will also support Android Market in early 2011, bringing "tens of thousands" of apps to the service.

Google's CEO, E.Schmidt played down any suggestion of Google actually becoming a content provider itself: *"There's a line we've decided not to cross. We want to work with content providers and get them onto this new platform whether it be Google television, YouTube or the Web. We're very unlikely to go into actual content production at least in a significant way because we want the content providers to make money."*

Sony already delivers a line of connected TVs and Blu-ray players integrating Google TV on the US market from autumn 2010. Logitech too launched its Revue set-top box, delivering Google TV.

Google TV should have been shown off at the Consumer Electronics Show in Las Vegas in January 2011. However, due to technical problems, Google asked TV manufacturers such as Sharp, LG Electronics, Vizio and Toshiba to delay their introductions.

Source: A.Preto (2011), Mobile Business Briefing, 21 May 2010.  
<http://www.mobilebusinessbriefing.com/search/?keywords=Android> consulted September 2011.

In December 2009, on all online video platforms some 33.2 billion videos were viewed worldwide, of which 178 million were viewed in the USA (Busson, 2010). Online distribution is offering new avenues. This is being recognised by the mainstream broadcasters. The director of the trade association of the EU commercial broadcasters (ACT), Ross Biggam, summarized the position of the broadcasting industry, claiming at the 4<sup>th</sup> Annual conference<sup>87</sup> that the Internet was not seen as a threat any more but as an opportunity. There was a strong consensus emerging around this common position of the broadcasting industry. The broadcasting industry sees more clearly the role of this distribution channel to create a *"wholesale demand for their contents"*.<sup>88</sup> But moving to a position of wholesaler of contents instead of direct distribution to customers creates tensions as the control of the retail is not any more under control.

For instance, the BBC in the UK and the German ARD/ZDF are active in the field. The BBC launched its online news service in the 90ies (L. Cohen-Tanugi, 1999). The Spanish channel Antena 3 is offering live streaming services.<sup>89</sup> Most private broadcasters are moving in that direction. News Corp and its subsidiaries are making their content (e-books, movies, TV shows, papers...) available online through a plethora of different platforms and continue to promote new and innovative means of online content distribution in a secure and sustainable manner in order to respond to consumer demand.<sup>90</sup> However, the company is still trying to turn these new channels into a profitable business as, so far, it did not

<sup>86</sup> Suveer Kothari, head of international, Google TV at the 4<sup>th</sup> Annual ACT Conference, November 9, 2011.

<sup>87</sup> ACT Conference, Brussels, November 9, 2011.

<sup>88</sup> Magnus Brooke, Director of the Policy and Regulatory Affairs, ITV at the ACT conference. Jean-Pierre Paoli, Managing Director, International Affairs, TF1 even stated: *"we have tremendous benefits from Internet, very good business"*.

<sup>89</sup> [www.antena3.com/directo](http://www.antena3.com/directo)

<sup>90</sup> D. Fares (VP Corporate relations) at the IIC Annual Conference Barcelona, 2010.



compensate for the loss of off-line revenues. Like the telecom operators broadcasters are looking for a new pay model like a pay-per-click for instance.

BskyB launched Sky Player (5 million live streams in 2011) but also developed Apps on mobile as companion services (D. Wheeldon, 2011). The RTL group<sup>91</sup> reacted with the creation of a family of channels which can be customised (from "*masse to niche*"), and diversification of its activities (38% of RTL Group revenue originate from a broad range of non-advertising activities). The Luxemburg based media group considers that broadcasters must move with their audience and use all relevant digital platforms, as audiences become more flexible.<sup>92</sup> They will move from "*commercial broadcasters to multimedia operators*" (Delusinne, 2011). The German ProSiebenSat.1 group provides another example of such a diversification with online video but also online games accounting for a growing portion of the revenues.<sup>93</sup> On of their leading show generates 18 million video views, 4.5 million interactions online, and already 199 000 mobile download. The Canadian audiovisual firm, TVA, based its growth on the integration of the various channels (Lafrance, 2009: 194). On May 2011, Warner Bros. acquired the social networking site Flixster, a movie discovery service that owns the film review website Rotten Tomatoes (Sanz,<sup>94</sup> 2012). These evolutions point to the interaction of old and new television logics tied-up in complex relationships.

There is a growing competition in the EU with a number of channels that increased from 47 channels to 7200<sup>95</sup> in the last twenty years, quite an amazing leap, generating "*more choice for consumers...and for advertisers*".<sup>96</sup> In 2012, the number of online video on demand was estimated at 251 (E.C., 2012).<sup>97</sup> Despite of the fragmentation, the consumption is steadily increasing: 222 minutes per day/ per person in 2009 in the EU<sup>98</sup> (275 in the US), a growth of 19 minutes since 2000. In the US TV viewing clearly continues to edge up, up to 34 hours per person per week, in 2010.<sup>99</sup>

### **2.3 New services, new devices: looking for agreements**

In terms of innovation games consoles are the most interactive devices that can provide over the top television in terms of households penetration. It became an additional screen to watch TV. Other connected TVs are brought by the TV set manufacturers like Samsung and Sony. A.Preta forecasts a big boost of an OTT market that will go from 300 million euros in 2011 to 3 billion over just three years (Figure 6). An Informa report states that OTT TV viewers will outnumber IPTV viewers by 2013 (Sony ConnTV: 10% connected, Sony PS3: 30% connected).<sup>100</sup> There is a consensus about this market booming, the development of connected and hybrid TV devices in the EU was estimated to be 47 million at the end of

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<sup>91</sup> RTL Group: 45 TV channels in 11 countries, 31 radio channels in 6 countries.

<sup>92</sup> O. Herrgesell, EVP, Corporate Communications, at the IIC Telecoms and Media Forum, Brussels, 2011.

<sup>93</sup> H. Zysk, VP Governmental Relation and Head of European Affairs, at the IIC Telecoms and Media Forum, Brussels 2012.

<sup>94</sup> See the report on the broadcasting industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>95</sup> P. Delusinne put forward 10 000 licensed channels in the EU as of 2010.

<sup>96</sup> O. Herrgesell, id.

<sup>97</sup> This figure does not include catch-up TV, news-only services, adult programmes, films trailers, home shopping programmes and branded services such as YouTube, Dailymotion and iTunes; at 2.

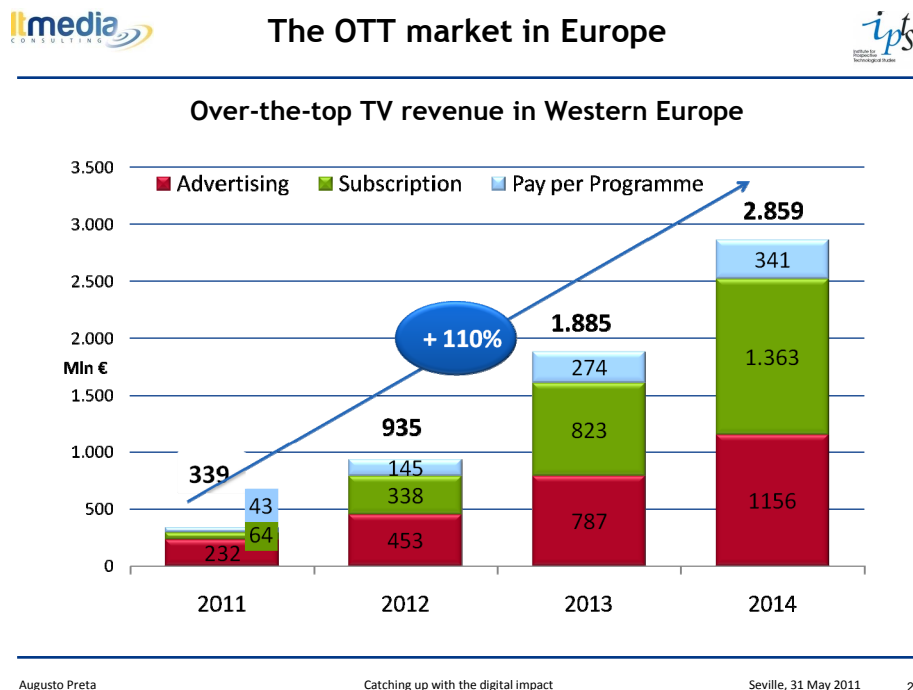
<sup>98</sup> 228 minutes per day in 2010 according to P. Delusinne.

<sup>99</sup> New York Times, January 3, 2011 quoted by D. Waterman.

<sup>100</sup> Quoted by L. Vermaele (Director of Technology & Development, European Broadcasting Union) at the IIC Telecoms and Media Forum, Brussels 2011.

2011 in the EC first report on the AVMS directive application.<sup>101</sup> However some observers note that sale of 'connected' TV does not equate to connecting the set to the Internet especially for sets directly connected to the internet (G. Fontaine, CSA, 2011, Ofcom 2012). The AVMS reports notes as well the limited use of connected TV: only 20% to 30% of connectable TVs sold are actually online.<sup>102</sup> A number of parameters are likely to interfere, including the absence of unique standards, the lack of proper interface with the viewer (such as programmes search, interaction between broadcast/internet content, billing system) and the quality of services ("best effort" over the Internet). In other words, as noted by A. Busson (2010) for the French TV market: *"There can be no doubt that these new televisions will exist in French homes in 2020, the only question is how quickly they will be accepted, adopted and fully utilized by French consumers"*.

**Figure 6: The OTT market in Western Europe.**



Source: A. Preta, IT Media consulting, MCI workshop.

At first glance, the devices are opening viewers to new markets, such as access to advanced video services (such as VOD and catch-up TV) and other services, such as interactivity and e-commerce which enrich broadcasters' linear offers (BskyB strategy) and increase the value of the main asset: programmes. However, it comes with some threats as it already increases the degree of fragmentation that is one of the main features of the evolution of broadcasting over the last decade (Missika, 2007). Nevertheless even with a high degree of fragmentation and the amazing number of available channels, the main legacy channels are still dominant on each national market (Sanz, 2012).<sup>103</sup>

<sup>101</sup> Including: connected TV sets, gamees consoles, standalone TV set-top boxes, p.8. E.C. May 2012, "Audiovisual media services and connected devices: past and future perspectives". Available [http://ec.europa.eu/avpolicy/docs/reg/avmsd/application\\_rep\\_1/report\\_temp\\_en.pdf](http://ec.europa.eu/avpolicy/docs/reg/avmsd/application_rep_1/report_temp_en.pdf)

<sup>102</sup> AVMS report p.8.

<sup>103</sup> This was already the case in the US when cable was growing fast in the 70s and 80s, an offer of around a hundred channels did not prevent consumers from watching mostly the networks and some very popular

Besides, as in the case of newspapers and the position of search-engines providers, it bypasses the direct relationship between the viewer and the broadcaster. Acting as dis-intermediation agent, the new player provides or will provide content aggregation and distribution or advertising management. It opens up a window of opportunity for studios to directly distribute their contents on the market (via a worldwide VOD provider for example, e.g. Netflix), depriving the channels from the content they need or just increasing the costs of the programmes because of an increased demand. Studios are clearly benefiting from online distribution with increased margins (Table 1).

**Table 1: The growth of the studio share with the online distribution of films (US)**

T-7

### Internet cost reductions I: Movies

#### “Brick & mortar” DVD rental (2002) vs. Online “rental” (2010)

	Rental price	Studio share*
<b>2002</b>	\$3.25	33%
<b>2010</b>	\$4.41	70%

\* Before duplications/distribution cost

Sources: author calculations from Kagan Research and Adams Media data  
Preliminary data (Waterman/Ji, March, 2011)



Source: D. Waterman, presentation at the first MCI workshop, 2011

This is one of the reason why, for instance, in November 2010, the nineteen available French digital terrestrial channels signed a charter<sup>104</sup> in which they announced that they will not to make available their content and online services to manufacturers who do not allow full control by the broadcasters of the way online services appear on their programmes. Likewise, in the US ABC, CBS, NBC, Fox, Hulu and Viacom refused to grant access to their online content to Google TV. By the same token, this is the rationale for manufacturer to strike deals with broadcasters for allowing access to their digital contents especially the more "localised" ones. Sony has secured access to HBO content for its Playstation in the US, Canal + is available on the Xbox in France, and Bsky in the UK. In Germany Sony (Bravia TV) connected TVs allow access to ARD/ZDF, Pro7/Sat 1 and Eurosport under such an agreement. However, the willingness of content providers to strike deals with the new players cannot be taken for granted, search engine providers will be more and more challenged by rights holders, but the bargaining power of the newcomers can be, say, persuasive. For instance, Google Music, introduced in November 2011, has struck deals with

channels like the sport channel ESPN. Channels allocated in ranking above 50 were described as "Alaska" (Charon et al, 1988).

<sup>104</sup> "TV connectées : les chaînes de la TNT fixent leurs conditions", Guillaume Deleurence, 01net, 24/11/10: <http://www.01net.com/editorial/523929/tv-connectees-les-chaines-de-la-tnt-fixent-leurs-conditions/>

Sony, Universal and EMI but not Warner Music.<sup>105</sup> By the same token “*The Financial Times*” and “*The Boston Globe*”, have created creating mobile pages using HTML 5 thereby avoiding the “app” worlds controlled by Apple or Google (Pew, 2012).

At the same time, the dominant position of such players is allowing others to act as some kind of “White Knight” offering better options to content holders. This is the case of the telcos which see an opportunity to intervene as a trusted middleman under more favourable commercial agreements. For instance, in November 2010, Orange signed a deal with the ePresse consortium integrating their content into Orange's digital kiosk, “*Read and Go*”, using its search engine. The most important thing being that, contrary to Google, Orange is willing to pay for the content under a “*fair deal*” sharing agreement. For book publishing the company is proposing a similar deal to counter OTT players under an open model (like the Internet or GSM) maintaining each player in his (legacy) role: publisher, bookshop and transmitter (described as the manager of the library: “*digital locker*”). In 2011, the company was negotiating as well with the French trade association of book publishers (syndicat national de l'édition: SNE).<sup>106</sup> Under the proposed arrangement, publishers can set their retail price (De Prato et al,<sup>107</sup> 2012).

Nevertheless, in the EU some major digital platforms, bringing together several national companies were launched in 2010: in Italy (Edigita by RCS, Mauri Spagnol and Feltrinelli), France (Eden by Flammarion, Gallimard and La Martinière) and Spain (Librandia by Planeta; Santillana and Random House Mondadori) (Piault, 2011). In Germany, Bertelsman is preparing a platform in cooperation with the other German publisher Holtzbrinck. This evolution may pave the way to a ramped up switch to digital in the trade book sector. To be noted, the scientific, technical and medical (STM) publishing is already under digital format (90%). This sector has been involved earlier in a transformation that is now almost completed, the “paper” output became marginal within the data based sales and services provided by the largest companies.

Japan is offering an interesting case with the Japanese mangas on mobile: 22% market share in physical books, 65% in digital books with a shift of contents (sentimental, ‘adults’). This digital market became essential for mobile support (Feijoo, 2011). Again it opens experimentation with new business models. However it seems to benefit more to the mobile market and therefore publishers remain reluctant to the new format. According to Kimata (2011), the most influential factor in publishers’ reluctance to embrace e-books was the willingness to maintain a unique book distribution system. Publishers are trying to keep an alternative to Amazon’s streamlined supply chain, and advocating “*a (Japanese style) horizontal specialization in e-books*,” which means a collaborative environment where different stakeholders in the complicated supply chain work together without encroaching on the others’ territory.(Kimata, 2011).

Stable relationships within a given “world” or ecosystem are vital for the well functioning of the system. As shown by research on innovation (Flichy, 2003) there is a need to create a network of cooperations between the different players, mandating its own ecosystem regardless of other forms of cooperation (Apple) may not be sustainable in the long run. New forms of “co-opetition” are likely to emerge between vertical ecosystems. Established

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<sup>105</sup> Offering a library of some 13 million songs. “*Google Music goes live; takes on iTunes*”, Mobile Business Briefing, 17 Nov. 2011.

<sup>106</sup> Source: Pierre Geslot, Orange Lab, “*Ecrit numérique. L'hypothèse d'un modèle ouvert (MO3T)*”, mai 2011.

<sup>107</sup> See the report on the book publishing industry, produced by IPTS as part of the project on media and content industries, listed in the “*IPTS MCI reports*” of the bibliography.

relationships and the related expertise in the field is another asset for legacy players. Among the reasons pushed forward by the international media group Liberty global to buy the bankrupted US retail chain Borders, its CEO, J. Malone explained<sup>108</sup> that having an acknowledged player in the field may ease out the relationships with the other legacy players (de Prato et al, 2012). On the opposite, telcos when buying audiovisual players, an activity quite far away from their core businesses, seem to have some trouble integrating the newcomer. Telefonica bought one of the leading European audiovisual, the Dutch company, Endemol and sold it some years later. Orange-France Telecom went through similar zigzags: creation of the satellite distributors TPS in the 80s, then exit from the company, various attempts in the content sector, the last attempt being investing in the French video sharing service Dailymotion<sup>109</sup> with an acquisition of 49% of the shares in 2011.

**Box 3: Some economics aspects: an interlude<sup>110</sup>**

The traditional media products are characterised by high fixed costs and low marginal costs (Waldfogel, J., 2011), digitisation is bringing both costs down (marginal cost of distribution is almost nil), with falling marginal cost, the consumer surplus is increasing. The network effect generates "preferences externalities" which are likely to yield more focused products. It allows a market enlargement and a wider product availability, for instance CNN.com, and NYTimes.com are available, in the US, in every local newspaper market; US music, movies are available everywhere. A boon for seller of high quality product, with a strong brand (NY Times) but less so for lower quality products without a distinctive niche, like for instance most local newspapers in the US, according to J. Waldfogel.

The content markets can be described as multi-access, multi-sided, multi-format.<sup>111</sup> The multi-sided market approach may shed some light on of the issues. If we follow, B. Julien (Julien, 2011), there was a need for a new theoretical model to better understand competition between "platforms", hence the concept of two-sided markets emerges in the 2000s as a reaction to the evolution of the markets and issues faced by anti-trust and researchers: dematerialization of the exchanges (Internet, E-trade), the importance of services (financial, intermediation,...), and the rise of the content industry/media (new business models, free newspapers, services online, etc...).

Platforms organize/ facilitate the exchanges between agents; such an activity requires taking into account: the externalities between actors of the platform, the complementarities between products or services. The prices play a role more complex than in the case of firms selling a standard consumption good or input. The general level is used for generating revenues, but the structure shapes the behaviour of users and affects the quality of service. There are other important dimensions (design, choice of the services, control information...).

B. Julien defines two-sided markets in the following fashion. A two-sided market combines three elements:

1. The existence of two or more groups using the service, with different prices (asymmetric pricing).
2. The existence of crossed network externalities between these groups (a group being all the more attracted by the platform that the participation of the other group is important).
3. The importance of the price-structure, i.e. not only the sum paid on the whole by the two groups but also the decomposition of this sum between the two groups. One side of the market becomes an input for the other side as stressed X.Wauthy (Wauthy, 2011).

The main examples are: dating clubs, credit cards, BtoC, BtoB intermediaries, search engines, operating systems, smartphones, newspapers, TV, video games, yellow pages and shopping malls. A media bundles contents and advertising, the consumers will pay (or not) for the contents, the advertisers pay for the attention of the consumers. The Internet evolved from two-sided markets (search engine, directories, online press) to multi-sided platforms (social networks, e-commerce, portals, news aggregators), where the content is diverse and complex.

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<sup>108</sup> NYTime.com

<sup>109</sup> Reaching 110 million users according to the Director General M. Rogard (CSA, 2011). Service available in 19 countries and 12 languages.

<sup>110</sup> Based on the presentation of Bruno Julien and Xavier Wauthy at the IPTS MCI workshop.

<sup>111</sup> See Bounie et al. (2008).

In such a market structure, the price structure of the platform takes some specific form. Pricing rules must be adapted to the presence of cross externalities between groups. Attracting a customer on one side of the market allows raising the price on the other side of the market (e.g. advertiser). The platform can thus sacrifice profit on one side to increase its profit of the other side. There is an implicit cross-subsidy between the two sides. The stronger the externality generated by a side, the lower is the price charged on this side.

The video game industry provides a good illustration, a game platform set its prices on both sides of the market (players and game publishers) through an assessment of the expected network effects generated by each user groups, not only by taking into account its production costs (Bourreau et al, 2012). It is then optimal to subsidize the side of the market that generates most network effects. According to the economic literature applied to game consoles, subsidies should fall on the players' side, hence the very aggressive pricing strategies of consoles. Microsoft sold its Xbox360 at least 125 \$ under its marginal costs according to industry sources quoted by Bourreau et al. The company claimed: *"Our business model anticipates that while we currently sell Xbox360 consoles at a negative margin, product cost reductions and the future margins on sales of games and other products will enable us to achieve a positive margin over the Xbox 360 console lifecycle"*.<sup>112</sup>

The activity of two-sided platforms implies leverage effects between sides which may create an impression of excessive exploitation of market power. In two-sided markets, pricing at marginal cost does not constitute a good benchmark. A price above marginal cost is not always a sign of market power, as well as price below cost is not always predatory. Cross subsidies can be pro-competitive in that particular case.

The economic principles for two-sided markets are different from those which apply in the standard markets. The prices do not reflect simply the costs but the costs adjusted for the cross-externalities. Price-skewness and some cross-subsidies are socially beneficial in general, are exacerbated by competition. Multi-homing<sup>113</sup> reduces competition on one side but increases it on the other side. Some practices that are harmful within a standard framework (monopoly prices, rationing, bundling...) can be pro-competitive and socially beneficial. Besides, some apparent "inefficiencies" may help the overall performance (Caillaud et al, 2003).

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<sup>112</sup> Quoted by Bourreau & al (2012). Source: <http://www.gamesindustry.biz>, 28/04/2006, "Microsoft reports Q3 losses on Xbox360 division").

<sup>113</sup> An agent "single-home" if he is active only on one platform; an agent "multi-home" if he is active on several platforms.

### **3 The Importance of being Digital: Changing Cost Structures, Value Creation**

#### **3.1 Changing cost structures and changing benefits from technologies**

The costs are being re-allocated, altering the cost structure. A radically changed cost structure paves the ways for different business models (Ha et al, 2008, Wildman et al, 2009). For instance a server-based distribution of video services reduces the cost of making additional programs available to the customers, as opposed to traditional multichannel video programming distribution (cable, satellite) because of lower costs of capacity; in turn the willingness to pay of customers for an increased choice may be higher.

Some costs disappear: manufacturing of the physical good, physical transportation, storage (see Table 2 for potential savings brought by the Internet in the case of newspapers).<sup>114</sup> Some costs remain unaffected (creation/ development, editorial process, marketing and sales<sup>115</sup>) while others are shifted (part of the production in some cases like music with "home studios",<sup>116</sup> promotion with the coming of blogs and other tools but may decrease like in music for instance<sup>117</sup>) (Waldfogel, J., 2011). New costs are appearing mostly on the software side of the equation (security, rights management) bringing along a growing segment of enabling technology providers (web hosting, content delivery networks, billing). The sustainability of the new entrants is uncertain, some of them will grow, others will eventually fade away (phototypesetting shrunk in the book publishing sector after the introduction of desk publishing).

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<sup>114</sup> According to the book publishing industry, the disappearing or decreasing costs are not the bulk of the production costs, thereby not leaving that much room for a significant decrease of prices for e-books (De Prato et al, 2012).

<sup>115</sup> In the case of music, marketing and promotion also have a large share in the total costs: 28 per cent in 2009. See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>116</sup> Traditional studios are closing, id.

<sup>117</sup> Old days, promotion on the radio: \$60 million payments to radio in 1985, when recording industry profits were \$200 million, \$150,000 to promote hit single. *Source*: Waldfogel.

Table 2: Potential savings brought by the Internet: the case of US newspapers

T-7

## Internet cost reductions II: Newspapers

### □ Distribution of printed newspaper costs (33,000 circ. paper, 1994)\*

News-editorial	16%
Advertising	11
Production/printing	39
Circulation	11
Building/depreciation	32
Total	100%

### □ Classified advertising

Decline of print newspaper classified revenues, 2000-2008: \$9.6 bil.

Total Internet classified advertiser spending, 2008: \$3.3 bil.

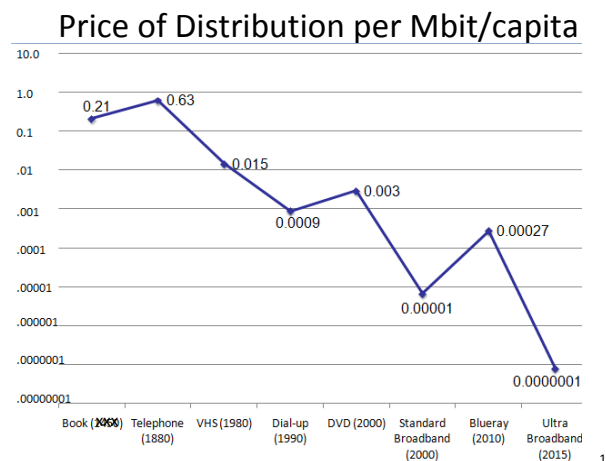
Sources: Inland Press Association, NAA, IAB  
Preliminary data (Waterman/Ji, March, 2011)



Source: D. Waterman, presentation at the first MCI workshop, 2011

All in all, the real costs of the segments of an online world remain unclear and difficult to gauge properly, however this shift is characterised by tremendous decreases in the prices of media distribution and information as illustrated by the two graphs (Figures 7.and 8).

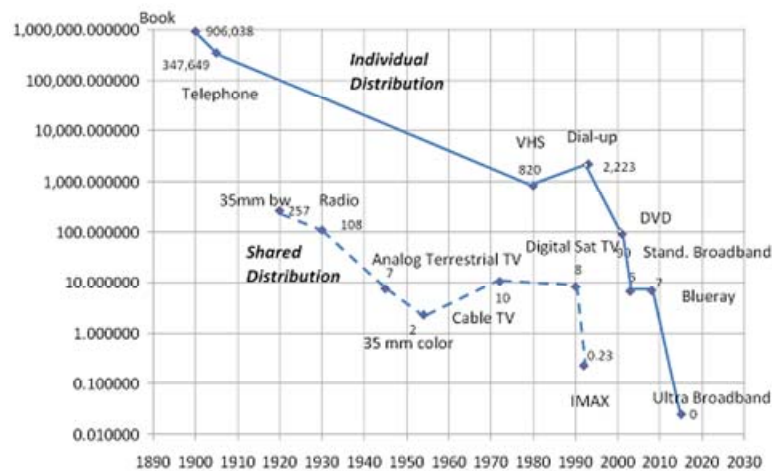
Figure 7: Price of distribution per Mbit/ capita



Source: E. Noam, 2010.



Figure 8: Price of media information per Gbit/ capita



Source: E.Noam, 2010.

Besides, one can assume with D. Waterman<sup>118</sup> that these new technologies will bring some further broad gains through flexible pricing, low delivery costs and virtually unlimited capacity (server based and cloud applications), as well as a higher efficiency. Historically, as stressed by the same author (Waterman, 2005), some of the media industries in the US have benefited greatly from the introduction of technologies during the last four decades. This is the case of broadcasting with robust revenues even if they have been flattening more recently (Figure 9). The revenues from the distribution of films in the US followed a similar pattern (Figure 10) even with some recent declining revenues, the introduction of each new technology triggering additional streams or revenues (broadcasting, cable, pay TV, DVD...). Bringing fixed costs down will facilitate creation (Waldfoegel, 2011a) even boost quality (Waldfoegel, 2011c).

For instance, the music industry went through a succession of cost-reductions with reel-to-reel tape (≈1948), DAT (≈1985), Pro-Tools & Garage band<sup>119</sup> (since Napster). M. Cooper (2008) is more radical, claiming that this is bringing a welcome change to the oligopolistic structure of the music industry and increasing creator and consumer welfare: *"the digital revolution radically transformed the fundamental economics of the industry in a direction that is consumer-friendly and also benefited the vast majority of artists"*. In any case, the music industry did benefit from the introduction of the CD format earlier on in 1984, as at the end of the 70s the music industry was already weakened by a *"post disco era collapse"* (Kahn, 2009: 222). Music companies and mostly the major realized how attractive their catalogues could be. Kahn showed with the well known example of Miles Davis' major commercial success, *Kind of blue* (1959), that it took Columbia<sup>120</sup> over thirty years to sell 500 000 copies but that it grew exponentially after 1984 to reach 1 million in 1993 (and over 3 million at the end of 2010).

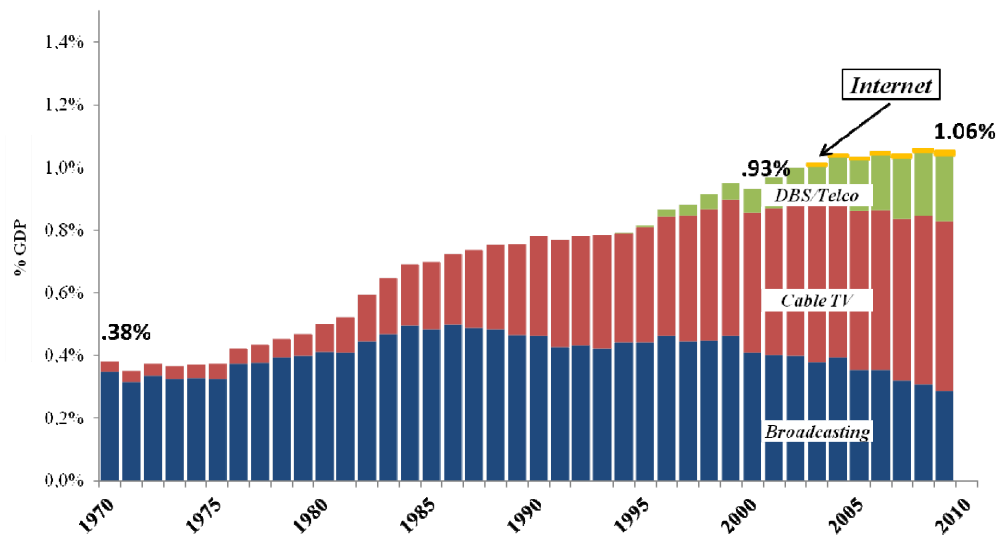
<sup>118</sup> Presentation at the IPTS MCI workshop, May 2011, available at:

<http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

<sup>119</sup> Apple's pre-installed software "Garage band" allows home users to record and create music.

<sup>120</sup> The music company was the first to release the LP format in 1948 (Kahn:51).

Figure 9: Television total revenues by categories as a % of GDP 1970-2009. US market.

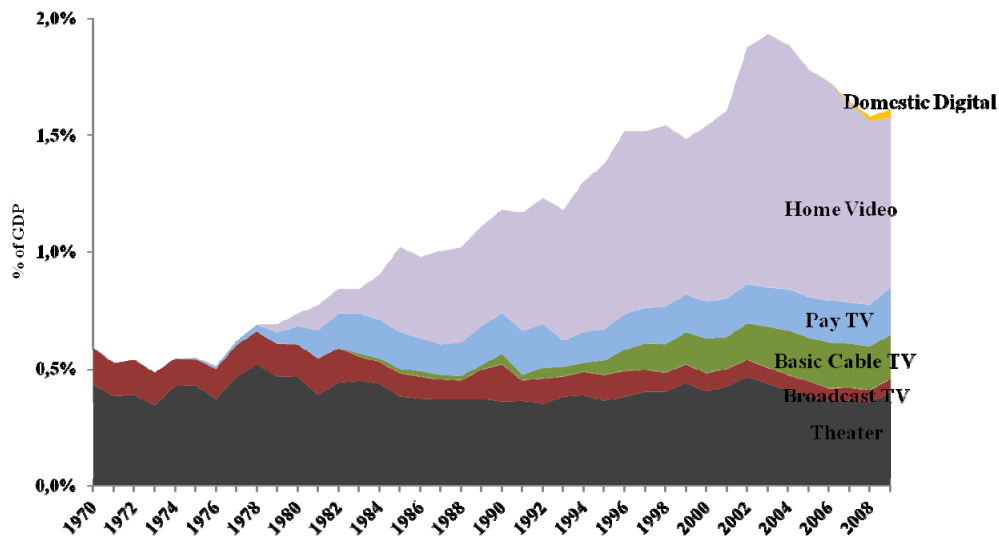


Sources: U.S. Census; trade associations; industry analysts; 10-K reports; author estimations  
Preliminary data (Waterman/Ji, March, 2011)



Source: D. Waterman, presentation at the first MCI workshop, IPTS, 2011

Figure 10: US Movie distributor revenues, US market as % of GDP, 1970-2009.



\* Revenue from merchandise is not included.

Sources: Waterman (2005); SNL Kagan (2010)



Source: D. Waterman, presentation at the first MCI workshop, IPTS, 2011

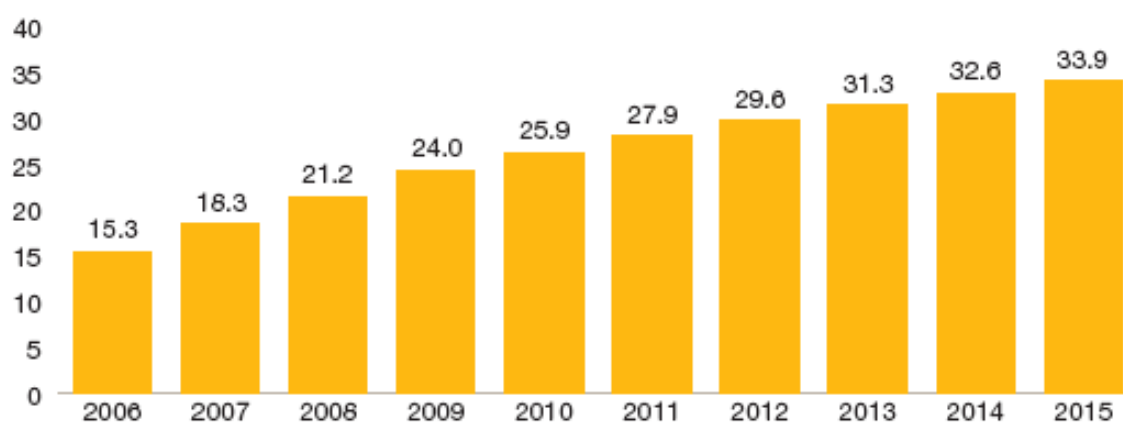
### 3.2 Creative destruction: value creation

If some authors are highly optimistic even enthusiastic about the positive consequence of the coming of the new digital online world (Benkler, 2006, 2011), we have seen that most, if not all, legacy players have concerns about the shift of value from the "old" (off-line) world to the new online world. The more optimistic players are hoping for a zero sum game, the less so claiming this shift of value does not offset the loss of revenues, the more pessimistic highlighting value destruction (recorded music trade association, IFPI, 2011).

To answer to questions raised by the coming of the digital age is not an easy task, especially as data are lacking, as the proper assessment of the digital economy is a complex task. It is often needed to rely on unofficial statistics that are not compatible with official ones and lack time series data. Statistics are usually confined to recent years;<sup>121</sup> (IPTS, 2011). Definitions and official statistical classifications such as those adopted by the OECD<sup>122</sup> and Eurostat often differ widely from those used in academic literature or by consultancies and research institutes. Nevertheless, it is possible use some heterogeneous sources to document this field.

If we take a look at the data published by PWC (2011), they show a clear growth of the digital share of the global entertainment and media spending (Figure 11) and a none the less clear decline of the non digital spending (Figure 12), in fact online are forecast to decline faster but the growth was a double digit growth and not a negative one like with non digital for 2009.

**Figure 11: The digital share of global entertainment and media spending (%), 2006-2015.**



Note: Digital spending consists of broadband and mobile Internet access; online and mobile Internet advertising; video-on-demand; mobile TV subscriptions; digital music; electronic home video; online and wireless video games; digital consumer magazine circulation spending; digital newspaper circulation spending; digital trade magazine circulation spending; electronic consumer, educational, and professional books; and satellite radio subscriptions.

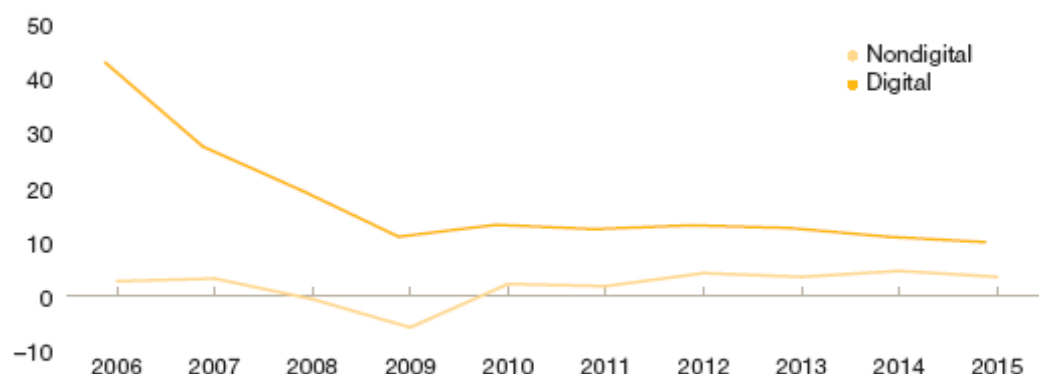
Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Source: PWC, 2011

<sup>121</sup> See the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>122</sup> The classification was changed in 2007 making it even more difficult to work on reliable and consistent time series, id report on quantitative overview.

**Figure 12: Global digital and non digital spending growth (%), 2006-2015.**



Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Source: PWC, 2011

From a regional viewpoint, only emerging markets (with Brazil and China being the fastest growing) see growth, mature media markets are declining (EMEA, US) (Figure 13). Looking at media segments, some are faring better than others. As already noticed the music industry (at least its recorded segment) is worse off (Figure 14): -7.3% in 2009, digital spending is expected to overtake physical spending in 2014. The newspapers were hit in 2009 by an even worse recession: with - 10.9 for newspaper and - 11.2% for magazines. The fast decline of newspaper does not appear to slow down as a compound rate of -1.5% is forecasted for the period 2011-2015. Print circulation continued to decline in 2011, so did ad revenues even more critically, online advertising revenues on the rise did not offset the losses on off line ad revenues (Pew, 2012). For magazines, the subsector seems to recover and a moderate growth of 3% is forecasted until 2015. One can assume that these data are even more dramatic in mature markets as the average data include growing spending in emerging economies (India for instance). In sharp contrast, as noted already (Figure 1), the Internet segment is predicted to grow fast with a compound growth rate of around 13% over the same period (2011-2015).

**Table 3: Market by region, US \$ billion, 2006-2015.**

Region	2006	2007	2008	2009	2010p	2011	2012	2013	2014	2015	2011-15 CAGR
North America	488,572	504,934	498,639	466,333	481,299	498,949	527,500	549,353	580,377	606,677	
% Change	4.9	3.3	-1.2	-6.5	3.2	3.7	5.7	4.1	5.6	4.5	4.7
EMEA	422,303	454,104	470,444	460,569	477,141	497,445	524,006	553,880	584,149	613,943	
% Change	6.6	7.5	3.6	-2.1	3.6	4.3	5.3	5.7	5.5	5.1	5.2
Asia Pacific	310,086	341,076	364,832	371,256	394,777	410,653	442,679	476,128	508,981	540,716	
% Change	10.5	10.0	7.0	1.8	6.3	4.0	7.8	7.6	6.9	6.2	6.5
Latin America	45,165	51,535	57,145	59,093	66,309	73,754	82,005	90,435	102,162	109,139	
% Change	13.9	14.1	10.9	3.4	12.2	11.2	11.2	10.3	13.0	6.8	10.5
<b>Total</b>	<b>1,266,126</b>	<b>1,351,649</b>	<b>1,391,060</b>	<b>1,357,251</b>	<b>1,419,526</b>	<b>1,480,801</b>	<b>1,576,190</b>	<b>1,669,796</b>	<b>1,775,669</b>	<b>1,870,475</b>	
% Change	7.1	6.8	2.9	-2.4	4.6	4.3	6.4	5.9	6.3	5.3	5.7

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Source: PWC, 2011

**Table 4: Global market by segment, US \$ billion, 2006-2015.**

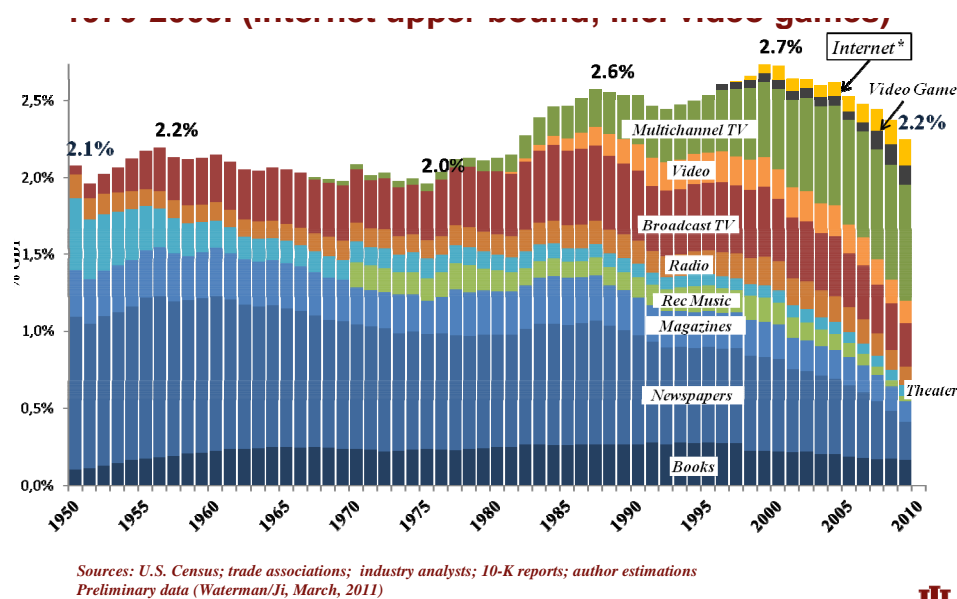
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Video games	34108	42944	51736	52635	55530	59293	64223	69693	75687	82436
Internet access: wired & mobile	167353	197923	226457	247249	269927	293597	320945	350963	379471	407871
Internet advertising: wired & mobile	37912	50234	59434	61381	70515	80122	92278	105033	117388	129865
TV subscriptions & licence fees	154183	167943	179838	191699	203083	217700	234209	250574	267652	285219
TV advertising	158208	163618	166241	154081	169770	175380	192951	202610	224434	232648
Recorded music	33492	30884	27586	25393	23440	22111	21755	21653	21799	2127
Filmed entertainment	81104	83081	82159	83415	86222	90622	96399	102675	108851	114759
Consumer magazine publishing	81481	833321	81756	72575	72618	73060	74949	76908	78977	81565
Newspaper publishing	185580	86836	179286	159658	159704	159564	162690	166438	170619	175558
Radio	46788	47926	46880	42691	44800	46193	47921	49701	51384	53126
Out of home advertising	27873	29837	29188	25197	26093	26617	28717	30725	32452	34240
Consumer and educational book publishing	104061	109569	110072	108499	108691	109480	111593	114047	116650	119229
Business-to-business <sup>123</sup>	162029	169115	164943	148014	147234	148497	153338	159757	167026	175011
Total	1266126	1351649	1391060	1357251	1419526	1480801	1576190	1669796	1775669	1870475

Source: PWC, 2011

D. Waterman, taking a closer look at the long term evolution over a sixty year period of the commercial media (edited media only) revenues in the US, finds that revenues measured as a percentage of the US GDP went up until the 2000, then plateaued and decreased after to come back in 2010 to the level of 1950 (Figure 13). Revenues are consistently falling (or flattening) especially newspapers and music, revenues from the Internet or from the newest segment of the media, video games, do not compensate so far the decline. He notes that the output was a far greater program variety and quality, though at higher prices to consumers. Like in the case of telecommunications it may just be the output of more competitive markets with reduced margins and decreasing prices. Figure 13 also confirms as well the different modes of evolution of the different segments already stressed (Figure 9).

<sup>123</sup> Business-to-business includes business information, trade magazines, professional books, and directory advertising.

Figure 13: Total revenues of US commercial media as % of GDP, 1950-2010.



Source: D. Waterman, presentation at the 1<sup>st</sup> IPTS MCI workshop, 2011

Unfortunately, we do not have similar data for the EU market. Eurostat provides some data on consumer expenditure on recreation and culture as a share of GDP, in line with the former OECD classification:<sup>124</sup> “Most EU Member States spend 4-6% of GDP on recreation and culture” (Enders Analysis, 2012)<sup>125</sup> One can only assume that the trend will be similar, although not identical, as some segments like the cinema have been growing fast in the US, but on the other side of the Atlantic much to the detriment of national film production, EU share melted sharply.<sup>126</sup>

IPTV is growing fast in the EU, with some countries like France leading in ADSL distribution, the revenues went from 206 millions in 2005 euros up to 2 007 in 2009 and are steadily growing (43.5% between 2008 and 2009) (European Audiovisual Observatory, 2010, Sanz 2012) but other segments of the broadcasting industry were impacted by the economic crisis, obviously TV advertising (-8.8 in the EU 2008-2009, -7.3 globally, PwC 2011).

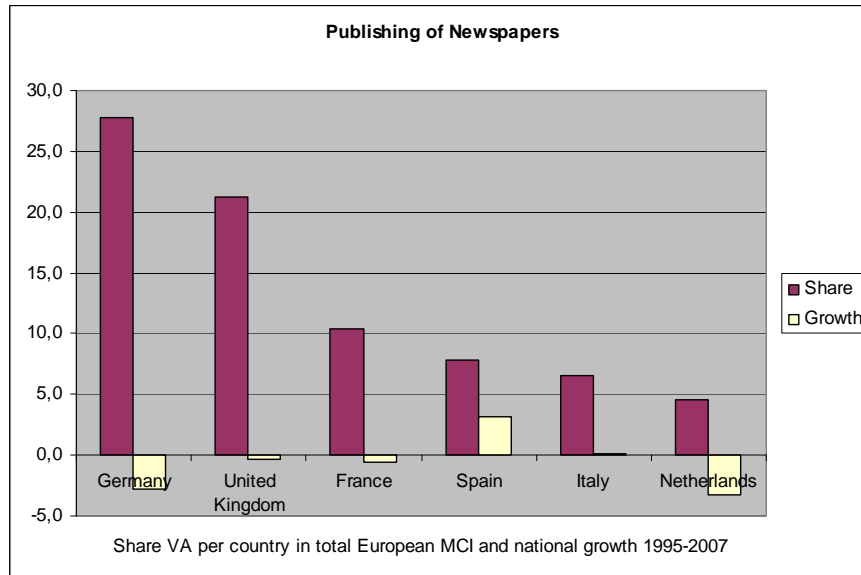
<sup>124</sup> Data on recreational, cultural and sporting industry at a disaggregated level is not available in the Eurostat Structural Business Statistics database. Therefore, the recreational, cultural and sporting industry is presented as a whole rather than at disaggregated sub-sector level. The consequence is that the broadcasting and motion pictures industry remains hidden in this broad category. The recreational, cultural and sporting activities sector is the biggest segment of the MCI industries. Based on 2008 data, only 10% to 20% approximately of employment in the recreational, cultural and sporting activities sector in 2008 can be attributed to MCI-relevant activities i.e film, broadcasting, video. If this percentage is projected on the 2007 data, this would mean that the recreational, cultural and sporting activities sub-sector comprises approximately 64%, whereas the publishing sector would amount to 36% of total employment in the MCI sector. Applying this ratio of 36 % to the EU average yields less than 1% of GDP to a little more than 2% comparable to the US data of figure 17. See the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

<sup>125</sup> The report adds: “Consumer expenditure on recreation and culture as a share of GDP varies widely across the EU27: 6.9% in the United Kingdom, 3.2% in France, and so forth.... Malta spends relatively the most on recreation and culture despite having relatively low per capita income, while Luxembourg spends relatively little despite having the highest per capita income”. (Enders at 6).

<sup>126</sup> See the report on the film sector, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

One can compare nevertheless with the average growth of the value added for the publishing of newspaper, books, recorded music in the six largest EU markets between 1995 and 2007: Figures 14, 15 and 16.<sup>127</sup> They illustrate a similar decline pattern.

**Figure 14: Value added share of the six largest EU Member States in book publishing (2007) and average national growth (1995-2007)**



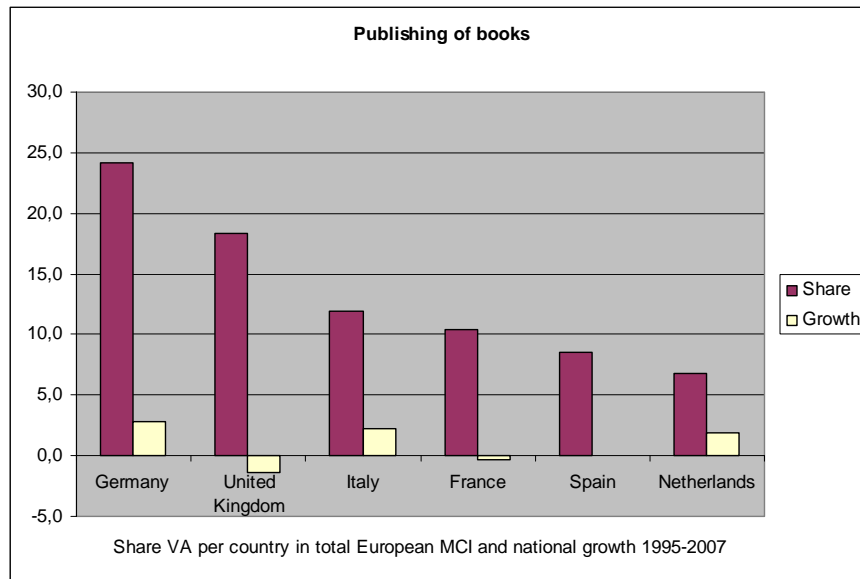
Source: Statistical report, 2012

The PWC figures are assessing the size of markets in US \$, D. Waterman is looking at the percentage of GDP and the last figures use the value added<sup>128</sup> to gauge the importance of each segment. Germany is the only country of the six EU Member States that shows a significant value added growth in one of the sector, the publishing of sound recordings industry between 1995 and 2007. To a minor extent, the newspaper segment in Spain, during the same period, went through an increase and not a decrease like in most other countries.

<sup>127</sup> This section comes from the statistical report see at 113. See the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

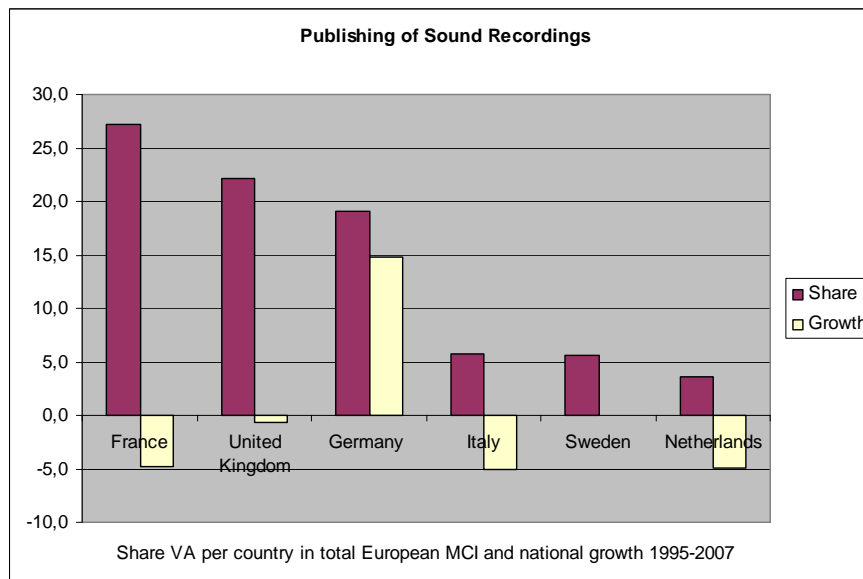
<sup>128</sup> The value added of a sector equals the sum of all the values added by every firm in that particular sector that is minus any intermediate products to avoid double counting. It is a measure of the importance of a sector.

**Figure 15: Value added share of the six largest EU Member States in book publishing (2007) and average national growth (1995-2007)**



Source: Statistical report, 2012

**Figure 16: Share of six largest EU Member States in the total value added of the publishing of sound recordings in 2007 and average national growth 1995-2007**

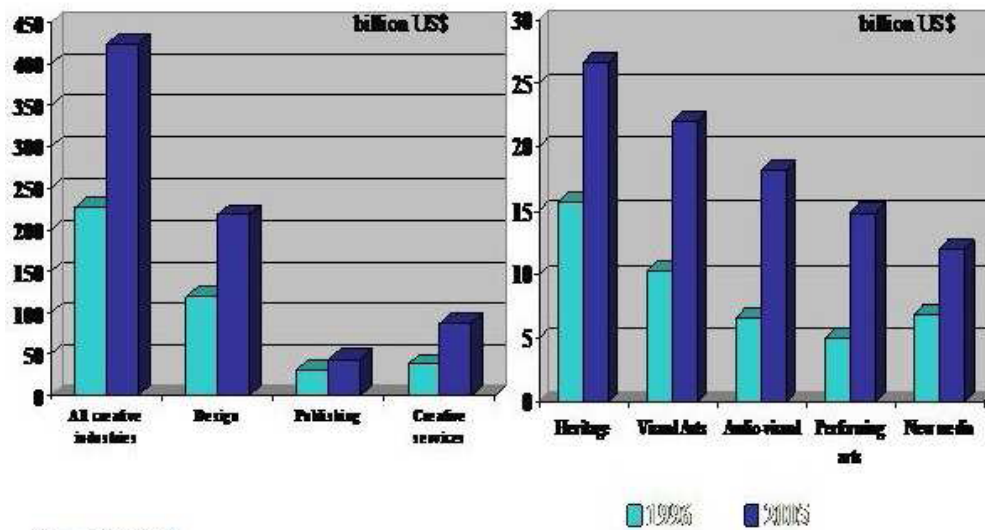


Source: Statistical report, 2012

Taking a look at the world export give a more nuanced view (Figure 17), especially for audiovisual and shows a slight increase for publishing, at least until 2005. New media, as expected, are growing.



Figure 17: Global trade flows, creative industries. 1996–2006



Source: UNCTAD<sup>129</sup>

However, one has to be very careful about the meaning of these declining trends as noting such trends does not allow deducting any direct impact of the growth of new media on the decrease of some legacy media. The causality factor is far from being obvious as numerous parameters intervene and are intertwined. These parameters are likely to differ from one subsector to another.

To take the historical example of the film industry in the 60s and still in the 70s, the usual claim from this industry was that the decline in cinema going was a direct output of the growth of broadcasting. This claim was not in line with the data available, for instance in France the box office revenues plummeted after the 1957 peak; and still in the early 60s the penetration rate of TV in the households was low. Furthermore as shown by R. Bonnell (1978) the main explanatory factor was not the raise of TV but the equipment of households with cars which lead to new patterns of leisure. By the same token, the decline of readerships (books, newspaper: see Chapter 6) took place before digitisation.

<sup>129</sup> Source: Creative Economy Programme: E-Newsletter, No. 12 (April 2010). "Meeting of international organizations on cultural statistics", the document emphasizes the methodological issues to gather consistent data, available at: [www.unctad.org](http://www.unctad.org)



## 4 Business Models: A Moving Target?

During the first phases of online distribution, the "natural" tendency has been to duplicate the legacy business models from the analogue/physical world to the digital world. Even is the case of the most recent segment of the media and entertainment industries, the video games industry, video games publishers tried to adapt the "old" video games industry business models (de Prato et al., 2010) to their online distribution. In the case of mobile games publishers (content providers), they are fundamentally a translation of the existing business models of the software game industry into the mobile domain: retailing (pay-as-you-go), premium retailing (the game with basic functionalities is free) and subscription (for gaming online).

### 4.1 Disintermediation/ re-intermediation

As noted in the same study, in line with the noticed overlapping of value chains which leads in turn to an overlapping of business models (legacy/ internet), the evolving business models are an output of two simultaneous processes: the overall trend of transformation of digital products into services, and the processes of disintermediation and re-intermediation. This two thronged process is increasing the complexity of the business models, both bringing some to an end and opening up new ones.

On the disintermediation side, direct sales from the producer/ creator/ developer become possible. In the case of video games, a developer selling directly to the consumer online will receive 5 Euros back, instead of 4 Euros through the legacy retail value chain (the publisher keeps 26 Euros, the distributor 10 Euros and the retailer another 10 Euros), in the mobile sphere the developer will receive 10 Euros from the distributor getting 15 Euros from the end customers (EGDF, 2011). In the film industry ... " *some independent filmmakers have embraced the idea that they could directly deal with (e.g. theatre) exhibitors or even the audience*" (De Vinck et al, 2011).<sup>130</sup> The growth of the blogosphere is another well known example, although the ways to monetize do vary. Because of her fame, J. K. Rowling, the author of Harry Potter is able to sell her e-books directly on her site, Pottermore, even imposing conditions on Amazon and other retailers for rerouting their customers to Pottermore.<sup>131</sup>

On the re-intermediation side, App shops are bringing new streams of secured revenues through their large customer base but they handle the relationship with the customers and set retail prices although under an agency model this is achieved through an agreement with the content providers (Apple).

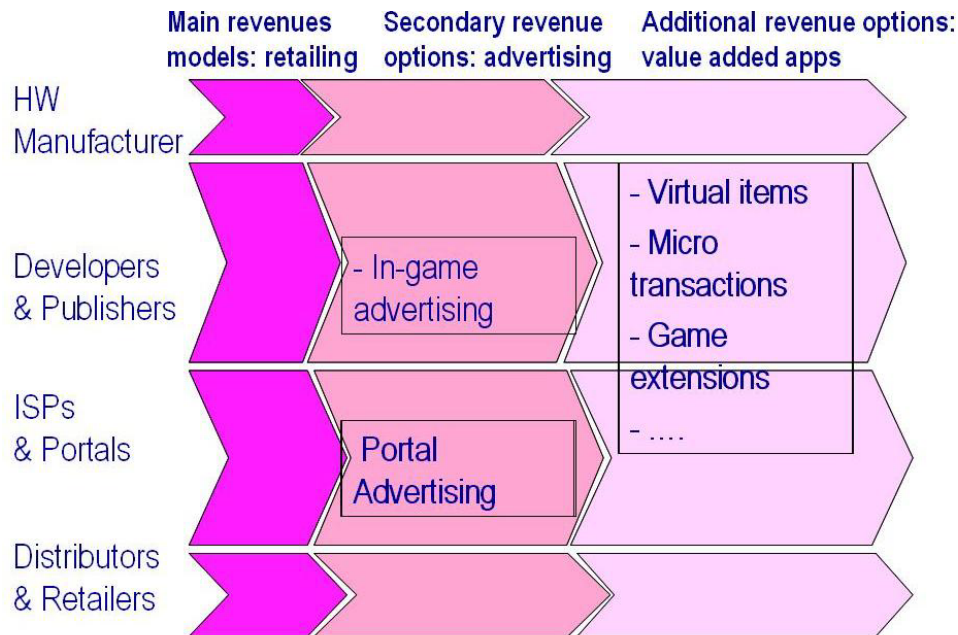
Part of the complexity has to do with the number of streams of revenues that could now be added to the retail (physical) models. In that complex interexchange some main revenues are likely to become secondary and vice-versa. The video games industry offers a good example of these hybrid business models as illustrated by Figure 18. Figure 5 introduced the hybrid Lagardère active business models with main revenues coming from advertising (75%, different kind of ads including click-to-call and to store), branding (brand experience: 15%) and paid content (10%: paid app). BskyB' Sky Player is linked to mobile services and Apps.

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<sup>130</sup> See the report on the film sector, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>131</sup> "A too-cosy world?" *The Economist*, 14 April 2012, p.62.

Figure 18: Business models in (re-) construction



Source: de Prato et al. (2010)<sup>132</sup>.

Figure 18 shows, for instance, how it becomes possible to introduce new forms of advertising, now an opportunity for magazines but for e-books or music online. It illustrates the path toward a service model where the consumer is buying a service linked to some editorial content rather than plainly the media per se. The video games industry saw the birth of the virtual item model<sup>133</sup> and basically any item can be sold as virtual. Players can use virtual money and buy "powers" or characters' features, together with extensions to the gaming experience of various types: soundtracks, scenarios, and textures - anything that can be transformed into a virtual item. This paves the way for a creative way to leave the "doom of free", under these modified "economics of free" model, free contents are used to lure customer into buying some elements, to access other models, contents are used as a springboard towards paying access (freemium). For instance with e-book; Leroutard.com<sup>134</sup> offered such an advertisement based service. Mixing different online content enables hybrid business model: in May 2011, the Zynga game company and the singer Lady Gaga struck a partnership to promote the singer last album, the CD can be downloaded for free if the user buys a game card for 25 US \$.<sup>135</sup>

Online distribution offers novel ways to monetize contents and to test the willingness to pay of consumers. Benkler (2011) claims that experiments with pay-as-you-wish pricing in the music industry reveal that fans will voluntarily pay far more for their favourite music than economic models would ever predict. Some business models are built upon user generated contents, for instance commercial distribution platforms for amateur or semi-

<sup>132</sup> See the report on the video game industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>133</sup> In South Korea, (Wi, 2009).

<sup>134</sup> *Le routard* is a well known French travel guide.

<sup>135</sup> [www.cbsnews.com/8301-504943\\_162-20061638-10391715.html](http://www.cbsnews.com/8301-504943_162-20061638-10391715.html), and [www.zynga.com/ladygaga/](http://www.zynga.com/ladygaga/). The Icelandic singer Bjork released an album as an app with two songs for free and additional bonuses.

professional content: Bildunion or iStockphoto, where users can upload their pictures and offer them for a fee or free-of-charge.

New entrants like telecom operators; hardware and app stores are de facto updating for the digital world the sharing models that existed with off line distribution. The landscape is characterised by an array of competing business models some of them will turn out to be sustainable, other will not. There are two main categories, the paid models and the free one which used to be based on advertising but now is seeing novel approaches. In between, one will find some intermediate categories granting a new flexibility and creating room for innovation. According to J. Burghin (2010) pay services are "a minor part of Web services" and are more concentrated in entertainment. He also notes that paying customers are willing to pay "a hefty premium (67%)" over non-paying customers. According to the same source, the online customers pay for about 40 Euros per year for subscriptions but benefits from free services valued around 225 Euros per year (with spending on e-commerce and services of 450 Euros).

#### **4.2 The pay models:**

*Pay-as-you-go*: online transactions allow a variety of pay-per-transaction model according to the kind of content that is being bought, with a clear trend toward more itemized sales (song, article, pages of books, avatars). Users pay a separate fee for every piece of content they download, listen/watch or play with. They can pay by download on a temporary (equivalent to rental) basis or on a perennial basis (sale).

An example of temporary pay-per-download is Apple's iTunes Store. Pay-per-listen/view services are mainly streaming based services that prevent users from storing content. This model, pioneered by iTunes (which had over 100 million accounts in 2009 celebrated its 1 billionth download in February 2010), remains the largest revenue source in the online sector. Pricing can be left to consumers as experienced by the group Radiohead letting their audience decide how much to pay for a track. Benkler (2011) claims that experiments with pay-as-you-wish pricing in the music industry reveal that fans will voluntarily pay far more for their favourite music than economic models would ever predict. The New York Times introduced a so-called metered model followed by and roughly 150 other US newspapers (Pew, 2012).

*Subscription model*: users pay a periodic flat fee and receive the right to download or listen to/watch content (un)limitedly for a certain period of time. This is the standard model for cable and satellite TV, often marketed through bundles (tiered offers) also for VOD (S-VOD).

Other examples are Spotify, an EU firm, and Last.fm., streaming platforms in the music sector.<sup>136</sup> Virgin Media UK launched a mobile music store based on the book club model: for a monthly fee (3.36 Euros) subscribers can download five tracks per month (PWC, 2011). In the case of video games this model can be boosted by the use of the community of gamers. For instance, members of the 11 million strong "World of Warcraft" gamer community typically pay close to \$170 annually to play, on top of an initial investment in software and upgrades ranging from \$50 to \$195 per player (Hadida et al, 2010).<sup>137</sup> The

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<sup>136</sup> See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>137</sup> The same authors suggest that the music industry should learn from this model.

“Wall Street Journal” and “New York Times” successes with pay wall, early 2011, have encouraged others: in 2012, Gannett announced that it will charge subscriptions for all of 80 of its local news sites but not for “USA Today” (Pew 2012).

*Services (secondary and additional revenue options):* in an online world bundles will more and more include numerous services. App stores are offering brokerage services, indirect marketing (like newspaper used to do). New entrants such as Telcos, e-commerce platforms such as Amazon can offer billing services. Classified ads are a well known source of revenues that shifted online.

#### **4.3 The free models:**

*Advertising-supported service model:* typical two-side market arrangement, the aggregator charge advertisers to reach the eyeballs of the consumers (economies of scale). Streaming takes the place of over-the-air distribution. On Pandora, customers specify what artists or songs they enjoy listening to, and similar music is then streamed to them (Coleman, Bazelon: 8).<sup>138</sup> In the book sector, Leroutard.com is advertisement based or the Spanish 24 Symbols. InLibro Veritas offers a free digital copy of e-books, but paid hard copies to be ordered (Benhamou, 2012: 98).

Online distribution allowed new forms such as in-stream or in-page ad with various sharing agreement with the rights holders (per click, per hit...) and especially more focused advertising, as well as viral marketing. It raised new questions about the kind of metrics to use to charge advertisers (per click, video view, engagement...) rather than the standard cost per mille (CPM).<sup>139</sup> Free online video providers are nevertheless trying to move toward pay models (Leborgne, 2010): YouTube opened a video rental store in April 2010, Hulu offers a paid version on the iPad. Pandora also offers a premium pay version without commercials.

*Freemium:* the content is made available for free online. Some customers may be willing to buy items as illustrated by the example of video games. The model is built on economies of scale. Bigpoint, a German video games company, distributes free browser games to its customer basis of 110 million users (as of March 2010) out of which 10% will buy some items for a small amount.<sup>140</sup> This is an innovative use of a two sided market (see Box 3) with a segmented pricing (or non pricing scheme), most customers will get free services supported by those who are willing to pay. According to research by NPD Group, quoted by industry source, around 40% of freemium game players make in-app payments with males more likely to shell out than women.<sup>141</sup> Moreover, the same study reveals that “Freemium games appear to have a high retention rate, with 84% of users continuing to play after their initial interactions”.

The video game hit maker firm Zynga sums up nicely this approach: “*Games should be free. Free games are more social because they’re more accessible to everyone. We’ve also found*

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<sup>138</sup> Other sites offering the same service are available: Grooveshark, (<http://grooveshark.com>), Musicoverly: <http://musicoverly.com/>, and Slacker: <http://www.slacker.com>

<sup>139</sup> Advert cost per thousand views.

<sup>140</sup> Source: Bigpoint, presentation at the Video games validation workshop, Brussels, June 2010.

<sup>141</sup> 36% for mobile app see box 3. NPD Group’s *Insights into the Freemium Games Market* report. Quoted by *Mobile Business Briefing*, 26 April 2012. <http://www.mobilebusinessbriefing.com/articles/survey-almost-half-of-freemium-gamers-make-in-app-payments/23624?elq=c7e01fe0e5d2433d8c56e290da0965c3>

them to be more profitable. We have created a new kind of customer relationship with new economics—free first, high satisfaction, pay optional.”<sup>142</sup> Pandora (music online) and Flickr (online storage of photos are other examples. The “New York Times” introduced a metered system where access to the first article is free but the customer will have to pay to access to the next one.

*Non commercial models:* maintained by a community (see Wikipedia) or sponsored, “Patronism”<sup>143</sup> is based on voluntary contribution from music fans to connect to artists, (Coleman, Bazelon: 14), stressing that “patronage is the oldest form of arts funding”.<sup>144</sup> Propublica is another interesting US example of “philanthropically sponsored investigative journalism” (Katz, 2011) as it was founded with a large private grant.<sup>145</sup> Public service of course is another well-known example (the BBC istore is a notorious model). The public service is not totally free as it funded through a specific tax (license fees in the case of public broadcasting). Public subsidies (often indirect through various funds) are also found in the case of cinema, newspaper or books. However, historically commercial advertising was seen as a way to achieve the “emancipation of the daily journals from political dictation” (public funding) (R.Collins, 2011).<sup>146</sup>

#### Box 4: The mobile perspective

The revenues from mobile entertainment are now higher than the revenues of the music industry: 35 billion euros according to mBlox<sup>147</sup>. Mobile phone content is, for instance, the largest segment of China's digital publishing industry (€ 3.58 billion)<sup>148</sup>. According to the Cisco Visual Networking Index: “Mobile data is well on its way to become a necessity. Mobile voice service is already considered a necessity by most, and mobile data, video, and TV services are fast becoming an essential part of consumers’ lives.”<sup>149</sup> Mobile device is the fastest growing platform for accessing news and information. According to a survey from the research firm CREDOC, as of 2010, 7.6 million French customers accessed an e-commerce website from their mobile device<sup>150</sup>. As noted already in the move toward a three screens world, mobile is a major one as creative content, media and Internet industries go mobile (on mobile, smartphones and more recently tablets/ e-readers).

Wireless-mobile technology is indeed a major driver of economic value in the world economy (EU: ≈250bn € or 2-3% of GDP and rising). In 2011 3/4 of the planet's population have use of a mobile handset as it will continue PC will stand more and more for “portable computer”. This box sums up some of the trends.

The figure below depicts the dimensions of mobile content: from processed information to creative content and the degree of specificity to the mobile environment, including some examples of mobile content market segments. The resulting mobile content space can be then categorized into four broad classes, not mutually exclusive:

- “adapted” for that already-existing information (coming from a different media), adjusted to be displayed and used in a mobile environment, example: “mobizodes”.
- “repurposed”, for that creative content re-used and adapted to mobility,
- “original” or “specific”, for that creative content designed with mobility in mind, mobile games being a good example (casual games) and

<sup>142</sup> Source: Zynga US SEC file. Zynga reaches around 267 millions users per month, out of which 80 millions for Citiville, over 45 millions for Empires & Allies, and nearly 37 millions for Farmville.

<sup>143</sup> “Become a patron of your favourite band”: <http://patronism.com/>

<sup>144</sup> Source: website.

<sup>145</sup> By Herbert Sandler, <http://www.propublica.org>

<sup>146</sup> For an history of the role and control of newspapers by the French governments see Charon (1991).

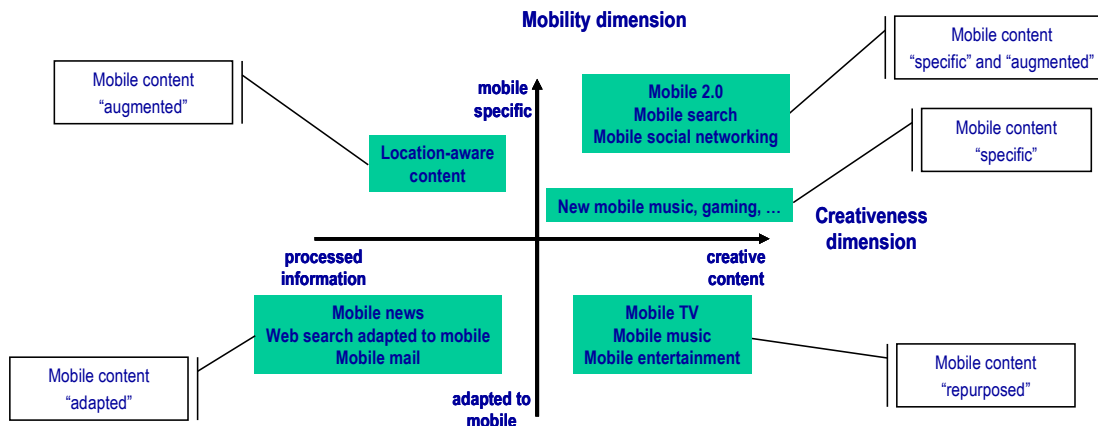
<sup>147</sup> A. Bud , Chief Strategy officer, mBlox (the world largest mobile transaction company), at the IIC Barcelona,

<sup>148</sup> GSMA Mobile Business Briefing, 20 October 2010.

<sup>149</sup> Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010–2015.

<sup>150</sup> Crédoc (2010) Les acheteurs à distance et en ligne en 2010, Etude Octobre 2010 .  
[http://www.credoc.fr/pdf/Sou/Fevad\\_%20presentation\\_%202010.pdf](http://www.credoc.fr/pdf/Sou/Fevad_%20presentation_%202010.pdf)

- "augmented", for that content (of any type) that uses additional and specific properties of mobile systems (such as location-awareness) to increase its value and interest for users.



Source: C.Feijoo et al, 2009.

On the edited side of the markets it consists of four main vertical segments: mobile music, mobile television / Mobile video, mobile gaming, and others like mobile media / m-books / education / .... Each segments tells a different story with failures (mobile TV) and outstanding successes as illustrated with the amazing story of the game Angry Birds edited by the Finnish company Rovio. The Finnish start-up which recently hit half a billion downloads was expected to hit 1 billion downloads of Angry Birds games "sometime next year" according to industry sources<sup>151</sup> and did achieve this goal in May 2012.<sup>152</sup> Its earnings before tax in 2011 stood at EUR 48 million, on revenue of EUR 75.4 million.<sup>153</sup> The mobile news segment is also growing fast: in the US Half of smartphone owners (51%) and a majority of tablet owners (56%) use the devices for news. According to the Pew 2012 survey,<sup>154</sup> mobile is adding to and expanding rather than replacing news behaviour.

#### *Mobile music: from ringtones to full tracks on the cloud*

In a nutshell, the mobile music market went through various phases. Up to 2005, ringtones dominated to be replaced from 2005 by full tracks (the music store concept, Rhapsody). In 2008, came with providers such as Spotify the move to the cloud in 2011 (Amazon, Google, ...). Ringtones are now in crisis and the full tracks which was expected to be bigger never achieved to overtake. Today, customers still mainly use side-loading (i.e. iTunes). Nevertheless, digital music has become mobile on its own "floating between PCs, portable players, home multimedia, video game consoles, car stereo, the cloud"(Fitchard,2011), with consumers forced to use clunky applications for DRM-free tracks

#### *Mobile TV: expectations never fulfilled*

Mobile TV benefited from a strong and fastened standardisation support since 2007 (DVB-H), especially in the EU,<sup>155</sup> but is currently in a "limbo". It was expected that mobile TV could potentially be a market of up to 20 billion Euros by 2011, reaching 500 million customers worldwide. Despite of attempting using major events (olympics, football) for commercial launches, the output remains modest with a limited response from EU

<sup>151</sup> "Rovio aiming for a billion Angry Birds fans", *Mobile Business Briefing*, 9 Nov. 2011.

<http://www.mobileworldlive.com/videos/rovio-aiming-for-a-billion-angry-birds-fans/19088/>

<sup>152</sup> Angry Birds hits 1 billion downloads; Rovio acquires Casey's Contraptions IP.

<http://www.mobilebusinessbriefing.com/articles/angry-birds-hits-1-billion-downloads-rovio-acquires-casey-s-contraptions-ip/23818?elq=34e4004e9dad43e7bfc49bf2c20cae06>

<sup>153</sup> Rovio reveals 2011 numbers, <http://www.mobilebusinessbriefing.com/articles/rovio-reveals-2011-numbers/23772?elq=59336ad8c9dc4c11851a1db913e79e19>

<sup>154</sup> Mobile Devices and News Consumption.

<sup>155</sup> In 2006, the Commission encouraged the setting up of the European Mobile Broadcasting Council. Commission communication on EU policy for mobile TV (July 2007), "Strengthening the Internal Market for Mobile TV".



markets (around 5 million users). Some modest success stories are to be found (Japan and Korea<sup>156</sup>) but also notorious failures (BBC 2008). This “*impasse*” situation stems from divergent technological options (broadcasting vs mobile comms<sup>157</sup>) but also from a lack of perceived value and usefulness from users. The unexpected behaviour of users (at home, after prime-time, long time view...) is another part of the explanation. Business models was an issue and the regulatory regime was unclear in spite of some attempt by the EC.<sup>158</sup> As of December 2010, 63 mobile TV platforms were available in the EU.<sup>159</sup>

#### *Mobile gaming*<sup>160</sup>

Before 2002 games were embedded in the handset, then up to 2007 game portals took over. A dramatic change took place in 2007 with first wave of smartphones. As a result; from 2008 on, mobile games are no longer a delayed-in-time “*poor brother*” of console and pc games, but a distinct and exciting experience part of a new wide ecosystem with wide demographics, ubiquity, personalisation, social and context-awareness. According to a study from ComScore,<sup>161</sup> nearly half of smartphone users in the so-called EU5 countries play games on their devices at least once a month: 46.4 million smartphone users in France, Germany, Italy, Spain and the UK accessed games in February 2012, representing 42% of the EU5 audience. Market research firm Newzoo said that the number of mobile gamers in the US has passed the 100 million mark, with 69% using smartphones and 21% tablets in 2012. The company also said that 36% of these pay for apps, indicating that “*mobile gaming is set for another year of double-digit revenue growth in the US*”.<sup>162</sup>

The ecosystem of mobile gaming allows for three basic mechanisms to deliver and consume mobile games: over mobile telecommunications networks, over some short-range wireless system (context delivery) and over some fixed “Internet access” and later side-loading. A new approach to mobile games, which completes those of mobile operators, content providers (game publishers) and device suppliers has appeared with considerable strength: the application stores and the platforms that support each of them.<sup>163</sup> The new concept has given developers a direct-to-consumer channel that circumvents carrier domination. Game developers for application stores must no longer adjust to operator platforms conditions and users do not need to connect to carrier decks and retailer web sites in search of games optimized for their particular device or operating system. Application stores introduce new paths in market evolution and strongly influences the users’ perception of the value and experiences related with mobile content.

The impact of new platforms and application stores has been considerable from the perspective of mobile gaming development: while development and marketing costs for a console or pc game may run in the millions of Euros, such costs for a mobile game were already typically in the range of the hundreds of thousands, sometimes even less before the emergence of platforms. In the new platforms these costs may be even an order of magnitude less. Thus, the low entry barriers for mobile games have helped spawn a proliferation of small mobile-game software developers and the possibility to account for the long-tail of potentially interested gamers. At the same time, and due to the increasing competence, mobile software developers require more than ever marketing help either in the traditional publishing scheme or via the new platforms. Like with online games it allows innovations in business models, for instance with in-apps

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<sup>156</sup> In 2005, South Korea became the first country in the world to have mobile TV when it started satellite DMB (S-DMB) and terrestrial DMB (T-DMB) service on May 1 and December 1, respectively.

<sup>157</sup> Standards are coming from different horizons and regions: broadcast (DAB, DVB families), mobile (OMA Bcast, UMTS, Mediaflo, Wimax). The content producer has to face an extended complexity of layers of standards: modulation layer (DVB-H, MediaFLO, ISDB-T..., service layer (EPG, rights management, streaming, download), middleware layer (API) (interactive services, recording, sharing, replay, repurposing, games, trick modes).

<sup>158</sup> In December 2008, the Commission issued its « *Legal Framework for Mobile TV Networks and Services: Best Practice for Authorisation – The EU Model*”.

<sup>159</sup> EAO, 2011.

<sup>160</sup> For a comprehensive overview, see C.Feijoo, “*The mobile gaming ecosystem*”, in De Prato et al (2010: 109-143).

<sup>161</sup> Quoted by *Mobile Business Briefing*, 27 April 2012. <http://www.mobilebusinessbriefing.com/articles/apps-fuelling-mobile-gaming-in-europe/23662?elq=d3f3d52ebb2a4ea39f941e08ea164cdc>

<sup>162</sup> Quoted by <http://www.mobilebusinessbriefing.com/articles/us-mobile-games-market-passes-100m-mark/23717/>

<sup>163</sup> In the mobile domain, software for games, either in the shape of content or as an application, is developed for a particular platform; Apple, Nokia, Google, and Microsoft are leading with Apple being the most prominent platform today.

revenues. Together with online games it is the fastest growing segment of the videogames industry. To be noted it is also an area where Asia (China, Japan and South Korea) is taking the lead.

*Mobile books*

From September 2009 on, books outnumbered games in the App Store, marking the first time the games category has failed to dominate total iPhone and iPod touch applications, according to data issued by mobile advertising exchange Mobclix in March 2010. At that time the App Store boasted more than 26 500 books, representing 18.6% of the total 142 000 available applications while the storefront features a little over 25 000 games, or 17.6%. Entertainment applications trail in a distant third at 11.9% of all iPhone apps, followed by education (6.8%) and utilities (5.5%). As of late 2009, books accounted for one out of every five new iPhone and iPod touch apps according to in-application analytics provider Flurry.

*Mobile advertising*

Mobile advertising is also small but growing rapidly. In the US it reached \$1.45 billion in 2011, less than 5% of the total for digital ads but nearly doubling the previous year and is expanding faster than any other digital ad segment. Mobile search ads alone also doubled during the year. For 2012, eMarketer expects mobile ads to rise 80%, to \$2.6 billion in the US.

*Mobile "others": Japan's success story*

Japan is offering an interesting case with the Japanese mangas on mobile: 22% market share in physical books, 65% in digital books with a shift of contents (sentimental, 'adults'). This digital market became essential for mobile support. Again it opens experimentation with new business models.

*Source:* C. Feijoo (2011), presentation at the 2d IPTS MCI workshop, C. Feijoo, I. Maghiros, J.L Gomez-Barroso (2009), C. Feijoo (2010), C. Feijoo (2012), de Prato et al (2012), Pew 2012.

## 5 Patterns of Change: Consumption, Production and Employment.

### 5.1 Changing patterns of consumption

Changes in the patterns of consumption paved the way for the use of digital technologies which, in turn, have reinforced and facilitated further changes in consumption patterns. For instance, a retrospective analysis suggests that most of the cultural and media practices since the early 1970s, with the exception of listening to recorded music, have experienced a more or less marked decline. The growing momentum of the audio-visual media, compared to the print media, for example, can be seen as having begun thirty years ago with the drop in newspaper reading, followed by the increase in time spent watching television when the audiovisual scene diversified and, subsequently, by a relative falling-off in book reading. The widening use of computers further worsened the trends affecting readerships. The generation of digital native is likely to have a further negative impact on the previous cultural and media practices. At the same time, this generation is also bringing new practices that ought to be better understood, as changes in these areas are explained, by and large, by a "*generational factor*", i.e. a particular generation originated a practice that will be continued and expanded by the succeeding ones.

As noted by P. J. Benghozi (2010, 2011), the emphasis is too often on the technological side of the supply without paying enough attention to the demand side. These technologies, as enablers, do not operate in a vacuum. As a shift is happening from products to services, toward more "dematerialisation", it is all the more important to take into account the evolution of the patterns of consumption. Typically, the glorious days of the album format in music may be over. Younger customers are listening to music in a more itemized way, creating their own repositories. M. Cooper (2008) argued that "*since technologies are frequently seen as empowering the consumer and "democratizing" innovation*" the demand side deserves a better treatment<sup>164</sup> of "*the impact of digital technology on content industries. Indeed, network effects that play such an important part in the analysis of digital technologies are known as "demand side economies of scale."* He also insists on the new muscle it gives to customers, "*to exit from commercial relationships and to enter into political relationships, including a new found ability to self-supply or engage in collaborative production*", on an unprecedented scale. Y. Benkler (2011) also stresses the new dimension of collaboration. Sanz et al (2011) analysing the behaviour of young Spaniards (econometric model using Eurostat 2008 data) found that the ability to contribute to the new media ecology by uploading self-created content is significantly correlated to the activity of downloading online material.

Customers are moving away from the physical product as long as they have ways to access to the product as a service anywhere, anytime as illustrated by the example of browser games<sup>165</sup> in the video game industry (de Prato et al., 2010). The huge memory of portable devices (mobile, USB key, hard disk) enables consumers to plug in their playlist wherever they go (at home, at work, travelling...). The balance between home (some being more permanent than others) applications and portable ones is another side of the question. According to a survey of the French market by the research institute CREDOC: 44% of

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<sup>164</sup> Quoting Hirschman's framework (*Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*) as well suited to provide insights.

<sup>165</sup> Casual games, not very complex, easy-to-use games, an important and rapidly growing subset of online games.

distance buyers<sup>166</sup> (15.1 million out of 37.5 million) are willing to buy music and video online, 23% an e-book and 16% online games.

However, customers may be facing several challenges, interoperability of devices is one. There are other uncertainties, customers do not know what to expect from an eBook, or an MP3 file, or a game. Such an uncertainty about the main characteristics or normal functioning of digital content is common to all the new digital services. Their expectations may be at odds with those of the industry, customers can expect some strong consumer protection while at the same time the industry may push for an extended copyright protection.<sup>167</sup> A survey published by Consumer Focus in February 2010 found that 73 per cent of consumers do not know what they are allowed to copy or record.<sup>168</sup> This can lead to a "*clash of culture*" (N. Helberger et al, 2012a) between two different notions of property. Physical objects (books) as goods are sold and become the property of their buyers, but digital contents are "*licensed*" and remained managed by the rights owner under various layers of intellectual property rights (N. Helberger et al, 2012b: 15). Customers may have concerns about access (interoperability, etc.), lack of information (functionality, redress, and support), and presentation of information (terms of use...), functionality (watching, copying, printing, and forwarding) and privacy (profiling, tracking, and sharing).

The status of ownership of a media product is transformed. As shown by the examples of DVD, the format enabled publishers to add attractive "*bonuses*", or to publish selective "*de luxe*" boxes of cult series (Sanz, 2012). New cross-media products and services, numerous combinations become possible. Some years ago, the French publisher Gallimard released a copy of J. Conrad's "*Heart of darkness*" with a DVD of F. F. Coppola's "*Apocalypse now*" inserted in the cover, at an attractive price for the two items bundle.<sup>169</sup> E-books are opening broader avenues.

The noticed blurring of the distinction between amateurs and professionals brought by the dramatic fall of audiovisual production tools for instance, leads to the consumption on the same device or in the same room of a new blends of more various types of contents, truly "*edited*" contents, user generated contents ranging from almost professional production to contents provided by "*friends*" (an average of 130 "*friends*" on Facebook<sup>170</sup>), transaction (utilitarian audiovisual like tele-shopping, tele-transaction, interactive advertising...) (Busson et al, 2011). The blend is likely to change over time but new entrants, especially social networks, are the engines of these changes toward multitasking, multi-screening behaviours, with consumers moving from the "*wisdom of the crowd*" (recommendations on web 1.0) to the "*wisdom of the friends*" (their trusted network on web 2.0). Media consumption is gliding from push to pull: "*we no longer search for the news, the news search for us*".<sup>171</sup> New forms of interpersonal communication (instant messaging, chatting...)

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<sup>166</sup> Crédoc (2010), « *Les acheteurs à distance et en ligne en 2010* », Etude Octobre 2010, op.cit. Distance buyers cover mail orders, telephone (fixed and mobile) orders and online sales. [http://www.credoc.fr/pdf/Sou/Fevad\\_%20presentation\\_%202010.pdf](http://www.credoc.fr/pdf/Sou/Fevad_%20presentation_%202010.pdf)

<sup>167</sup> J.McNamee (Advocacy Co-ordinator, European Digital Rights), at the IIC Telecoms and Media Forum, Brussels forum, 2010, listed the following: "*suining citizens, plundering citizens' personal data in peer to peer networks, opposition to private copyright exceptions and 'fair use' exceptions, cutting off citizens from the Internet*". See "copyright report", MCI 2.

<sup>168</sup> Quoted by Hargreaves (2011: 73). See the report on copyright issues.

<sup>169</sup> In a well respected collection "L'imaginaire". Other books/ DVD were released in the same collection.

<sup>170</sup> L. Delany, European Policy Manager, Facebook, IIC Telecoms and Media Forum, Roma 2011.

<sup>171</sup> L. Delany, id.

are emerging with new kinds of contents being added to the legacy ones. The economics of "attention" is drifting away from the plain old captive audience.

More broadly, consumers are looking for/ accessing items rather than a legacy bundle: an article rather than a newspaper, a tune rather than a DVD,<sup>172</sup> a film rather than a cable network (growth of Netflix), catch-up TV rather than linear TV. Consumers have a larger scope of consuming patterns and depending for instance of the quality and kind of music they may or may not use still bundles (Elberse, A., 2010). New technologies are opening new forms of experience, more immersive (watch video games and films in 3D), leading to a shift in the forms of consumption, to experience/performance. Experience has always been a part of music, the music industry business is moving from selling CDs toward the performance process. Artists will concentrate on tours rather than touring to promote the CDs as they used to (Rogers, 2011). Therefore, while 'recording' revenues have declined, overall 'music' industry revenues have increased. Concert promoters like the US companies, Live Nation and AEG Live have achieved strong position on the market. "*Events up, recordings down*", summarized W. Page and C. Carey in their analysis of the UK music industry (Page et al, 2011). Global retail value of 'recorded' music sales dropped from \$38.7 billion in 1999 to \$26.5 billion in 2008. However, the global 'music' industry revenues rose from \$51.2 billion to \$74, 1 billion between 1998 and 2010. Different consuming patterns generate different streams of revenues. Consumers have also created a new revenue stream for music companies by uploading their favourite music video clips or remixed versions to platforms such as YouTube, which now have to pay royalties to the music companies which hold the rights to these songs.

The willingness to pay is still a question mark especially online after a period of "free" culture opened by the Internet. However, in the media sector there is a trend toward pay rather than free (including advertising based) according to D. Waterman (2011) who notes a shift toward direct pay support, especially since 2000 in the US media markets, including online media as a whole.

Besides changing patterns, some important changes impacted some of the sub-sectors mainly a decline of readership over the years. As summed up in a prospective study commissioned by the French minister of culture: "*A retrospective analysis suggests that most of the cultural and media practices traditionally measured since the early 1970s will, with the exception of listening to recorded music, experience a more or less marked decline over the coming years*"<sup>173</sup> (Donnat, et al, 2007). These changes are explained, by and large, by a "*generational factor*", i.e. a particular generation originated a practise that will be continued and expanded by the succeeding ones. "*The growing momentum of the audio-visual compared with print media, for example, can be seen as having begun thirty years ago with the drop in newspaper reading, followed by the increase in time spent watching television when the French audiovisual scene diversified and, subsequently, by a relative falling-off in book reading*". The widening use of computers intervened within this processes to further worsen the trends affecting readerships. The study predicts that the generation of digital native is likely to have a further negative impact on the previous cultural and media practises.

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<sup>172</sup> Although Page et al (2010) put a note of caution about this trend, stressing an upward trend for digital albums in 2009 in the UK, reaching the same value as digital download.

<sup>173</sup> Based on the findings of the four waves of enquiries into the cultural practices of the French (1973, 1981, 1988, 1997).

Their future patterns of behaviour remain another factor of uncertainty: *“Will they maintain these patterns of behaviour when they get older (cohort effect)? Or will they return to a more traditional form of media consumption (Age effect)?”* (Busson, 2010). For even the very young as stated jokingly by the late S. Jobs quoting his own small daughter: *“a magazine is an i-pad that does not work”*.<sup>174</sup>

## 5.2 Changing patterns of production

The evolution of digital media has also brought changes to the behaviour of producers. On one hand, with digitisation, costs are being re-allocated, altering the cost structure of firms. A radically changed cost structure paves the ways for different business models (Wildman et al., 2009). For instance a server-based distribution of video services reduces the cost of making additional programmes available to the customers, as opposed to traditional multichannel video programming distribution (cable, satellite) because of lower costs of the capacity. In turn, the willingness to pay of customers for an increased choice may be higher. Some of the reports identify a trend toward more pay consumption.

On the production side, a richer content also means a more expensive content. This is also a continuation of trends for E. Noam. It requires creativity, many programmers, lots of alpha and beta testing, and many new versions. However, such expensive content exhibits strong economies of scale on the content production side, and network externalities on the demand side. Both favour content providers with big budgets that can diversify risk, can distribute over other platforms, have a strong brand, and can coordinate the specialized inputs of the various segments involved. The major media firms then become mainly coordinators, integrators, and financiers of the specialist firms, and the branders of the final products in a global market. For E. Noam this clearly means: Hollywood in combination with Silicon Valley. It may not sound like the best possible news for the EU industry, taking into account the dominant position of the US in both the audiovisual and the IT sector.

Some authors stress that the new situation and its potential growth creates room for a second model: the community model, in which modules of media creation and play modules will be created by decentralized peers, collaborating loosely with each other. This involves another, less mainstream, form of creativity, *“but it’s not likely to be the main way to create new content”*.<sup>175</sup> It may help to reach a critical mass as it was the case for radio in the 20s and Internet in the 80s, as E. Noam sums up: *“grassroots created the market then they are dismissed”*.<sup>176</sup> On the opposite, again Y. Benkler emphasized the drastic change brought by collaborative production in a network economy.

The role of user generated contents (UGC) may not be overstated as it will probably not become, as E. Noam emphasizes, the main source for the provision of content. Coleman and Bazelon (2010: 36) also supports this view: *“With a major film costing over \$200 million on average, of which \$39 million is spent just on marketing the film, it is hard to imagine that selling credits or garnering attention in social media sites will ever be able to cover the costs or inspire investors to back such a large undertaking”*.

However it adds another source thereby increasing diversity, and offering some novel avenues for creativity. David Byrne (singer of the US band “Talkin’ Head”) noted: *“The totally DIY (Do it yourself) model is certainly not for everyone – but that’s the point. Now*

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<sup>174</sup> Quoted by L. Borrás at the ‘Jornadas del libro digital’, Sevilla, May 2012.

<sup>175</sup> E. Noam at the IIC AC, Barcelona, 2010.

<sup>176</sup> E. Noam at the TPRC 2005.

*there's choice*".<sup>177</sup> Very often for industry experts, the rhetoric about user-generated content looks somewhat overheated. It seems dubious to industry players that for instance crowdsourcing can support a whole industry. A view summarized by S. Drath (2011), stressing the continuity of the role of recording companies: *"If the record companies as we know them today were no longer to exist, their functions would be performed by others and we would have record labels in some other guise"*.

Nevertheless, companies like Yahoo are using some form of crowdsourcing to fill the gap between edited content and amateur content. To track unmet demand, the search company commissioned amateurs to provide relevant contents then grant exclusive control for the rights of publishing online.<sup>178</sup> Dutch video games company Gambitious announced the planned launch of an *"equity-based crowdfunding platform"* in March 2012 to help funding independent games developers.<sup>179</sup> Crowdsourced curated websites such as Freshscouts or Recordscout help consumers discovering new artists (Cameron and Bazelon, 2011: 5). In the book sector, Editeursauteursassociés, Les NouveauxAuteurs, Crowdbook, Manolosantis are using the funding scheme (Benhamou, 2012b: 93). Even in the broadcasting industry, sites such as Kickstarter, Lanzanos or Quirki have contributed to the funding of television shows.<sup>180</sup>

In the book sector, even if the *"vanity presses"* may evolve quickly and allow some direct access and sales it may not be sufficient to move to self-editing. The low barriers to entry are not equivalent to a new form of pervasive online publishing, the expertise of the publisher may be more crucial in that case (not to mention the marketing/ promotion of the product). Digital self-publishing may appear more lucrative for authors. Amazon for instance will grant to a self-published author, \$ 6.99 for each e-book (instead of the net \$ 1.75 to be received from most major publisher for a similar e-book) sold on Amazon's Kindle e-bookstore for \$9.99.<sup>181</sup> For unknown authors, their lack of popularity is likely to be a major obstacle even if some anecdotic evidence of some success stories of unknown authors can be found.<sup>182</sup> However, this is not the case for well established authors and this may turn out to be a threat for publishers. In 2009, King published *Ur*, a novella written exclusively for the launch of the second-generation [Amazon Kindle](#) and available only on [Amazon.com](#).<sup>183</sup> Amazon has taken an early lead, providing service tools (Amazon Digital Text Platform) for authors to self publish and creating an imprint last year to publish promising authors in print and online. Other publishing systems are available such as Lulu, or Barnes & Noble's PubIt!<sup>184</sup> The music case tells a similar story according to a 2010 study (Bastard et al, 2012) showing that despite a strong online self-promotion conducted by little known artists, online promotion by fans and online success still benefit to artists who already met success offline.

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<sup>177</sup> From an article in Wired magazine 2007 quoted in Bacache et al (2011).

<sup>178</sup> Yahoo at the IIC Telecoms and Media Forum, Brussels, Brussels 2012.

<sup>179</sup> *"Gambitious said that a recent crowdfunding effort by Double Fine, which raised US\$ 1.23 million, proves that the model works"*. <http://www.mobilebusinessbriefing.com/articles/gambitious-launches-crowdfunding-for-games/22195?elq=8858f5281e634642b70295812d901ffa>

<sup>180</sup> See the report on the broadcasting industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>181</sup> Geoffrey Fowler, Jeffrey Trachtenberg, *"'Vanity' Press Goes Digital"* <http://online.wsj.com/article/SB10001424052748704912004575253132121412028.html>

<sup>182</sup> Coleman and Bazelon (2011: 49) reports the case of *"Amanda Hocking, who sells her novels as digital downloads for \$0.99 to \$2.99 on online bookstores and makes" an estimated \$2 million a year"*.

<sup>183</sup> *Throttle*, a novel co-written with his son [Joe Hill](#), which later was released as an [audiobook Road Rage](#).

<sup>184</sup> Or FastPencil, Publish Green, Scribd, or Smashwords (Coleman, Bazelon:47).



User generated contents (UGC) nevertheless play a major role for social networks (Ala-Mutka, 2008, Punie et al, 2009) and sites like You Tube, it is a vital component of their business model which clearly differs from a legacy business model. YouTube, was launched in 2005 and then bought by Google in 2006 for \$1.65 billion. By June 2010, this video distribution platform had more than 100 million different visitors per month (Busson, 2010). Their success stories are in line with the expectations of the consumers and their changing role. This is the view from M. Cooper who is more optimistic about the role of "amateurs" (Cooper, 2006). Y. Benkler (2006) is the most vibrant proponent of the new knowledge economy where producers and consumers role tend to overlap: "*The result is a flourishing nonmarket sector of information, knowledge and cultural production, based in the networked environment and applied to anything that the many individuals connected can imagine*".<sup>185</sup> P. Flichy stresses the blurring of the borders between professional and amateurs (Flichy, 2010).

### 5.3 New sources of distributed labour? Creative worker or unpaid labour?

Another aspect of this blurring of the borders hinges on new ways to distribute, outsource, and remunerate labour. The success story of online newspapers seems to suggest that appearing on the online service delivers sufficient status to compensate for the lack of real payment: the *Huffington Post*, does not pay its writer (Katz, 2011). Blog publishing companies such as Gawker Media<sup>186</sup> or Spreeblick<sup>187</sup> Verlag combine a number of blogs and pay the authors who write for them, or at least provide them with a platform to raise their profile. It looks as if appearing on the online service was delivering enough status to compensate for the lack of real payment. The French online news website "*Le Post*" (a subsidiary of the firm *Le Monde interactif*) relies also on voluntary contributions. For their online edition, most newspapers frequently rely on their readers' contributions. A US 2008 report claimed that overall "*58% of the newspapers offered some form of user generated content in 2008*".<sup>188</sup>

These various forms of crowdsourcing in the media can obviously been perceived as an easy option to reduce the overall costs of labour to better adjust to the sea of changes. However, the fear that this flexible form of outsourcing will "*drain jobs from the regular work force*" is not justified, according to J. Burghin, who stresses that, what he described as co-creation, is indeed an entirely new type of work much along the lines of Y. Benkler. He gives two examples in the video game industry. The first example is about professional gamers in South Korea who manage to make a living by competing in multiplayer games like StarCraft because they are broadcasted to a large audience. The second, also in Asia, is the case of so-called gold "*farmers*"<sup>189</sup> in China with online games, paid to dig up virtual treasures (Burghin, 2010: 37) and making revenues through the sales of virtual items.

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<sup>185</sup> The author made available his book on his website under Creative Commons Noncommercial Sharealike : [www.benkler.org](http://www.benkler.org)

<sup>186</sup> <http://www.gawker.com/about>

<sup>187</sup> <http://www.spreeblick.com/impressum>

<sup>188</sup> The Bivings Report. *The Use of the Internet by America's Largest Newspapers* (2008 Edition) December 18, 2008. at <http://www.bivingsreport.com/2008/the-use-of-the-internet-by-americas-largest-newspapers-2008-edition>. Quoted by Katz (2011).

<sup>189</sup> "*Gold farming is playing a massively multiplayer online game to acquire in-game currency which other players purchase in exchange for real-world dollars. While most game operators expressly ban the practice of selling in-game currency for real-world cash, gold farming is lucrative because it takes advantage of economic inequality and the fact that much time is needed to earn in-game currency. Rich, developed country players, wishing to save many hours of playing time, may be willing to pay substantial sums to the*



However in the blooming field of “applications”, developers are still struggling to generate enough revenues. According to a 2012 research by app marketing company App Promo, 80% of the surveyed population of developers claimed that the revenue they generate from their most popular app is not enough to support a standalone business.<sup>190</sup> The survey correlates the level of revenues gathered and the investment in marketing, a far cry from direct sales.

Nevertheless, the question whether this trend will lead to a substitution to current work is none the less pending. However, in segments where most the workforce was not employed on a permanent basis (like authors in literature<sup>191</sup> or music), distributed labour may open up opportunities. It does not mean it offers a panacea for all “creative workers”, not having to be allocated permanent positions, neither for “knowledge workers”. The idea that has been around for some time that creative/ knowledge workers were the single model for the future of work is questionable and will require some additional evidence to be sustained.

Referring to the work of P. Hirsch, P. M. Menger (2010, 2008) analyzes the cultural industries and other creative industries as characterised by uncertainty and specific behaviour to take into account an uncertain horizon, therefore overproducing as illustrated for instance by the overproduction of films in the EU.<sup>192 193</sup> These are social processes and organisations that are dynamically unpredictable so as to produce innovation as well as mainstream works.<sup>194</sup> However he strongly questioned the idea that creative workers are anticipating the face of future capitalism,<sup>195</sup> that they represent the “avant-garde” of the world of labour as they offer a combination of autonomy, pressure and competition in a world with again blurred borders between independence and permanent employment.

Firms and workers need a long term relationship, and according to P. M. Menger few employers would be ready to shift their entire workforce to a “pay by the task” status. Increase pressure and competition can also act as a counterincentive for creativity. This kind of “autonomisation” may just well be one element inside an innovation process that combines highly heterogeneous parts.

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*developing country gold farmers. In 2009 the global market for gold farming was valued at around \$3bn annually”. Source: Gold farming. Wikipedia.*

<sup>190</sup> “Survey: Developers struggling to sustain business”. Neither the size of the surveyed population, nor the methodology are specified in the article. <http://www.mobilebusinessbriefing.com/articles/survey-developers-struggling-to-sustain-business/23750?elq=59336ad8c9dc4c11851a1db913e79e19>

<sup>191</sup> In the publishing industry, the author appears to be more in the position of a supplier working under various contractual arrangements (De Prato et al, 2012).

<sup>192</sup> See the report on the film sector, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.

<sup>193</sup> This is also the view of the former Director of Studio Canal, the film production branch of Canal Plus and a well known economist of the cinema industry: “ « 260 films c’est un peu trop, sachant qu’en 1957 année de pointe de la fréquentation, il y en avait environ 130, et que plus des deux tiers d’entre eux font moins de 100 000 entrées. Cela dit, dans une industrie de prototypes, l’optimum est le maximum car on ne sait jamais quel film va marcher ». « Rencontre avec René Bonnell, le compte rendu ». March 11, 2011. Available : <http://www.sacd.fr/Rencontre-avec-Rene-Bonnell-le-compte-rendu.2214.0.html>

<sup>194</sup> P. M. Menger : “Chacun s’accorde aujourd’hui sur le fait que le savoir et l’innovation sont la condition majeure au développement des sociétés. Or, il existe deux mondes qui font de ces ressources leur alpha et leur oméga: les arts et la recherche scientifique et technique.”

<sup>195</sup> Wikipedia “Gold farming” notes: “Academic studies of gold farming reveal that the social networks of gold farmers are similar to those of drug dealers”. Quoting: “Gold Farming Research Digs Up Similarities With Drug Dealers”. Kotaku Daily. <http://kotaku.com/5594424/gold-farming-research-digs-up-similarities-between-drug-dealers>. Retrieved July 23, 2010.



## 6 The Changing Nature of Competition in the Media-IT-Telecom Ecosystem and the Deployment of New Networks

Content is often seen as bringing an incentive to roll out networks, to upgrade of transmission for upgraded contents so as to provide customers with attractive applications and services. Drastic changes took place, over the last decade, in the telecom services and equipment sub-sector (Simon, 2011b, c). They have been driven by the entry of some players from other sectors of the ICT (e.g., Apple, Microsoft, Google or Yahoo) and, to a lesser extent, from the media and content industries (de Prato et al., 2010).<sup>196</sup> As noted by (Booz&Co, 2010: 10) *“The extent to which just two companies—Apple and Google—have changed telecom’s competitive landscape is unprecedented”*. The blurring of previously distinct sectors (the so-called convergence, a vague and probably misleading notion) has been described more accurately under *“the new ICT ecosystem”*<sup>197</sup> (Fransman, 2010; Arlandis et al., 2010, Booz&co, 2011). The role of telecommunications operators goes far beyond the mere provision of networks and services (e.g. as enabler of innovation for the other players, backing the creation of new market opportunities such as applications on smartphones).

To illustrate these changes with some recent examples in the mobile telecom sub-sector, smartphones continued to outperform the overall mobile devices market in 2009 and 2010. They were a key factor in consumers upgrading their devices. The release of the Apple iPhone in 2007; played a key role to trigger this migration while mitigating the expected negative impact of the financial crisis, as data growth in mature markets accelerates. Mobile device sales hit 427.8 million units in the first quarter of 2011, up 19% from a year earlier, according to new data from Gartner, an increase mostly due to on-going strong sales of smartphones, which surpassed 100 million units in the period and now account for 23.6% of the devices total sales.<sup>198</sup> Ovum<sup>199</sup> forecasts a compound annual growth rate (CAGR) of smartphone shipments between 2011 and 2017 at 24.9%, still continuing to outperform the mobile phone market as a whole, which is forecast to see 6.3% CAGR during the same period. According to Booz&Co (2010: 6) the mobile application business will be worth USD 40 billion. The telecom sub-sectors play a crucial role at the very core of this ICT ecosystem with a likely impact on the innovative capacity of the whole (e.g. the development of smartphones and the mobile apps).

The smartphones phenomenon not only contributed to the upgrading of devices. It also changed the way customers are using their mobile phone, among others by shifting the patterns of use toward the Internet world and allowing access to all kind of contents. The phenomenon is only the most visible indication of the changes taking place in the ICT ecosystem. It paved the way for the creation of an array of new applications whose number has skyrocketed. The number of applications was multiplied by 6 over just one year (2010), but only 30 applications reach more than 500 000 users. iPhone users spend almost double the time on data intensive applications as other mobile data uses (A. T. Kearney, 2011).

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<sup>196</sup> In the United States, Walt Disney marketed two Mobile Virtual Network Operator services under the brands Disney Mobile and Mobile ESPN between 2006 and 2007.

<sup>197</sup> This notion refers to symbiotic relationships (financial, informational and material flows between the actors) and synergies.

<sup>198</sup> Source: Mobile Business Briefing, 19 May 2011.

<sup>199</sup> Source: quoted by Mobile Business Briefing, 4 May 2012.

<http://www.mobilebusinessbriefing.com/articles/ovum-android-to-lead-way-in-smartphone-surge/23746>

Mobile became a significant way to distribute news, music and is certainly of one the fastest growing platforms to provide such contents and assorted services<sup>200</sup> (see Box 4).

In the US, more than three-quarters of U.S. adults own laptop or desktop computers, 44% of adults own a smartphone, and the number of tablet owners grew by about 50% since the summer of 2011, to 18% of Americans over age (Pew 2012): " *Fifty six percent of all mobile device users, and 47% of the population, now use such devices to get local news via an Internet connection*" (Waldman: 17).<sup>201</sup> Nearly a quarter of the US population, 23%, now gets news on multiple digital devices (Pew 2012). We are moving toward a five screens world: TV, PC, game consoles, connected TVs and mobile (be they smartphones or tablets). Besides, as noted by the Pew 2012 report: "*Smartphone owners are even more likely than others to be digital omnivores*". PCs remain the primary access but is almost stable, mobile are growing fast.

To be noted, China and India are the fastest growing mobile markets in the world. The 3G market started growing with China and India (de Prato et al, 2012). No wonder, if Rovio, the Finnish mobile game success story, announced looking to expand its business in China by opening hundreds of Angry Birds retail stores and activity parks. Mobile operators in the BRIC countries - Brazil, Russia, India and China - are accounting for a rapidly growing share of global mobile revenue, and are on track to overtake the US in market size (revenue) by 2012. They will be the primary engine of growth, contributing over 40% of global revenues by 2012.<sup>202</sup> Indonesia is estimated to have 37 million Facebook users, second only to the United States, according to web statisticians Socialbakers.<sup>203</sup>

The relative share of the US within the global app market is diminishing, from 38% of the top 200 most popular app category in 2010, down to around 26% according to the market firm Distimo.<sup>204</sup> As of July 2012, the rest of the top 10 most important markets were made up by China, Japan, UK, Germany, France, Canada, Italy, Australia and South Korea.

Notwithstanding the pioneering role of Apple, Google is now taking over with a different approach and a different business model. Google's Android operating system (OS) is set to overtake Apple's iOS in terms of global shipment volumes during 2012 (iSuppli 2010),<sup>205</sup> but managed to have already a 44% share in 2011 through a CAGR of 26.8%.<sup>206</sup> Ovum

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<sup>200</sup> The "stunning" impact of mobile have been stressed by former US president B. Clinton at the CTIA Wireless 2012 : "In 2010, a UN report said that wireless technology becoming a common medium has done more to lift people out of poverty than any other technological advance in history. In the poorest countries in the world, every 10% increase in cell phone penetration tends to add about 1% per year to GDP. It's a stunning thing,". <http://www.mobilebusinessbriefing.com/articles/clinton-highlights-stunning-impact-of-mobile/23821?elq=04bec5a4f8b148299c2c55c1ba4c4751>

<sup>201</sup> "Survey: Mobile News & Paying Online" in Pew, *State of News Media*, 2011, <http://stateofthemedias.org/2011/mobile-survey/>.

<sup>202</sup> GSMA, *The Global Cellular Industry Balance Sheet*, 2012.

<sup>203</sup> Quoted by Sri Ranjini Mei Hua and Ezmieralda Melissa (2012: 15).

<sup>204</sup> <http://www.mobilebusinessbriefing.com/articles/distimo-us-losing-significance-in-global-app-store-market/24763/>

<sup>205</sup> In 2012 Android was expected to reach a 19.4% share of the global smartphone platform market, with Apple (iOS) having 15.9%. *Mobile Business Briefing*, November 16, 2011. <http://www.mobilebusinessbriefing.com/articles/smartphone-sales-growth-slows-in-q3-android-dominates/19463/>

<sup>206</sup> In 2011, smartphones accounted for 26% of all mobile phone sales, slightly up on the 25% seen in the previous quarter. Android-based phones made up 52.5% of smartphone sales, more than doubling its market share compared to Q3 2010. *Mobile Business Briefing*, 16 November, 2011.

predicts Android to become dominant in 2017 with a 48% market share with Apple finding itself relegated to the second rank with 27% of the market (23% in 2011).<sup>207</sup> However, in 2012, Apple continues to dominate tablet market with over 68% of the worldwide media tablet shipments and amazingly dwarfing any competitors with over 17 million shipments (Samsung ranks second with only 2.4).<sup>208</sup>

The deployment of broadband networks as well as the diffusion of new devices (smart phones, tablets) has been identified as major enablers of the growth of new services and markets. Accordingly they became top priority for policy makers under such initiatives as the US national broadband plan or the EU digital agenda. The spread of broadband networks (and ultra-broadband in the future) represents one of the critical factors for the distribution of content over IP. This process is usually perceived as bringing great benefits to the economic growth of firms and markets and, above all, to the creation of an environment that is socially advanced, more competitive, reducing the social divide as claimed by the EU Digital Agenda or the US Broadband Plan. The contribution to the GDP is perceived as of major importance from 4.1 trillion Euros in 2010 (4.1%) to 4.2 by 2015 (BCG, 2012).

However, the telecom industry and the IT sector are facing several challenges; huge investments are needed against uncertain economic returns. In the US, overall capital investments by telecom, cable TV, and broadband wireless providers were \$51 billion in 2009 (Noam, 2010). Out of these, \$30 billion went to broadband construction and upgrade.<sup>209</sup> This investment is projected by Wall Street analysts to stay at that level into 2015. All in all, E. Noam claimed: *"As a society, in America we would have spent, or are about to spend, a trillion dollars in one decade on broadband. This is a tremendous amount in a short period"*. Similar numbers are likely to be found in other OECD countries. However, the market is reaching saturation and infrastructures will plateau as about 92% of U.S. households have access to at least one wired broadband platform (adoption stands at about 65%), and about 90% of the population is covered by 3G mobile wireless broadband (Figure 19).

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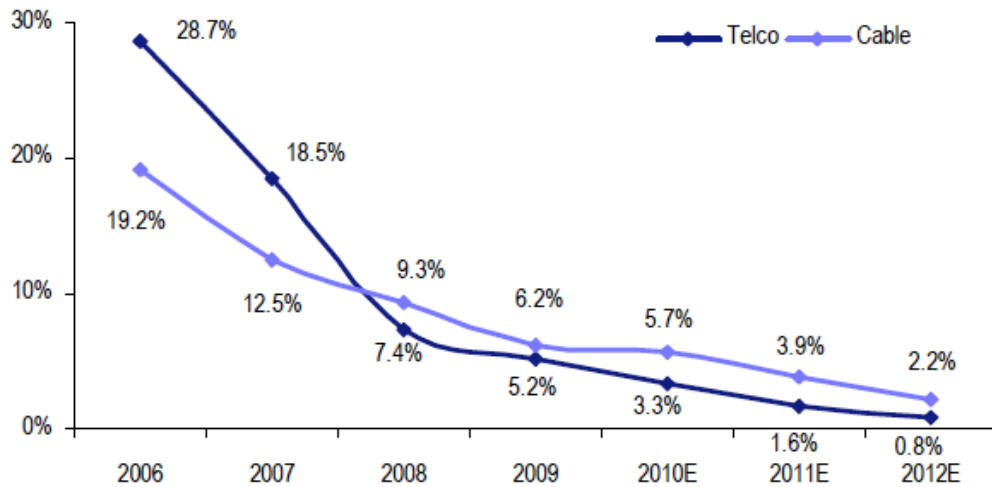
<http://www.mobilebusinessbriefing.com/articles/smartphone-sales-growth-slows-in-q3-android-dominates/19463/>

<sup>207</sup> Ovum id.

<sup>208</sup> Source: IDC Worldwide Quarterly Media Tablet Tracker, August 2, 2012., quoted by <http://www.mobilebusinessbriefing.com/articles/apple-continues-to-dominate-tablet-market/24830?elq=4c7c11931d874f02a900e484c26094b6>

<sup>209</sup> E. Noam, at the IIC 2010 Annual Conference, Barcelona, 18-19 October, 2010.

Figure 19: Wired broadband subscriber growth



Source: E. Noam, UBS Research, "Cable likely to extend lead in Broadband," May 3, 2010 on p. 4

## 6.1 Funding new networks: a challenge

It appears that the Telecoms sector index has underperformed the general index by 29.3% over the last 10 years.<sup>210</sup> One of the reasons is that the telecoms sector share price performance over the last decade shows the sector has never really recovered from the technology bubble. The challenge is to persuade investors to back and endorse operators' capex, despite funding being more expensive (equity risk premium higher and still rising) and in the wake of what happened during the technology bubble. Unless the sector is able to show some revenue growth and provide adequate returns, it is unlikely that investors will show commitment to the additional capex that the industry requires rolling out the new networks.

Indeed, the funding of such deployments, at least in some areas, appears somewhat problematic, and the views of the industry may differ from the views of policy makers. They hold different views about the respective role of markets and of public funding. In the EU, the telecom industry usually argues that the deployment of ultra high broadband has to be driven by private investments and that public investments should not crowd out the private ones. The industry also supports the view that public institutions should rather complement private investments, they should act as enablers: centralised civil infrastructure database, open access to utilities ducts, shared fibre terminating accesses and foster the demand of public services (e-health/e-gov/e-education). The industry considers that EU Member States do not have enough resources to invest; it should then be left to the private investors. Policymakers will argue that broadband does have a lot of social potential externalities; therefore some public intervention is legitimate. They have

<sup>210</sup> L. Minerva (Senior Analyst, Global Telecoms, HSBC) at the IIC Annual Conference, Barcelona, 2010. He pictured as a dismal decade on the financial markets for the telecoms sector. During the same conference, C. Bowe (Chairwoman Ofcom) also told the audience that in 2009, for the first time in the sector, revenues declined. However, the sector seems to be recovering in 2010. At the IIC April 2012 forum a representative from another investment bank spoke of "a disaster over the last decade".



concerns about a lack of investments in the next generation of networks (next generation access, NGA and next generation networks, NGN). Some may even deem that the digital gap in Europe requires much more than just agreeing or consenting to market player self-initiative plans to invest in the market, in other words, both Member States and European interventions may be needed.

The EU appears, according to the EIB,<sup>211</sup> to lag behind OECD countries (similar regions in terms of economic performance) like Australia, Japan, South Korea and the US for broadband penetration with a lower variety of different platforms competitions. Its broadband access structure is more biased towards a single infrastructure, DSL infrastructure. This is an issue for the EU to roll out next generation access network, in a context with reduced scope for platform competition. The EIB did some scenario exercise (with different interpretations of the targets of the digital agenda) to see how much the bill could be to deploy such networks so as to meet the policy targets of the Digital Agenda by 2020: it ranges from 72 billions Euros up to 220 billions (even up to 280 depending on the type of access requirements). The European Commission is trying to leverage such public funding with the project bond initiative,<sup>212</sup> it is estimated that a new contribution of one billion Euros a year could leverage up to 100 billion of additional spending over a period of seven years, which could amount, under current estimates, to about roughly one third of broadband financing gap. In October 2011,<sup>213</sup> the European Commission announced its intention to allocate €9.2bn to fund broadband networks and pan-European digital services in 2014-2020 aiming with this funding to stimulate between €50bn and €100bn in total broadband investment.

In order to find a common ground and to avoid a growing discrepancy between the views of the industry and of the policy makers, EU Commissioner N. Kroes set up, in 2011, a CEO group<sup>214</sup> to come up with some precise proposals on behalf of the industry.<sup>215</sup> The group

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<sup>211</sup> H. Gruber, Head of ICT and Economy Division, European Investment Bank at the IIC Telecommunications and Media Forum, Roma, June 22-23, 2011. On the bank side, so far, the average annual lending for broadband projects for the last ten years was around EUR 1.1bn (EUR 1.7bn for 2007-2010). During the last financial crisis, EIB increased lending to broadband projects by over 50% with signatures for 2009 of EUR 2.3bn.

<sup>212</sup> Launched on 28th February 2011. The Europe 2020 Project Bond Initiative, is a financial instrument to share risks and to attract private investments, and a draft decision on trans-European telecommunications networks and services.

<sup>213</sup> The €9.2bn funding under the Connecting Europe Facility (CEF) to be spent on telecoms would take the form of equity, guarantees, debt instruments and grants to complement investments by private parties and public authorities at local, regional, national and EU level.

For CEF see: Connecting Europe Facility: Commission adopts plan for €50 billion boost to European networks:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1200&format=HTML&aged=0&language=EN&guiLanguage=en>

And: "Digital Agenda: Commission proposes over €9 billion for broadband investment",

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/11/709&format=HTML&aged=0&language=EN&guiLanguage=en>

<sup>214</sup> The group convened on July 13 for a second meeting with apparently some mixed results as stressed by Commissioner Neelie Kroes after the meeting took place: *"We all want Europe to catch the high-speed broadband train. It has been worth the time and effort for us all together to touch upon every single root cause of the problems at stake. This sometimes painful "catharsis" has not resulted in a consensus view on the principles presented by the coordinators but it has certainly helped to build mutual understanding. (...)".* Press release. Eleven recommendations were introduced.

working on the investment in the infrastructure offered a compromise between the private and public approaches with a scheme of shared investments between the two, a *"utility approach"*, as a way to *"derisk"* investment as long term investors such as pension funds, infrastructure funds were willing to invest in such a model of public-private partnerships.

The players share nevertheless the same starting points: a current data explosion calling for this deployment of new networks taking place at a difficult economic time.

## **6.2 A declining EU telecom industry and a rising US Over-the-top (OTT)<sup>216</sup> industry?**

The view is often expressed by industry participants<sup>217</sup> that on one side we have a declining EU telecom industry (with voice traffic declining 7% per year) and on the other a rising Over-the-Top (OTT) and software sectors dominated by US players (and Asian players to a lesser extent)<sup>218</sup> as illustrated by Figure 20 (BCG, 2011): a decline of revenues of 1% in 2009 for the distribution segment in the EU but still the biggest segment of the Internet market. This may turn out as a major trade issue between the EU and the US as the EU is at a strong competitive disadvantage. For EU telecom industry, there is a risk to become *"dumb pipes"* carrying US contents and services. The changing nature of competition is evolving with the growing role of these OTT players with most of the growth coming from these players: 40% for search and 35% predicted for communities (social networks), 15% for devices (Figure 20). Telecom operators lost their value for services to various kinds of applications providers.<sup>219</sup> Furthermore, so far, the impact of their attempted diversification remains limited. As emphasized by Boo&Co (2011), boosting non-core revenues is an issue. As the same time this *"commodization"* of telecommunication may just be the output of more competitive markets with reduced margins and decreasing prices.

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<sup>215</sup> Three working groups: led by CEOs Ben Verwaayen (Alcatel-Lucent) on the NGA investment framework and financing, René Obermann (Deutsche Telekom) on open access, interoperability and connectivity and Jean-Bernard Lévy (Vivendi) on the sustainability of the internet ecosystem and business models.

<sup>216</sup> Over-the-top is a general term for the delivery of web-based video services that can be utilized via a broadband connection over the open Internet, on different devices such as connected TVs, games consoles, hybrid receivers and digital media players, supplied by players like search-engine providers, manufacturers (Apple, Samsung) and social networks.

<sup>217</sup> F. Bernabe, CEO of Telecom Italia at the ETNO Trento conference, June 2010. Again as chairman of GSMA in 2012: "GSMA Chairman: Investment needed to drive 'new wave of innovation', <http://www.mobilebusinessbriefing.com/articles/gsma-chairman-investment-needed-to-drive-new-wave-of-innovation/24282?elq=72b388e3730f41a3946056f7e41c010b> A view shared by the CEO of DT, René Obermann, almost a year after noting: *"harsh competition and new Internet services which are replacing previous methods of communication,"* citing services such as Skype, WhatsApp and others, which *"appear to be free of charge."*, "DT notes telco pressure; T-Mobile USA sale 'unlikely', <http://www.mobilebusinessbriefing.com/articles/dt-notes-telco-pressure-t-mobile-usa-sale-unlikely/23996?elq=536e94ba27c843748e910c4dca7b42ab>

<sup>218</sup> A. Busson (2010): *"While media groups have experienced varying degrees of challenge to survive in the last couple of years the 'new economy' companies like Microsoft, Amazon, Apple and Google, are all doing rather well. Examples (from press releases for the first quarter of 2010) to support that assumption:*

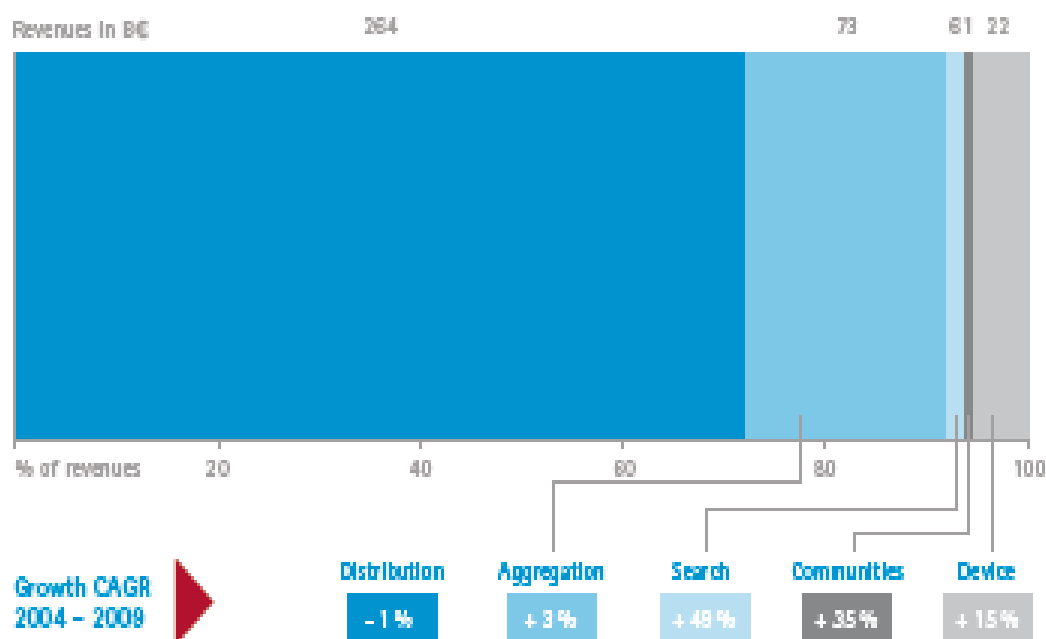
- Microsoft's profits rose 35% during the third quarter of its financial year.
- Intel beats its previous sales record for microprocessors.
- Amazon went one better by announcing an increase of 68%, albeit prior to the release of the Apple iPad.
- Apple breaks all records by increasing its profits a staggering 90% in the quarter ending March 31st.
- Google announced an increase of 37% in its net income over the same quarter a year earlier."

<sup>219</sup> At the ITS Budapest conference, September 2012, the CEO of Matav telecom, the Hungarian incumbent classified voice as *"just another application"*.



Figure 20: Revenues and growth from competing business models (EU25), 2009<sup>220</sup>

European (EU25) revenues 2009



Source: Company reports; EIU; OGS; Magna Global; SNL Kagan; Forrester; Ovum; eMarketer; Internet World Stats; Statista; Juniper; IDC; GANDI; BCG market modeling

Source: BCG, 2011

In other words, a landscape of heavy investments, slow roll-out of ultra-fast broadband but exploding traffic, may not constitute an easy equation to solve. Some options are being considered to deal with 30 billion investments just in the core networks in Europe until 2014. A study commissioned to A. T. Kearney<sup>221</sup> by the four leading EU telecom operators<sup>222</sup> proposed four options (Figure 21): an increase in retail prices for differentiated services, a change in the current interconnection scheme with paid interconnection (instead of free peering arrangements), enhanced quality services over the public internet (standardisation process), and a quality of service improvement via bilateral agreements between online serviced provider and retail. The study stresses that no single solution can solve all the structural issues of the disconnect in the Internet value chain: *"those who benefit from higher traffic volumes are those who generate traffic (typically content sites) and those who consume it (typically end users). Those who have to build and operate the networks required to carry the these traffic volumes earn almost no revenues and are often locked into flat rate price schemes with the latter group, continually decreasing because of competition"*.<sup>223</sup>

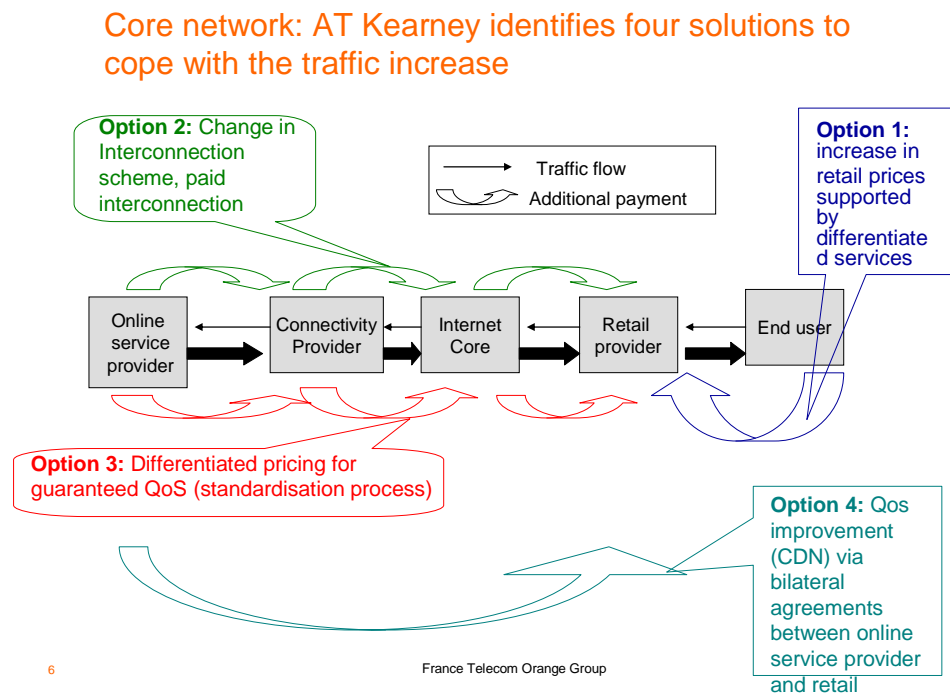
<sup>220</sup> Covers five business models but according to BCG they are not an exhaustive representation of the size of the EU IT, telecom and media industry, some segments being left out.

<sup>221</sup> A. T. Kearney, "A viable future model for the Internet. Investment, innovation and more efficient use of the Internet for the benefit of all sectors of the value chain", 2011.

<sup>222</sup> DT, FT Orange, TI and Telefonica.

<sup>223</sup> A.T Kearney (2011:1).

Figure 21: Four options to deal with the imbalance between traffic and revenues



Source: Orange based on A. T Kearney (2011)

V.Bonneau<sup>224</sup> (Idate, 2010) came up with a similar analysis to introduce the potential evolutions with value transfer around the telcos: new interconnection scheme, performances based quality of service and traffic wholesale for OTT providers, pay per use, per quality and new bundles of traffic and service for end users. He also stressed that Internet content economics was characterised by the fact that revenues of services do not depend on traffic: Hulu stands for 2% of the video traffic but 20% of online video in the US, Netflix represents 20% of peak traffic time during prime time in the US (27% in 2011) but get its revenues from bundles with mail DVD rental; the BBC iPlayer is not deriving any revenues from the Internet but is used over 270 minutes per month.

Besides, part of the perceived reluctance of the telecom industry to deploy ultra fast broadband is linked to the signals received from the market of a lack of demand for massive additional bandwidth: no significant signals of consumers' demand a major difference with Asian markets (online gaming).<sup>225</sup> A field trial in the Roma area, by the leading Italian broadband provider, Fastweb, showed that the new fibre network deployed provides a limited strategic advantage compared to a well functioning copper network as customers do not yet fully perceive the value of moving from 10 to 100 MB (even with no or very limited premium price) and that installing the fibre and relevant equipment in the house represents a relevant barrier for a large percentage of the customer<sup>226</sup>. The take up is very low. The telcos perceived the demand for ultra-fast broadband as latent. This reluctance was noted in the Digital Agenda Scoreboard 2011 but the report claimed that it "will lessen gradually as new services requiring higher speeds become available", quoting for instance what happened with online games (Digital Agenda 2011: 20, De Prato et al, 2010). However, the case of Denmark, a leading country for the deployment of ultra fast

<sup>224</sup> Presentation at the Digiworld Summit 2010, "Internet traffic and economics". Available at: [www.idate.org](http://www.idate.org)

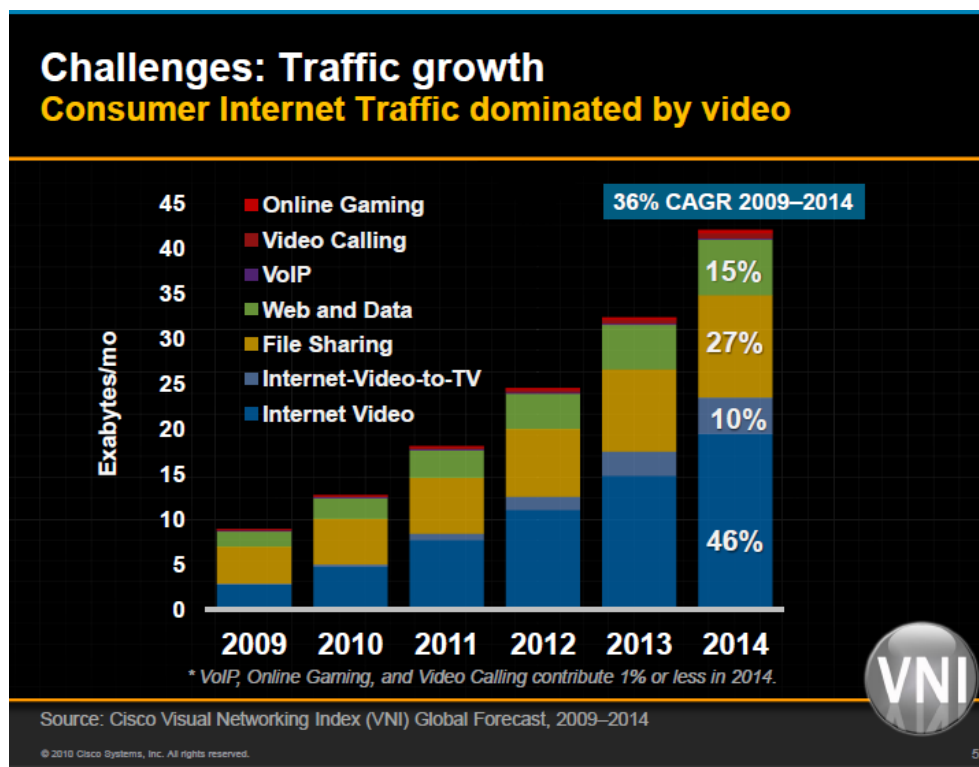
<sup>225</sup> As stressed by F. Bernabe, IIC Telecoms and Media Forum, Roma 2011.

<sup>226</sup> L. Di Felicianantonio, Head of regulatory, Fastweb, IIC Telecoms and Media Forum, Roma 2011.

broadband does confirm the wide gap between availability and take up: the deployment rate went up to 38% of the population in 2011 having access to 100 meg, while the take up rate was only 0.5% (Danish Business Authority 2012).<sup>227</sup> As stressed by the director of the Danish Authority, customers do not appear to see what they can get from this increased bandwidth for lack of attractive applications. For most of them, 10 Meg seems sufficient. It shows that there may be some room for demand side policies and not only for supply side policies.

Furthermore, in the EU, customers enjoy very low prices and very attractive conditions. The telecom industry claims that there is misalignment between prices and costs in the telecom industry, making the existing business models unsustainable. The growth of traffic is now mainly driven by consumer (as opposed to business before) with consumers becoming more and more active as "prosumers". Then, looking at the composition the traffic growth, the growth is mainly driven by media, with video being the driver,<sup>228</sup> generating imbalance in revenues (see Box 5).

**Figure 22: Traffic growth. Cisco Global Forecast, 2009-2014.**



Source: CISCO P. Valero, presentation at the IIC Brussels Forum, 2011.

<sup>227</sup> "A lot of empty fat pipes" commented J.A. Andersen, IIC Telecoms and Media Forum, Brussels 2012.

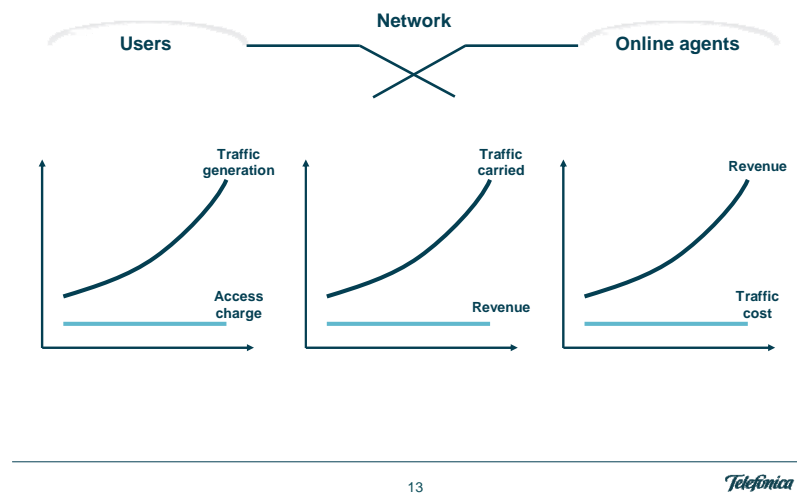
<sup>228</sup> Ericson predicts a mobile data traffic increase 10 fold by 2016 (60% every year). Mobile Business Briefing, 7 Nov. 2011. Cisco announces even higher increases: "Global mobile data traffic will increase 26-fold between 2010 and 2015. Mobile data traffic will grow at a compound annual growth rate (CAGR) of 92% from 2010 to 2015, reaching 6.3 exabytes per month by 2015". Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010-2015.  
[http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-520862.pdf](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.pdf)

**Box 5: The imbalance between traffic and revenues. The view from Telefonica**

Consumers are using more and more communications but under highly uneven patterns of use: 80% of the traffic is generated by 25% of the fixed broadband subscribers using 40 GBytes per month, in the mobile world 80% of the traffic is generated by 7% of the customers using 4 Gbytes per month (and this is increasing)<sup>229</sup>. The price signals on both side of the market (users and "online agents"<sup>230</sup>) are deemed not to be sustainable.

**Figure 23: the imbalance between traffic and revenues.**

No price signals are sent to either side of the market in the current model



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Telefonica

Source: Telefonica, presentation at the IIC Barcelona conference.

According to other experts,<sup>231</sup> the largest transfer of value is no taking place between telecom companies and IT companies (even if the latter are better rated by the financial markets as illustrated by the valuation of Apple) but from companies to users, hence a misalignment between price and costs in the telecom industry. They deem that the internet services which are driving the demands for new network investment are often not generating any revenues for anyone. This "mispricing" (i.e. 'unlimited' undifferentiated internet access) is the major challenge for the industry searching for the right pricing model for both retail and wholesale, to uncover the willingness to pay in a better way. Along these lines, one of the option (increasing the retail price) considered by A. T. Kearney<sup>232</sup> in their study may bring the end of free peering in Europe as some business models do not internalise the costs in the network they generate making the business unsustainable. Unlimited flat rate has allowed for a faster adoption of Internet but has reached its limit from an economic viewpoint especially, as stressed by V. Bonneau, in the case of limited resources like spectrum for mobile. It triggered a strong reaction of mobile operators and the introduction, for instance by Vodafone, of a mobile broadband tariff in Spain with time-of-day elements, off-peak usage not included in traffic caps and the acceptance of traffic throttling during period of congestion in exchange of lower fees. From a more positive

<sup>229</sup> J. Linares Lopez, COO of Telefonica, at the IIC Annual Conference, Barcelona 2010.

<sup>230</sup> For OTT providers such as Google.

<sup>231</sup> Richard Feasey, at the IIC Annual Conference, Barcelona 2010.

<sup>232</sup> But not very likely according to the consultancy.

standpoint J. Burghin (2010) acknowledged that the "*web produces extraordinary value*" but also that most of it benefits the digital users. He gauged a value net (US, Europe) of 250 billion euros shared 40% by online advertisers and 60% by consumers.<sup>233</sup>

As noted, new devices (tablet, smartphones) have had a huge impact. Smartphones are the biggest contributors to the mobile internet explosion. As growth is to be expected, the issue becomes: how to monetize this growth? One way out, considered by some players, is offering a more segmented choice (often limited by the regulators fearing price squeezes) and avoiding unlimited flat rate (same with the peering agreements) as traffic is very unbalanced. Some companies, like SoftBank, the Japanese number-three mobile operator, are looking at a two-sided business model, combining a "*comms charge and a content charge*" alongside its tiered flat-rate model.<sup>234</sup>

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<sup>233</sup> "How the web will likely evolve as a value net", Burghin (2010), pp.62-66.

<sup>234</sup> "Pricing, partnerships and innovation key to smarter services, say operators", <http://www.mobilebusinessbriefing.com/articles/pricing-partnerships-and-innovation-key-to-smarter-services-say-operators/24312?elq=e7d41f8d8409447d82f88a853ff7fd08>



## 7 Regulatory/Policy Issues 1: Funding/Protecting Creation and Innovation

The last set of issues relates to the changing role of regulation in the digital world. Legacy regulation and segments of the legislative framework may become out of sync with the reality of the markets, creating further tensions between the initial goals that may still be legitimate and the way to implement these goals in a digital world.

### 7.1 Funding of creation

Given the trends described and, so far, the lack of revenues to compensate for the foregone ones, the question of how to support in a sustainable way the production and the consumption appears crucial.

The usual view among content holders (broadcasters, producers, rights holders) is that all other players (disregarding the country they originate from or their delivery mode) should participate to the "*financing of creation*". This was one the main rationale of the introduction of quotas in the Television without Frontiers (TSF)<sup>235</sup> in the 80s,<sup>236</sup> mostly under the pressure of some Member States. The directive aimed initially at removing barriers to the free movement of television programming across national European boundaries (arts. 4&5). The directive was designed indeed to take into account new developments such as cable and Pay TV, program sponsorship and teleshopping. It was build upon the country of origin principle a core principle of the EU legislative framework.<sup>237</sup> The promotion of European content and Europe's diversity of cultures was added. When the directive was reviewed, became the Audiovisual Media Services (AVMS) directive when adopted, the potential extension of the quota mechanisms to the non-linear media triggered hot debates. Some Member States, like France, mandated further obligations on Internet Access Providers after the implementation of the revised directive.

Nobody will question the urge of funding creation and the legitimate concerns it triggers, but it may not be the most relevant approach from an economic viewpoint. The core question is: does these new forms of distribution contribute to an increased media production, more diversity and enhanced consumer and producer surplus? Another difficult side of the issue is how to find the proper indicators to answer to these questions.

In a well functioning market the production of such goods should find the adequate financial resources. The growth of the US cable markets illustrates the link between the development of the market and the investments in programmes: to maintain its growth ratio, the US cable industry tripled its investment in programmes between 1984 and 1989

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<sup>235</sup> The adoption of the 1996 World Intellectual Property Organisation (WIPO) treaties triggered the adoption of legislation on both sides of the Atlantic. The main international obligations arising from the two treaties on copyright and related rights needed to be transposed. See the "policy" section and the "copyright" report.

<sup>236</sup> Directive 89/552/EC "*Television without Frontiers*" of 3 October 1989.

<sup>237</sup> During the discussion of the AVMS directive, the country of origin principle was attacked by broadcasters claiming it was easing out the circumvention of national regulation when out-of-country broadcaster were focusing on an outside market. The principle was kept but the definition of location was adapted. The same principle was at the core of the "(in)famous" service directive (European Parliament and Council Directive 2006/123/EC of 12 December 2006 on services in the internal market) which initially included "*audiovisual services, cinematographic services and radio broadcasting*". This went unnoticed for a while, until the audiovisual industry found out and started lobbying for removing the provision. It was derailed and audiovisual removed as an exception to the Directive.

(Simon, 1991: 336). TCI, the US pioneer company for “superstations”, created two of the most innovative channels in the early 80s: Cable News Network (CNN) and CNN-Headline News. More recently, in 2012, US VOD companies Netflix and Hulu started offering original TV series on their platforms.<sup>238</sup>

Asking for the participation of the distributor is somehow asking for the contribution of logistics players, like truck services, to contribute to the production of the wares they transport. It departs from the standard business approach where a supplier will normally charge for its service and not the opposite. It also departs from the current transportation model used to transmit the signal of the over the air TV, broadcasters pay the transmission companies (tower companies). Some cable companies tried indeed to come back to this standard business logic and to charge the channels they were distributing, at least the less popular ones.<sup>239</sup> This was also the business model of channels of teleshopping in the US; cable networks were getting a share of the revenues (an average of 5%: Simon, 1991). The model is similar for e-commerce companies taking a commission on online transactions.

From an economic viewpoint the relevant question is: are we facing market failures and consequently is public intervention needed? Very often such measures are implemented through a tax levied on some segment of the industry (the growing segment) to fund another one (a declining or more troubled segment), a rather distortive approach with potentially negative effects on new markets. To take the example of the fixed retail price of book, a measure introduced initially in France in 1981 and adopted by several other Member States,<sup>240</sup> this was meant to ensure the persistence of networks of independent bookshop throughout the countries. It worked in the sense that under “normal” market conditions most of the retail points would disappeared. The example of movie theatres in the late 50ies and 60s when cinema going started to decline sharply<sup>241</sup> has shown that when supply is being reduced (with theatres closing), the demand followed (Bonnell, 1978).

Opponents to the measures, like the Swedish publishers and booksellers argue that any regulatory interference artificially increases the prices for books. In Sweden, the fixed book price system was abolished some 35 years ago upon the instigation of the Swedish competition authority.<sup>242</sup> In Finland it was suppressed in 1991. In the UK, the “Net Book Price Agreement” was abolished in 1995. In the US such an agreement would be held illegal as a mandated retail price. Even in France, the 1981 law was challenged and brought to the courts as a quantitative protectionist restriction but was upheld by the European Court of Justice (with some requests for modifications). The EC does not interfere with national agreements but ban cross-border ones.

Some may question the relevance of propping up legacy players as a policy as the distribution is very different in a digital world from the physical distribution of cinema in the 50ies. It is not unsurprising to notice that the standard view from competition authority is that one should not expect competition authorities to protect any players, to prevent them from being washed out because of technological innovation. The role of competition

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<sup>238</sup> *Lilyhammer* as US-Norway production for Netflix, already a hit in Norway, and *Battleground* (a total investment of 500 million US \$) for Hulu. <http://meta-media.fr/tag/hulu/>, February 20, 2012.

<sup>239</sup> Numéricâble in France in the early 2000.

<sup>240</sup> Austria (adopted in 2000), Denmark (2001), Germany (since 1887 but legally since 2002), Greece (1997), Italy (2005), Luxemburg, the Netherlands (2005), Norway, Portugal (1996), Spain (1975).

<sup>241</sup> In France a peak was reached in 1957.

<sup>242</sup> Source: International Publishers Association (IPA). <http://www.internationalpublishers.org/index.php/-industry-policy/-fixed-book-price/pros-a-cons>



authorities is not to give any protection against (new) competitors (Perrot, 2011).<sup>243</sup> They aim at enabling a diversified offer (prices and features). In the debate in France about the extension of the fixed price to the e-book, the French authority ("*conseil de la concurrence*") questioned the transferability of the former policy goals (Perrot, 2010). The "*long tail*" is taking care of the rotation issue. Bookshops are not the main access point for e-books. The substitution effect digital/hard copies is different from the music case. According to A. Perrot, in an emerging market, it would be unwise to freeze the market: the burden of proof was high on policy makers to set policies out of the market mechanisms, it was necessary to identify clearly the market deficiencies and to sort out the adequate remedies. The French authority took a similar position for connected TV.

The opposite view in favour of regulation and public intervention<sup>244</sup> is built on the understanding that books, films, videos, CDs are not just commodities, but have a special value to society as cultural goods, and as such, merit to be treated differently from other tradable commodities. The production of these merit goods generates further externalities for society at large (cultural, societal...) (Unesco, 2005). Besides, the media have an acknowledged the role in the functioning of democracies, triggering consequent rights and responsibilities with respect to human rights, democracy,<sup>245</sup> and freedom of information and cultural diversity.<sup>246</sup>

Rules and regulation have been set in place to ensure these policy goals. An array of existing policies aims to foster these goals: governments often interfere directly (subsidies in the case of cinema in France, or zero VAT on books in the UK, for instance) or indirectly (various tax breaks, reduced postal rates for the distribution of newspaper or books). Although this kind of measures are propping up legacy industries, the final output is far from being clear, for instance in the case of cinema already quoted some argue that it leads to overproduction of films unable to reach an audience (cinema report).

New media and new players (search engines, social networks and manufacturers) are usually exempt of the regulations mandated upon legacy players; hence the debate that took place for the AVMS directive and the current debate about the rules for connected TV entrants (CSA, 2011). The standard incumbent argument claims that such an unequal regulatory regime will place incumbents under a competitive disadvantage. An argument starkly presented by US National Association of Broadcasters: "*What we have here is completely unregulated business competing against a regulated industry, using as its major weapon the very product which its competitor turns out, and paying nothing for the product*" (quoted by Waldman, 2011: 105). The strategy to deal with the new competitors using regulatory means may vary, from trying to stifle this competition as the US broadcasters

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<sup>243</sup> For the relation between regulation and competition in the media sector see for instance: A. Perrot, J-P. Leclerc (with C. Vérot) (2008): *Cinéma et Concurrence*, a report for both the French Minister of Economics and Finance and the Ministry of Culture.

<sup>244</sup> For a critical view about leaving media regulation to the "hegemony of market forces" see for instance Feintuck and Varney (2006) focusing on access, stewardship and diversity. The body of academic literature in that field is significant since, for instance, say Dahlgren (1995).

<sup>245</sup> See for instance the views of Nobel prize, Sen (2001).

<sup>246</sup> This report does not review any of these issues for cultural diversity see the E.C (2010) Green Paper, *Unlocking the potential of cultural and creative industries*; and the Unesco 2005 convention, <http://www.unesco.org/new/en/culture/themes/cultural-diversity/2005-convention>

did with cable,<sup>247</sup> or simply to seize the opportunity to receive more flexibility (this was the case with advertising in the new audiovisual directive), asking for a “*level playing field*”.

Whatever the strategy, it is clear is that when moving away from the former integrated value chain with the publisher at the centre, a growing disconnect is happening, as explained before, between distribution and creation, between the economics of distribution and the economics of creation. In other words some forms of integrated cross-subsidization between lines of bundled products are no longer possible. As S. Waldman (2011: 17) described the process for local newspaper, as “*the great unbundling*”: “*a consumer who bought the paper for the box scores was helping to pay the salary of the city hall reporter*”. The distribution side may not use their revenues to fund more contents.

However, newcomers resent being treated as the “*cash cows of the system*”.<sup>248 249</sup> They have concerns that mandating funding obligations upon them, especially through additional taxes may freeze the market and deprive them from the resources they need for other activities (deploying new networks for telcos). They favour less disruptive options like sharing agreements. For instance, Sony did not exclude this possibility per se to the extent that their content-related activities (e.g. VOD, music in streaming, online sale of games and books) generate revenues.<sup>250</sup>

## **7.2 Copyright<sup>251</sup>**

As emphasized already, content is the main strategic asset of the players from the sector, no wonder it appears a thorny area of potential conflicts. As noted in 2006, by the Screen Digest study “*Interactive Content and Convergence*”, some content providers were simply reluctant to licence their content. Content providers and distributors, around that period, found it difficult to agree on distribution terms. The situation has improved since partly because of tsunami initiated by Apple, making it far more difficult to move back.

The usual way to protect the content has been copyright up until now. But the system came under attack from various sides. De facto, as claimed by rights holders through piracy. It opened up what M. Cooper described as the “*first great battle of the digital age*” on digital intellectual property. As noted, copyrighted content allows rights holders to control the circulation of their goods all along the value chain; the digital era is jeopardizing this power. “*The major industry has always controlled the means of distribution up until the digital era, and that control has been lost... all copyright owners have lost that control with the*

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<sup>247</sup> Usually a short-term tactic as the broadcasters eventually lost their case; on the opposite the nascent cable industry managed to be granted some protection and privileges in the US in the seventies (Simon, 1991). As reported by S. Waldman, newspaper executives tried to undermine competition from radio as radio grew in popularity in the 1930s.

<sup>248</sup> Orange at the CSA conference.

<sup>249</sup> Some governments have a tendency to treat telecommunications as nothing but a tax vehicle. In the 80s, the French prime minister at that time, took the decision to increase not to decrease the retail prices contrary to the historical declining trends.

<sup>250</sup> Sony at the CSA conference, Paris, 2011.

<sup>251</sup> Chapter 5 is meant to provide an overview of the policies within the horizontal framework adopted. The second report “*Changing modes of asset management: IPR and copyright in the digital age. A complementary report. MCI Report 2*” provides an extension of the shorter section of chapter 5. This second report complements the first one through a more detailed analysis of the policies at hand and focuses on asset managements (IPR and copyright). The report introduces the academic debate, reviews the economic debate (new business models and welfare), follows the legal strategies of the players and sums up the policies.

internet” regrets the CEO of the Irish music industry trade body.<sup>252</sup> They link the process of creation and the use of copyright to protect and fund back creation.

On the opposite side, some like M. Cooper or the notorious US law professor Lawrence Lessig (2004),<sup>253</sup> suggest that copyright may well be the suppressor of ‘*radical potential*’. The Electronic Frontier Foundation, a US think tank and activist group, explains that “*IP law sometimes hampers—rather than encourages—communication, creativity, and innovation.*”<sup>254</sup> Much in the same line, others are wandering about the costs of safeguarding copyright, and predicting that copyright reform will happen sooner or later.<sup>255</sup> They underline that technology is a lost battle and that extending the consumers rights or implementing the existing ones may be at odds with the defensive strategies of some rights holders. Again the debate may be cooling down somewhat, the main entity in charge of managing copyrights; the World Intellectual Property Organization (WIPO) is considering alternative options<sup>256</sup> to licence.

#### Box 6: The Grokster case and the fight against piracy

On June 27, 2005, the US Supreme<sup>257</sup> court held that the software service company Grokster was liable for infringing copyrights and could not benefit from the ‘*Sony safe-harbour*’ principle that was set by the Supreme Court<sup>258</sup> in 1984, this applied as well another two other firms StreamCast distributing the software, Morpheus and Sharman networks (Kazaa software). The Sony safe-harbour ruling stated that, “*...the sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes.*”<sup>259</sup>

This brought to a close the legal action initiated, in 2003, when the Recording Industry Association of America and the Motion Picture Association of America took the PtoP (using the FastTrack protocol) company, created in 2001, to a court in California (Los Angeles). The court decided that file sharing was not illegal, therefore the decision was appealed by the plaintiffs but the United States Court of Appeals for the Ninth Circuit issued a partial ruling supporting Grokster. The case ended up at the Supreme Court. On November 2005, the site was closed and showed the following warning:

*"The United States Supreme Court unanimously confirmed that using this service to trade copyrighted material is illegal. Copying copyrighted motion picture and music files using unauthorized peer-to-peer services is illegal and is prosecuted by copyright owners. There are legal services for downloading music and movies. This service is not one of them.*

*YOUR IP ADDRESS IS XX.XX.XXX.XX AND HAS BEEN LOGGED. Don't think you can't get caught. You are not anonymous.*”<sup>260</sup>

Although the decision was hailed as a “victory” for rights owners,<sup>261</sup> the judgment is a balanced and limited decision that does not question the Sony Betamax jurisprudence. The court had to decide whether Grokster

<sup>252</sup> Quoted by Rogers (2011).

<sup>253</sup> His famous book “*Free culture*” was released on the Internet under the Creative Commons Creative Commons Attribution/Non-commercial license on March 25, 2004.

<sup>254</sup> <http://www EFF.org/issues/intellectual-property>

<sup>255</sup> R.Falkvinge, MEP representative of the Swedish Pirate Party at the Barcelona IIC Annual Conference, 2010.

<sup>256</sup> At the IIC 2010 Barcelona Annual Conference, S. Wunsch-Vincent (formerly with the OECD now Senior Economic Officer for the World Intellectual Property Organization) announced that his organisation was now ready to look at alternative ways to licences and talking with different stakeholders.

<sup>257</sup> Metro-Goldwyn-Mayer Studios Inc., et al, petitioners v. Grokster, Ltd, et al. 545 U.S (2005).

<sup>258</sup> Sony Corp. of America v. Universal City Studios, Inc., 464 U. S 417 (1984).

<sup>259</sup> Quoted by Wikipedia.

<sup>260</sup> Still to be found under: [www.grokster.com/](http://www.grokster.com/)

<sup>261</sup> Some US scholars question this « victory » see Pamela Samuelson who states that the Court not having revisited the Sony safe harbour was “*a considerable defeat for MGM and the entertainment industry which believed the “bad” facts of the Grokster case would be compelling enough to induce the Court to reinterpret Sony.*” Legally Speaking: Did MGM Really Win the Grokster Case? , <http://people.ischool.berkeley.edu/~pam/papers/CACM%20SCT%20decides%20MGM.pdf>

was liable of a contributory copyright infringement and did find such an infringement, but not because of the use of the software but because the company was using piracy as a commercial tool to attract customers, thereby clearly incentivising the users to behave illegally. However, without such an explicit strategy, a PtoP company or a carrier cannot be held liable of such an infringement. The Court made clear that direct evidence of intent to induce infringing conduct was needed. The Court advised software companies to act more carefully and confirmed the legal use of PtoP software for universities, libraries...

Moreover, the decision does not jeopardize the Sony-Betamax case which clearly stated that using a technology is not blameable per se (VCR in that earlier case). The Supreme Court is trying to keep a balance between technological innovation and the protection of existing rights. In other words, the decision indicates that the guilty company should be punished but not the technology. A Dutch court judging a similar case of PtoP (Kazaa) took the same position in 2005.

The decision was welcome by consumer organisation as illustrated by the reaction of the president of the Think Tank, Center for Democracy and Technology, Jerry Berman: *"The court has worked to craft careful balance that allows copyright owners to pursue bad actors, but still protect the rights of technology makers. We hope this decision will preserve the climate of innovation that fostered the development of everything from the iPod to the Internet itself."*

Copyright is not just a protecting tool; it is a powerful marketing device through windowing. D. Waterman showed how the US movie industry made the most of it with a successful market segmentation (Waterman, 2005: 118), *"maintaining pecking order and timing in sequence"*. It is then understandable that this industry should be careful before leaving a well established and functioning business model for an unproven one. Adding a new segment is a complex operation within existing tight release windows. The fear is about the newcomer cannibalizing the existing segments, especially as stressed by D. Waterman as the video window is *"by far the most important in economic terms"*.<sup>262</sup> In the 80s the introduction of videotape (to be replaced later by DVD) gave birth to an internal debate about the right marketing strategy: rental, sales, combination of the two. It took some time to stabilize and for the video window to become the main source of revenues.

If, as mentioned, some rights holders are reluctant to grant their rights, there is no reason to assume a permanent unwillingness to clear these rights as soon as the benefits will show up and the trials and errors would have been made. The case of the US movie industry clearly showed how it benefitted from the introduction of any new technology over the last fifty years and how windowing maximized its revenues. The pending questions are how and when; this may take some time to be sorted out.

Besides, the debate on piracy did not contribute to a better understanding of the complexity of the situation. On the opposite, it did confuse the debate,<sup>263</sup> the defensive strategy most likely acted as a blinder, preventing the music industry, for instance, to adapt promptly. Assessing the impact of piracy is not an easy task and experts disagree on data and methodologies. In the case of music some experts are reluctant (Music report) to accept the data coming from the industry (IFPI, 2011, TERA 2010), some may even claim that the music industry is counting revenues that most likely they would not have been able to receive because of the declining trends already noted. The question, in the case of book for instance (see Box 7), then becomes: is piracy filling an unmet demand? The movie and broadcast industries may be in a better position. In any case, mature and declining industries are under strong pressure, notwithstanding the impact of technology, to restructure themselves.

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<sup>262</sup> In 2008, North American revenues the distribution was the following: theatrical box-office distribution US \$9.6 billion, home video US \$25.8 billion, while online distribution accounted for only US \$227 million (Coleman, Bazelon: 22).

<sup>263</sup> As illustrated by the overstatement to be found in TERA (2010).

**Box 7: Gauging the impact of piracy. The case of book publishing.**

In the case of books as emphasized, by a 2009 study from the French observatory "*Le MOTif*"<sup>264</sup>, there are few studies available to document the phenomenon of digital piracy of books<sup>265</sup>. It is therefore worth summing up their main findings under the assumption that these findings may be valid, to some extent, for other EU markets. In 2009, it appeared as a highly marginal market compared to the music, film or video games markets. The volume of illegal downloadings of books is very difficult to gauge making its financial impact even more difficult to assess. This is why the study opted for concentrating on the illegal offer of the pirates networks.

Finding the appropriate data for the number of titles available is also complex, however according to their estimation (for the summer of 2009) the amount was lower than 1% of the number of titles available under the physical format: between 4000 and 6000, the majority (between 3000 and 4500) being comics books,<sup>266</sup> followed by scientific, technical or medical titles (1000-1500) and some 200-300 audiobooks half of the title being in the public domain.

As can be expected, authors of best sellers on the French market<sup>267</sup> are prominent in the list of downloaded authors. However, some results are much more counterintuitive. First, 25% of the top 20 are philosophers a percentage that does not compare with the top 20 for books, neither of sales. The number one is the French philosopher, Gilles Deleuze. Another 25% comes from science fiction and heroic fantasy. Lastly writers within the category "religion and esoterism" are overrepresented.

The second round of the study, released 18 months after in March 2011<sup>268</sup> yielded a similar pattern (science fiction and comics). Piracy still did not appear massive but tended to speed up nevertheless, new titles being pirated more quickly. Direct downloading prevails now upon Peer to Peer. The study concludes by raising the questions of what makes this illegal offer attractive, of its ability to meet the demand of the consumers. In other words, are these pirated books filling an unmet demand<sup>269</sup>? Indeed, the study reveals that out of the 50 best-selling comics, 58% of these are not available as e-books. The pirated comics appear to be provided by well organized entities which drives the study to conclude that without an improved legal offer, the risk is high to see an increase in piracy.

Source: De Prato et al, Book report<sup>270</sup>.

The complementary side of time sequencing is spatial sequencing with the territoriality of rights which raised similar issues. There seems to be a consensus, at least for instance in France (M. Tessier, CSA 2011) about the role and control of territorial rights. As R. Biggam<sup>271</sup> explained: "*the rights are sold to follow the consumer's demand and this demand is territorial*" for broadcasting. However, some media groups hold the view that clearing territorial rights, country by country, raised the transaction costs artificially in a digital age.

<sup>264</sup> EbookZ1. Observatoire du livre et de l'écrit en Ile-de-France <http://lemotif.fr/fr/e-motif/elabz/-ebookz/>

<sup>265</sup> The International Intellectual Property Alliance released a short report in 2008: available at [http://www.iipa.com/2008\\_SPEC301\\_TOC.htm](http://www.iipa.com/2008_SPEC301_TOC.htm). It concentrates mostly on what they call "priority watch list" of infringing countries such as China, Mexico or Egypt, most of the time there are no data available for books. For China the estimated level of piracy for the period 52 millions US \$ for books but of nearly 2.5 billions for software. <http://www.iipa.com/pdf/2008SPEC301LOSSLEVEL.pdf>. There are no data available on the IPA website either?

<sup>266</sup> France is well known for the importance of this market, this may not be transferable to other markets.

<sup>267</sup> For instance: Bernard Werber, Amélie Nothomb, Frédéric Beigbeder, J.K. Rowling, Michael Connelly, Daniel Pennac, Marc Levy, Paulo Coelho, Stephenie Meyer.

<sup>268</sup> EbookZ 2 (march 2011)

<sup>269</sup> Following the argument of Edward Nawotka commenting the 2011 survey: "*SURVEY: Are Book Pirates Fulfilling Unmet Demand?*", January 24, 2012. <http://publishingperspectives.com/2012/01/survey-are-book-pirates-fulfilling-unmet-demand/>,

<sup>270</sup> See the report on the book publishing industry, produced by IPTS as part of the project on media and content industries, listed in the "IPTS MCI reports" of the bibliography.

<sup>271</sup> IPTS MCI workshop, 28 October, 2011.

The TSF directive and the following Satcab directive<sup>272</sup> were trying to deal with these issues of updating a legislative for new technologies and a potential EU more unified market. Satcab introduced one-stop shopping allowing the satellite industry to negotiate on behalf of the cable industry.

For instance, the RTL group considered<sup>273</sup> the impossibility to offer multi-territorial licences for online services as a market failure. National collecting societies have a licence exclusivity on their territory. An option, suggested by the media group would be direct licensing leaving rights holders free to make choices, an option implemented in Australia and the US for over 10 years. One of the issues is that collective societies are organisations that are not part of the business community and that makes it difficult for them to come up with innovative rates/ approaches matching the fast changing environment.

The EC has been very active in that field, trying to come up with solutions to streamline the process of copyright licensing. EC displayed a strong willingness to intervene to correct what they consider as major inefficiencies for the internal market. As Charlie McCreedy, former European Commissioner for Internal Market and Services once explained:<sup>274</sup> *"The current unsatisfactory arrangement of having to clear online rights in musical works on a territory-by territory basis is too costly and complex and needs to be remedied"*, adding *"Europe's model of copyright clearance belongs more to the nineteenth century than to the 21st"*.<sup>275</sup> The focus of DG MARKT shifted from harmonisation (copyright directive<sup>276</sup>) toward the management of rights with a view to facilitating the acquisition of multi-territorial licenses, more suited to the Internet age.

The EC took a careful approach acknowledging option like direct licensing may take time as existing structures are based on bilateral agreements. In its July 2005 staff working document on the cross-border collective management of copyright,<sup>277</sup> the Commission backed the option to give rights holders the choice to authorise one single collecting society to license and monitor all the different uses made of their works across the entire EU. It was seen as the most effective long-term model for cross-border licensing of copyright-protected content in the online environment and cross-border distribution of online royalties. Meanwhile, it opted for a soft law approach (recommendation) but nevertheless has been grappling with existing settlements: Barcelona,<sup>278</sup> Santiago<sup>279</sup> agreements.

A 2010, KEA/CERNA study<sup>280</sup> on *'multi-territory licensing for the online distribution of audiovisual works in the European Union'* remains careful in its conclusion. The study states that international licensing could foster the availability of audiovisual works across border

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<sup>272</sup> Directive 93/83 of 27 September 1993 "SatCab".

<sup>273</sup> C. Hauptman (Deputy General Counsel RTL) at the IIC Annual Conference, Barcelona, 2010.

<sup>274</sup> At the London Creative Economy Conference (October 2005).

<sup>275</sup> Along these lines, Tilman Lueder, Head of the Copyright Unit, DG Internal Market, claimed: *"the current management of intellectual property – within defined territories that are usually national borders – is a source of considerable inefficiency. It also hinders the entry of new Internet based services that rely on IP protected content"*, speech on 2 March 2006 at the Content for Competitiveness conference in Vienna.

<sup>276</sup> Directive "on the harmonisation of certain aspects of copyright and related rights in the Information Society" (9 April, 2001).

<sup>277</sup> *Study on a community initiative on the cross-border collective management of copyright*.

<sup>278</sup> BIEM/Barcelona an agreement between collective management societies to allow online reproduction (covering webcasting).

<sup>279</sup> An agreement of 2001, between collective management societies to allow multi-territorial licensing for the authors' right of online communication to the public including making available for the provision of music downloading or streaming use of authors' rights.

<sup>280</sup> Presented at a European Commission stakeholder workshop on 2 June, 2010.

but that it is difficult to predict whether this will increase the demand for non-national audiovisual works in the Member States. They found that so far VOD did not lead to more circulation of European audiovisual works in the EU which they link to the fact that local distributors remain very important in the success of an audiovisual work (e.g. through the marketing strategy that is targeted to the national market). The low level of demand for cross-border AVMS suggests that the absence of cross-border licensing is not in fact the most significant barrier to a Single Market for Digital Cultural Products emphasised a recent EC communication.<sup>281</sup> By the same token, a 2012 Plum study on *"The economic potential of cross-border pay-to-view and listen audiovisual media services"*<sup>282</sup> came to similar conclusions about a low level of demand in a domestic for TV or video originating from other EU markets (Plum, 2012). The study stresses that: *"a substantial proportion of the general population in some countries (e.g. Germany) are unwilling to pay for television or video from other EU countries"* (Plum, 2012: 9). They found a rather low order of magnitude for the willingness to pay for subscription-based cross-border audiovisual between 760 million and 1,610 million euros<sup>283</sup> to be compared to a total pay TV market of 28.6 billion euros (out of a total TV revenues of 69.3 billion)

A communication on a single market for intellectual property rights was released on May 2011.<sup>284</sup> In 2012, the Commission will circulate *"proposals to create a legal framework for the collective management of copyright to enable multi-territorial and pan-European licensing"*.<sup>285</sup> Commissioner, M. Barnier in a recent speech (May 2012) delineated the enabling policy advocated by the EC as *"a facilitator and not a brake"*.<sup>286</sup>

However, from a competition angle, the DG Comp took a harsher approach. On April 29, 2004, the Commission issued a statement of objections to collecting societies because of the anti-competitive effects of the territorial exclusivity clauses of the agreements. In 2011, the European Court of Justice's Advocate General took the position that existing territorial content licensing models contravene the goal of a single open market.<sup>287</sup> This would have far reaching global consequence to the industry if the court were to actually sustain that opinion. There is a tension between multi-territory rights and multi-license ones as it seems that multi-territorial rights are valid for a single license and multi-license for a single territory.<sup>288</sup>

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<sup>281</sup> Quoted by Enders (2012): "A coherent framework for building trust in the Digital Single Market for e-commerce and online services", COM (2011) 942, [http://ec.europa.eu/internal\\_market/e-commerce/docs/communication2012/COM2011\\_942\\_en.pdf](http://ec.europa.eu/internal_market/e-commerce/docs/communication2012/COM2011_942_en.pdf)

<sup>282</sup> The study includes all distribution platforms relevant to cross-border audiovisual media services and focused only on services in which both the contract and the delivery of the service are cross-border, so excluding the provision of non-national EU channels in national pay-television packages and non-national programming on national television channels. (Plum:1).

<sup>283</sup> Based on an online survey of 462 migrants resident in France, Poland, Spain, Sweden and the UK.

<sup>284</sup> "A Single Market for Intellectual Property Rights. Boosting creativity and innovation to provide economic growth, high quality jobs and first class products and services in Europe".

<sup>285</sup> Communication, p.10.

<sup>286</sup> At the LetsGoConnected conference. Available at: [http://letsgoconnected.eu/files/SPEECH-12-354\\_FR\\_Michel\\_Barnier.pdf](http://letsgoconnected.eu/files/SPEECH-12-354_FR_Michel_Barnier.pdf). In French: *"un cadre facilitateur, et non un frein"*, p.4

<sup>287</sup> Cases C-403/08 and C-429/08 Football Association Premier League Ltd and Media Protection Services Ltd. On 4 October, 2011 the European Court of Justice adopted a ruling in a case involving the use in the UK of decoder cards intended to gain access in other member states to satellite retransmissions of live English football matches.

<sup>288</sup> Sacem, presentation at IIC Annual Conference London, 2007: *"A long story .....and a huge confusion"*.



A third related aspect concerns, the broadcast signal, its protection (against piracy) and its integrity. For the latter broadcasters being legally liable for the content they broadcast, they have concerns about the way third party will behave and comply. Under current European law, the broadcaster is legally responsible for editorial and commercial content. The question is about the compliance with the EU directive and the compliance with the contractual obligations for third parties. On signal integrity, the issue is, for instance in the connected TV environment about platform operators adding advertising or other contents in and around the broadcaster's signal.

This the reason why the US government was initially backing, in 2006, a draft treaty of the World Intellectual Property Organisation<sup>289</sup> to update on the Protection of Broadcasting Organisations on a signal-based approach.<sup>290</sup> Certain U.S. Internet portals (Yahoo, AOL, Digital Media Association) successfully petitioned the U.S. Government to push to include "webcasting". This went unnoticed until consumer organisations (such as CPtech) flagged the issue and counter-lobbied early 2006. They were supported by US and non US telecom carriers expressing concerns on three main points:

- Broadcast-type services are not explicitly covered when delivered across "closed" telecoms networks.
- Extension of the treaty to webcasting/simulcasting will create serious liability problems for internet intermediaries.
- Provisions on technological protection measures risk reinforcing the market power of certain content providers.
- The EU (DG Markt) also disagreed about the extension, and favoured a text characterised by complete technological neutrality. The Commission admitted that some language could be necessary to deal with the liability problems for internet intermediaries but suggested rather to copy language from the 1996 treaty meant to solve similar problems.

The powerful lobby efforts of US broadcasters nevertheless led to the adoption, in 2006, of the Audio Broadcast Flag<sup>291</sup> Licensing Act after a FCC decision of 2003 was struck down by a court,<sup>292</sup> to increase the protection in a digital world. Consumers association opposed the bill but as opposed to the other, more arcane issue of the WIPO treaty, did not manage to derail the bill. They claim the act was simply reducing the scope of the rights for users without dealing adequately with the issue of piracy. The measures were not consistent with other legal measures governing the use of for instance «Digital Audio Recording Devices» and «Digital Music Recordings».

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<sup>289</sup> The main objective of the treaty *"is to serve as a stable legal framework for the activities of broadcasting organizations against piracy, but it also provides protection against competitors and against unfair exploitation, and against free-riding,"* Jukka Liedes Chair of the Standing Committee on Copyright and Related Rights.

<sup>290</sup> USTA, interview 2005: *"treaty is life support for broadcasters"*

<sup>291</sup> A *broadcast flag* is a set of status bits sent in the data stream of a digital television program that indicates whether or not it can be recorded, or if there are any restrictions on recorded content.

<sup>292</sup> The FCC decision was challenged by the Electronic Frontier Foundation in 2006. The United States Court of Appeals for the District of Columbia Circuit ruled that the FCC had exceeded its authority in creating this rule. <http://www.eff.org/issues/intellectual-property>



This was contradicting the well established US "fair use"<sup>293</sup> of copyrighted material. The Computer & Communications Industry Association (2010) holds the view that "We are only beginning to fully understand in the 21st century that what copyright leaves unregulated—the 'fair use economy'<sup>294</sup>—is as economically significant as what it regulates." They report that companies benefiting from fair use generate substantial revenue, employ millions of workers, and represent one-sixth of total US GDP. On the other side of the spectrum, a report commissioned by the International Intellectual Property Alliance (IIPA) claimed that "the US copyright industries:

- *continues to outpace the rest of the economy in real growth,*
- *employ over five million workers, who are on average paid significantly more than other U.S employees; and*
- *contribute significantly to US foreign sales and exports, exceeding those for many US industry sectors" (Siwek, 2011).*

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<sup>293</sup> Fair use is an important restriction to the rights conferred on original works by the U.S. Copyright Act of 1976. *Source:* Computer & Communications Industry Association (2010). The TSF and now AVMS Directive offers similar exemptions.

<sup>294</sup> Under "*fair use economy*" they classify: manufacturers of consumer devices that allow individual copying of copyrighted programming; educational institutions; software developers; and Internet search and web hosting providers.



## 8 Policies 2: Protecting Consumers...and Competition

We devoted a longer section to copyright to pay justice to its role in the sector, but other regulatory issues are none the less important. Most of them (competition issues, net neutrality, privacy...) are well identified and policies have proposed, suggested or updated. We will just sum up briefly the mains issues in relation to the field.

### 8.1 Net neutrality

It is usually acknowledged that "*net neutrality*" means different things to different people; '*net neutrality*' is a deceptively simple phrase hiding a multitude of meanings. This "*fuzzy*" notion<sup>295</sup> originates in a US debate over the policies to be applied to broadband access networks, which are typically licensed and regulated at the national or even the state and local levels. This debate on how to regulate so as to keep the Internet "*open*" was triggered by the deregulation of broadband that was achieved with the FCC August 5, 2005 decision on Broadband Internet Access Services (Simon, 2010). Some players feared that this landmark decision to deregulate may well jeopardize the future growth of the Internet and lobbied for some protective measures.

This subject was named in Wu (2003), and has since become a major academic discussion with significant policy impact. It is essentially an argument about the open Internet and the possibility for finely detailed charging for higher speed content—mainly video (Yoo, 2010). It has elements of intermediary liability, as the ISPs will have to inspect content more closely to discriminate if permitted (Marsden 2010), and it entails the abandonment of both common carriage and access regulation in the United States (Cherry 2006). Lessig and McChesney (2006) introduced net neutrality as an end-to-end issue: "*Net neutrality means simply that all like Internet content must be treated alike and move at the same speed over the network. The owners of the Internet's wires cannot discriminate. This is the simple but brilliant 'end-to-end' design of the Internet that has made it such a powerful force for economic and social good.*"

Those opposed to net neutrality typically characterize it as a competition issue, whereas other analysts more regularly base their arguments on consumer rights as well as preserving the innovative nature of the Internet by preserving competition based on the layers model (Weiser 2009, Crawford 2009). As G. Sidak sums up "*the debate over network neutrality is essentially a debate over how best to finance the construction and maintenance of a broadband network in a two-sided market in which senders and receivers have additive demand for the delivery of a given piece of information - and hence additive willingness to pay*" (Sidak, 2006).

The four "*net neutrality*" principles (four freedoms) were proposed, in February 2004, by the former chairman of the FCC, Michael Powell, in the perspective of the forthcoming deregulation of broadband so as to protect consumers. "*I challenge the broadband network industry to preserve the following Internet Freedoms: Freedom to Access Content; Freedom to Use Applications; Freedom to Attach Personal Devices; Freedom to Obtain Service Plan Information*".<sup>296</sup> A little more than one year after, the FCC adopted the four principles (*Open*

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<sup>295</sup> Or as C. Marsden puts it: " '*net neutrality*' is a deceptively simple phrase hiding a multitude of meanings" p.24. Open Internet may be a better wording. A comprehensive work on the topic: Christopher T. Marsden, "*Net Neutrality. Towards a Co-regulatory Solution*", Bloomsbury Academic. Available at: <http://www.bloomsburyacademic.com/pdf%20files/NetNeutrality.pdf>

<sup>296</sup> C. Marsden on p 35.

*Internet principles*) the same day the agency adopted its decision on Broadband Internet Access Services,<sup>297</sup> adding that "*principles are subject to reasonable network management.*" In 2010, the FCC chairman, Julius Genachowski, added two further principles: non-discrimination and transparency.<sup>298</sup> These principles are already included in the EU regulatory framework, non-discrimination being an important principle of competition law.

The hot US debate cooled down somewhat but resurfaced in 2009 with a FCC decision about "*reasonable traffic management*" while trying to better define what constitutes a "*broadband internet access service*". The debate move away from just a matter of good (or bad depending on the view held) principle<sup>299</sup> toward was to be seen as an appropriate way to manage traffic. In 2009, the Canadian regulator came up with a decision on what they called "*Internet traffic management practices*" (ITMPs) based on a four criteria test<sup>300</sup> to define what was reasonable. The Canadian regulator was also trying to find a balanced approach.<sup>301</sup> The notion addresses a governance issue of the Internet but the complexity from a regulator's viewpoint that such governance should encourage long term capacity investments, dynamic efficiency rather than static efficiency and provide incentive for innovation. The FCC followed and December 2010 adopted a "Report and Order" introducing for first time introduces some specific regulation for the open Internet and net neutrality.<sup>302</sup>

From a technical viewpoint, more recently the wording "*managed services*" was used to deal with this issue. This covers the importance of network management (e.g.; specialized IP routing, packet differentiation, filtering, and content caching...) to prevent congestion and preserve quality of service. New technologies (e.g. cloud computing) will require new network-level traffic management techniques. It is usually agreed that differentiation is needed to better support heterogeneous applications (like voice, video and data for instance).

The position from the Commission has been very careful so far, the view being that the EU 2009 regulatory framework was sufficient to prevent any abuse (no deregulation of broadband, strong non-discrimination principle) and that further legislation was not required.<sup>303</sup> Therefore it was not necessary to add anything to the new regulatory

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<sup>297</sup> Press release, "FCC Adopts Policy Statement. New Principles Preserve and Promote the Open and Interconnected Nature of Public Internet".

<sup>298</sup> FCC, news bulletin ("FCC Chairman Julius Genachowski Statement on Open Internet Public Notice"), 1 September 2010.

<sup>299</sup> This first phase was qualified as "*a war of religion*", *Act I*" in a recent issue of *Communications & Strategies*, also acknowledging that under Act II players displayed a better understanding of the real stakes. Bonneau et al (2011).

<sup>300</sup> *An ITMP should be implemented only if:*

1. *It addresses a justifiable purpose; for example, it is needed to prevent congestion, or disruption of time-sensitive programs.*
2. *It is as narrowly tailored as possible to achieve the desired result, using the least restrictive means.*
3. *It causes as little harm as possible to the retail customer, the application provider or the ISP that is the wholesale customer of a primary ISP.*
4. *And it is well advertised in advance. A full explanation must be given, describing the practice and how it will affect the user.*" P.4-5.

<sup>301</sup> His chairman, Konrad von Finckenstein, claimed: « *It is our attempt to provide predictability and transparency while encouraging innovation and investment, and minimizing regulatory intervention.* »

<sup>302</sup> FCC, Report and Order, 21 December 2010, FCC-10201.

<sup>303</sup> EU 2009 regulatory framework (*Universal Service Directive*): "*NRAs will be allowed to set quality of service parameters on public communications network providers to prevent degradation of service or the slowing down of traffic across networks. In addition, consumers must be informed – before signing a contract –*

framework (2009) beyond some transparency rules, leaving the implementation and the monitoring to the national regulators. The wording is not present in the directive but there are provisions to ensure net neutrality. The US debate about net neutrality is deemed unique and unrelated to Europe. The view from the EU regulators (BEREC) is that in the EU most problems encountered so far have been resolved by informal means, including, on occasion, through intervention by the regulator. In its April 2011 communication,<sup>304</sup> the Commission stated that it will refrain from regulatory intervention at present and deemed that the regulatory framework was sufficient to deal with any such issues. In July 2012, the Commission launched a public consultation on: “specific aspects of transparency, traffic management and switching in an Open Internet”.<sup>305</sup>

In June 2011, the Netherlands passed a law to protect the net neutrality principle and hence became the first market in Europe with such a legal framework, raising the issue of the fragmentation of legislation across the EU.<sup>306</sup> Neelie Kroes, Commissioner for the Digital Agenda, was very critical of the initiative, stating in October 2011:<sup>307</sup> *“I regret very much that The Netherlands seems to be moving unilaterally on this issue. We must act on the basis of facts, not passion; acting quickly and without reflection can be counterproductive. For example, requiring operators to provide only “full internet” could kill innovative new offers”*. Besides, enforcement does not appear to be assured (van Eijk 2011a). The Dutch Senate adopted the law on 8 May, 2012. Later that same year Finland introduced a constitutional right to Internet access, a right however that remains vague about the real obligations concerning net neutrality. In Norway the regulator created non-binding principles on net neutrality (van Eijk 2011b).

## **8.2 Competition issues**

Many of the most important dominance cases have been of computer, telecoms, and more recently Internet companies, notably those against IBM in the 1980s, Microsoft and Intel in the 1990s and 2000s (McGowan, 1998, Lemley and McGowan, 1998), and Google (Coates 2011). There have also been several critical merger cases involving these and other parties, which had global impact and required clearance by both United States and European Commission regulators. Several of these were refused in highly controversial decisions. The approaches to the problem have highlighted the particular problems for antitrust in adapting to the Internet business structure (McGowan, 1998, Froomkin and Lemley, 2003), with opaque vertical linkages often written in code as much as commercial agreements (Lessig, 2006), and rapid dominance resulting from market adoption of de facto standards (Lemley, 1996).

New forms of competition taking place through digitisation such as new form of vertical integration (“Apple economics”) and the creation of platforms of multisided markets

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*about the nature of the service to which they subscribe, including traffic management techniques and their impact on service quality, as well as any other limitations”.*

<sup>304</sup> “The open internet and net neutrality in Europe”, COM(2011) 222 final, [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/communications\\_reports/netneutrality/comm-19042011.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/communications_reports/netneutrality/comm-19042011.pdf). The Body of European Regulators for Electronic Communications (BEREC) will publish the results of its own investigation in 2012. According to the 2009 EU regulatory framework, the Commission has to report annually on the state of ‘internet freedoms’ and to propose additional measures if necessary.

<sup>305</sup> [http://ec.europa.eu/information\\_society/digital-agenda/actions/oit-consultation/docs/Questionnaire.pdf](http://ec.europa.eu/information_society/digital-agenda/actions/oit-consultation/docs/Questionnaire.pdf)

<sup>306</sup> A concern for the European Parliament. In November 2011 the EP adopted a resolution asking the European Commission to ensure a consistent application of the relevant EU regulation.

<sup>307</sup> At the ETNO Financial Times 2011 CEO summit.

("Google economics"). The former may have some anticompetitive effects; therefore competition authorities are watching carefully the wholesale market (Perrot, A., 2011). The activity of two-sided platforms implies leverage effects between sides which may create an impression of excessive exploitation of market power. In two-sided markets, pricing at marginal cost does not constitute a good benchmark. A price above marginal cost is not always a sign of market power, as well as price below cost is not always predatory. Cross subsidies can be pro-competitive.

The media sector is described most of the time as being highly concentrated or displaying a trend toward increasing concentration (Castels, Lessig), must often from a rather qualitative<sup>308</sup> rather than quantitative viewpoint. However, as E. Noam (2009) have shown the reality is much more complex, the media sector fluctuates dynamically around long-term concentration trends linked to changing economics and technology (changing economies of scale and entry barriers).

Concerns about the potential impact on media pluralism<sup>309</sup> and on freedom of expression and information have driven most EU member states to regulate media ownership and concentration.<sup>310</sup> This stems from another public policy angle and as stated on the 2007 EC working paper: *"European competition law cannot replace - nor does it intend to do so - national media concentration controls and measures to ensure media pluralism"* (E.C., 2007: 7). Besides, limiting media concentration does not necessarily translate into pluralism.<sup>311</sup>

Clearly the digitisation process is a major one but the obvious output is to bring concentration in the distribution media (ISP, search, wireless).<sup>312</sup> Internet industries, although being described most of the time as "wide open" and competitive, are showing strong concentration trends. This raised concerns already from competition authorities, not only while reviewing proposed mergers between players in that field. For instance, in November 2010, the European Commission announced that it was opening an inquiry into allegations of anti-trust violations by Google.

The process is not linear, the average concentration over the entire information sector declined in 80s, to rise after 1995 and to decline again after 2001. However, the concentration of mass media industries increased steadily after 1988 from an average Herfindahl (HHI)<sup>313</sup> index of 524 in 1984 to 1121<sup>314</sup> in 2005, but as stressed by E. Noam, it

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<sup>308</sup> Arsenault & Castells (2008) focus on *"networked form of production"* (743) and the globalisation and diversification of media content but rely only on financial participation not on the usual economic indicator of concentration. Lessig was criticised by Noam for the same reason.

<sup>309</sup> In 2011, Commissioner Kroes set up an independent high-level group on freedom and pluralism, but mostly in the wake of the controversy about the new media regulation of the Hungarian government and the Media Authority powers. See the report by the Center for Media and Communication Studies (CMCS): *"Hungarian Media Laws in Europe. An Assessment of the Consistency of Hungary's Media Laws with European Practices and Norms"*. Available at: [https://cmcs.ceu.hu/sites/default/files/field\\_attachment/news/node-27293/Hun\\_Media\\_Law\\_Executive\\_Summary.pdf](https://cmcs.ceu.hu/sites/default/files/field_attachment/news/node-27293/Hun_Media_Law_Executive_Summary.pdf)

<sup>310</sup> In 2007, the EC released a working paper on *"Media pluralism in the Member States of the European Union"*, SEC(2007) 32. The paper was trying to identify concrete indicators.

<sup>311</sup> According to studies quoted by the 2007 EC working paper: 8.

<sup>312</sup> Based on E. Noam's presentation at the 39<sup>th</sup> TPRC, Arlington, September 23-25, 2011. available at: [http://www.tprcweb.com/images/stories/2011%20papers/noam\\_2011.pdf](http://www.tprcweb.com/images/stories/2011%20papers/noam_2011.pdf). Based on a collective work in progress on global trends of media concentration.

<sup>313</sup> The index is a measure of the size of **firms** in relation to the **industry** use to gauge concentration. Other common concentration ratios are the CR<sub>4</sub> and the CR<sub>8</sub> measures the total market share of the fourth and eight largest firms in an industry.

does not appear to be particularly high compared to other industries, under standard antitrust measures a share of 36% for the overall media sector for the top 10 firms would not be considered as a high level of concentration (vs. other industries where only two firms reach that level).

### **8.3 Data protection and privacy**

The first directive on data protection was adopted in the EC in 1995.<sup>315</sup> The directive defined personal data and its processing. Each member state was required providing one or more independent public authorities responsible for monitoring the application of the directive. At the same time, it created a new body a Working Party (Article 29 Working Party) on the protection of individuals, composed of representatives from the national supervisory authorities, representatives from the supervisory authorities of the Community institutions and bodies, and a representative from the Commission. A regulation was later adopted, in December 2000,<sup>316</sup> creating the European Data Protection Supervisor (EDPS).<sup>317</sup> The independent advisory body has been issuing opinions since. For personal data and the protection of privacy in the electronic communications sector it was complemented by the ePrivacy Directive.<sup>318</sup>

In 2009, the Spanish Data Protection Agency established a Working Group and promoted and coordinated the work for elaborating a Joint Proposal for a Draft of International Standards in line the Council of Europe's efforts to improve the fundamental rights to data protection and privacy and the international debates going on.<sup>319</sup> The proposal was adopted in Madrid<sup>320</sup> in 2009: Joint Proposal for setting International Standards on Privacy and Personal Data Protection.<sup>321</sup>

In July 2010, the Commission issued a background paper on the future of data protection, followed in 2011 by a consultation and a communication. The basic principles and objectives of the 1995 Directive are held valid, but the rules were to be adapted to new technological challenges (including cloud computing). The reviewed framework has to take into account the new institutional framework of the EU (the Lisbon Treaty has a strong emphasis on fundamental rights). At the December 6, 2011 Forum Europe annual conference on data protection and privacy, Viviane Reding, EU commissioner for justice,

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<sup>314</sup> The US department of Justice considers that an HHI of 2500 is an index of high concentration, between 1000 and 1800 the concentration is deemed moderate.

<sup>315</sup> European Parliament and Council Directive 95/46/EC of 24 October, 1995 on the protection of individuals with regard the processing of personal data and on the free movement of such data.

<sup>316</sup> See:  
[http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/EDPS/DataProt/Legislation/Reg\\_45-2001\\_FR.pdf](http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/EDPS/DataProt/Legislation/Reg_45-2001_FR.pdf)

<sup>317</sup> See;  
[http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/EDPS/DataProt/Legislation/Reg\\_45-2001\\_FR.pdf](http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/EDPS/DataProt/Legislation/Reg_45-2001_FR.pdf)

<sup>318</sup> Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector. The first directive was adopted in 2002 and modified in 2009: European Parliament and Council Directive of 26 October, 2009 concerning the processing of personal data and the protection of privacy in the electronic communications sector.

<sup>319</sup> [http://www.coe.int/t/dghl/standardsetting/dataprotection/modernisation\\_FR.asp?](http://www.coe.int/t/dghl/standardsetting/dataprotection/modernisation_FR.asp?)

<sup>320</sup> The 30th International Conference of Data Protection and Privacy Commissioners.

<sup>321</sup> See:  
[http://www.privacyconference2009.org/media/Publicaciones/common/estandares\\_resolucion\\_madrid\\_en.pdf](http://www.privacyconference2009.org/media/Publicaciones/common/estandares_resolucion_madrid_en.pdf)



fundamental rights and citizenship, announced<sup>322</sup> proposals so as to: facilitate secure transfers of data, including outside the EU, by simplifying the adoption of binding corporate rules, “*introduce one data protection law in Europe and one single data protection authority for each business*”,<sup>323</sup> introduce the “*right to be forgotten*” (article 17) into the regulatory framework and have the same rules for cross-border and domestic processing of personal data for law enforcement purposes. She also took this opportunity to emphasize the transatlantic cooperation with the US, welcoming the US draft legislation.

The EDPS welcome the approach but regretted the lack of a global more integrated approach.<sup>324</sup> In June 2012, the European Parliament while supporting the approach of the Commission drew the attention to “*keep bureaucratic and financial burdens to a minimum*”<sup>325</sup> but “*to conduct impact assessments and carefully evaluate the costs of new measures*”. For instance, IT companies claim that the idea of a right to be forgotten for privacy may look nice but may nevertheless yield unexpected outputs as if taken to the extreme it may weaken rather than strengthen security. Policies need to ensure a balance between personal data protection and the fruition of advanced business and government services in exchange for user information. From an industry viewpoint, privacy should be an enabler not a barrier. There is also some consensus within the industry to consider that that “privacy policies” that did not work as the fixed world solutions were neither likely to work nor appropriate in a dynamic (mobile) world.

Indeed, as noted by Greenstein (2010), privacy, has received less attention from economists hence “*economic analysis of privates issues remain at a nascent stage*”. According to the same author, this is due to not a well defined legal or economic concept of privacy. As also stressed by T. Stevens et al (2010): “*we know very little about eID as an enabler of the Digital Economy*”. Firms are using more and more the information they are able to collect through various means but customers may not be fully aware, there may be a growing discrepancy between the two aspects hence the need for a comprehensive framework. Some customers may agree to trade services for their personal data, some other may oppose especially if they are not aware of the ways the data are used. For instance, cookies<sup>326</sup> robustness and ubiquitous usage in the social layer of the web make them indispensable, but they are to a large extent missing from users’ perceived context, an issue privacy enhancing technologies (PET) are trying to address. However, according to the IPTS Survey<sup>327</sup> (2012: 17): “The perception of risk associated with eCommerce and Social Networking is not acknowledged as a dominant factor”.

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<sup>322</sup> Speech at the 2nd Annual European Data Protection and Privacy Conference  
<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/11/851&format=HTML&aged=0&language=EN&guiLanguage=en>

<sup>323</sup> Speech at the 2nd Annual European Data Protection and Privacy Conference

<sup>324</sup> In March 2012:  
[http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2012/12-03-07\\_EDPS\\_Reform\\_package\\_FR.pdf](http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2012/12-03-07_EDPS_Reform_package_FR.pdf)

<sup>325</sup> See: <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&mode=XML&reference=A7-2011-0244&language=EN>

<sup>326</sup> The 2002 EU regulation was reinforced in 2009; a consent from the user is now require to place a 3d party cookie.

<sup>327</sup> “Pan-European Survey of Practices, Attitudes and Policy Preferences as Regards Personal Identity Data Management”. The Report presents the results of the largest survey ever conducted in Europe and elsewhere about people’s behaviours, attitudes and regulatory preferences concerning data protection, privacy and electronic identity, both on the Internet and otherwise in their daily lives. The survey shows very clearly how Digital Europe is shaping up. About two thirds of EU27 citizens use the Internet



At the same time, as underlined by the European Parliament, there is a pending question about the costs that such privacy regulations may impose on firms. Some may argue that a too strong framework may have prevented the creation of the EU Google or the EU Facebook; the two IT companies could grow using the safe harbours provisions of the US legal system. There are some trade offs to be made between the legitimate objectives (from the viewpoint of consumer's protection) and innovation, for instance, mandatory deactivation of RFID tags may hinder to use of RFID. The question of the percentage or risk that policy makers can accept is opened.

The issues are clearly complex with overlapping and intermingling aspects with new technologies like cloud computing (a technology which transmits data fleetingly from one point to another without necessarily being tied to proprietary channels) or even mobile Internet making things even more complex. A lot of options have been considered such as privacy by design/ default based on opt-in for disclosure, but all options came with some drawback. An integrated solution for privacy and data protection looks like the way to go (IPTs, 2011) but does not appear as straightforward move.

**Box 8: EC regulation of contents. The main Directives.**

*The existing EU framework: a cornucopia*

*Directive 89/552/EC "Television without Frontiers" of 3rd October 1989 and Directive 97/36/EC of June 30, 1997 amending the 1989 Directive*

The directive was designed to take into account new developments such as cable and Pay TV, program sponsorship and teleshopping. The directive aimed at removing barriers to the free movement of television programming across national European boundaries (art.4&5), promoting European content and Europe's diversity of cultures. The directive draws a distinction between broadcast television and other types of audio-visual: content provided via the Internet and digital TV.

Amended by the *Directive 2010/13/EU* of March 10, 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in member states concerning the provision of audiovisual media services (*Audiovisual Media Services Directive*)

The directive applies to audiovisual media services, either scheduled or on-demand services, provided that they are "mass media" meaning that they must be intended for reception by, and could have a clear impact on, a significant proportion of the general public.

- "On-demand services" (i.e. non-linear audiovisual media services) are defined as: "*audiovisual media services provided by a media service provider for the viewing of programmes at the time chosen by the user and at his/her individual request on the basis of a catalogue of programmes selected by the media service provider*". A recital specifies that these are television-like services competing for the same audience as television broadcasts.

- Scheduled services ("television broadcasting" or "television broadcast") are defined as: "*audiovisual services provided by a media service provider for simultaneous viewing of programmes based on a programme schedule*". A recital specifies that these services include digital television, live streaming, webcasting, and near-video-on-demand.

Council resolution of June 27, 1994 on harmonised framework for a European Policy on Digital TV broadcasting

EC communication 2000 on principles and guidelines for the community's audiovisual policy in the digital age

EC Communication 2003/410 of July 9, 2003 on obstacles to open platforms in the field of 3G and Digital TV

The communication reminded and summarised the definitions of information society services as opposed to broadcasting services: "*Services that are transmitted point to point, such as video-on-demand or*

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frequently, more than one third uses Social Networking Sites (SNS) to keep in touch with friends and business partners and almost 4 out of 10 shop online.

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*the provision of commercial communications by electronic mail, are also Information Society services...Television broadcasting within the meaning of Directive 89/552/EEC and radio broadcasting are not Information Society services because they are not provided at individual request. »*

*Directive 93/83 of 27th September 1993 "SatCab"*

Has imposed a contractual relationship between broadcasters and collecting societies. In practice, introduced one-stop shopping: the satellite industry also negotiates on behalf of the cable industry.

*Directive 2000/31/EC of June 8, 2000 "on certain legal aspects of information society services, in particular electronic commerce in the Internal Market" (Directive on electronic commerce).*

Ensures the application of free movement of information society services within the Internal Market. Establishes an exemption from liability for intermediaries in their activity of "mere conduit" of information from third parties

*Directive "on the harmonisation of certain aspects of copyright and related rights in the Information Society" (April 9, 2001). EC Working Paper of February 14, 2002 on Electronic Copyright Management Systems (Digital Rights Management (DRM)).*

Establishes a compulsory exception for technical copies and defines the notion of communication to the public.

*APIs/ EPGs*

Directive 2002/19/EC of March 7, 2002 on access to, and interconnection of, electronic communications networks and associated facilities (AID). Regulation of access to other associated facilities such as Application Program Interfaces (APIs) and Electronic Program Guides (EPGs).

*Conditional Access:* Directive 98/84/EC of November 20, 1998 on legal protection of services assorted of conditional access and services of conditional access

The key measures on conditional access systems have been transferred (from previous Directive 95/47/EC) to Art. 6 and Annex I of the AID: Directive 2002/19/EC of March 7, 2002 on access to, and interconnection of, electronic communications networks and associated facilities (AID)

**Conclusions: “Culture-transformation” (“wen-hua” - 文化 - in Chinese)<sup>328</sup>**



Chinese philosopher, Zhuangzi (4th century BCE). *Source* : en.wikipedia.org

As the French philosopher and sinologist F. Jullien (2012) notes, any disruption takes place on the basis of some underlying continuity. However, it is always highly problematic to figure out the exact form of the continuity. The apparently drastic transformations we have taken a look at in this report are also somehow deeply rooted in other processes and part of an ever evolving cultural process. Both are difficult to track and changes of magnitude take some time to unfold.

**The weight of the downstream: competing business models, clashes of culture**

Within the global ecosystem described in Chapter 4, the relative economic size of the content industry, although evolving over time, remains small compared to its industrial IT counterpart, the legacy telecom players (network operation and service, equipment) and the new players from the IT world (intermediation and IT services and software) (see Figure 1 and Figure 20). This distribution of economic weight is not a new phenomenon (typically audiovisual revenues are 10 smaller than telecom revenues). What is new, however, is the progressive intermingling of sectors that had been separated before. Additionally, within this ecosystem, each segment is now competing with all the others (“autonomisation” of segments) for the final consumers (Chapter 1). Each segment now has its own business model and is fighting to become the primary gateway for content navigation and provision. The new players act as dis-intermediation agents, and provide (or will provide) content aggregation and distribution or advertising management and also additional services. These services may compete with other services provided by legacy players to bring in the revenues used to subsidize the production of contents (for example, classified ads in newspapers).

In the “old” world, each sector focused on its core business, managing its own assets accordingly. Typically telecom providers provided services to all segments (residential and business), and media companies bought in the services they needed to reach their final customers downstream and upstream (some production services, agents, wholesaling, logistics, transmission/ distribution, retail).

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<sup>328</sup> Quoting F. Jullien (2012: 175). Thanks to Dr Yang Yang, Shanghai University for sending me the ideogram.

Recently, however, there has been a significant change in the dynamics of the sector. On a global scale, the balance of power has shifted towards the downstream, away from the upstream, or from the “production” side of the media toward the distribution side. In other words, there has been a collision between the economics of production of cultural goods and prototypes and the economics of distribution of digital goods and services. This move towards a greater control of the downstream is a feature of more mature markets, where marketing/ distribution is taking backwards control of production (engineers, artists). The emergence and domination of large retailers such as Carrefour since the late 60s, and more recently the Wal-Mart phenomenon, serve as illustrations.<sup>329</sup> Large retailers tend to impose their own conditions on their suppliers. Amazon, one of the fastest growing IT companies since its foundation in 1995, had revenues of 34 billion US \$ in 2011 (which represents only 4% of Wal-Mart’s revenues - US \$ 422 billion) while the revenue of the entire French book sector was a mere 5 billion in sales (in 2009) (de Prato et al, 2012). Downstream players like Apple and Walmart, both of which also distribute cultural goods, can operate at loss on the sales of these goods in order to foster the purchase of other products (such as iPods), or to encourage people to shop in their stores.

This evolution has been enabled by IT technologies and the introduction of computing for the management of these enterprises. With digital goods, the entire value chain can be digitised, unlike apples<sup>330</sup> in a grocery store. The value chain becomes homogenous, with no physical disruption due to production, storing, and distribution of goods. Online distribution, in a digital world characterised by huge economies of scale and scope, further strengthens the position of IT players, including the social networks. This evolution is on-going within the cloud: for instance, server-based distribution of video services reduces the cost of making additional programmes available to the customers, as compared with traditional multichannel video programming distribution (cable, satellite) because of lower costs of the storing capacity.

There are very different types of firms in this ecosystem and their performance also varies. They include highly profitable IT companies, networks providers with declining revenues and media companies with often rather tight margins (though some are also highly profitable). Paradoxically, the “creative” sector does not appear to be “overcreative” from a management viewpoint, or when patent production is applied as a proxy<sup>331</sup> for innovation. Creativity seems to be concentrated in the production process. This adds another clash of cultures: high tech companies value the technical side and process over whatever content they may offer. The only notable exception is the videogames industry, a fast growing segment of the media and content industries that combines both kinds of creativity, bridging the two worlds.

However, digitisation is not new to any of the subsectors. They all underwent a transformation of their production processes (digital recording, computerised editing of films, desktop publishing) during a first phase of digitisation, not to mention the transformation due to the mere introduction and development of computers within the firms. This phase varied in scope and scale across sectors; it was implemented with

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<sup>329</sup> Walmart operates in 16 countries and had revenues of 405 billion US \$ in 2009, followed by Carrefour with over 119 billion US \$ in 2009, operating in 36 countries. Out of the five top ranking global retail firms, four are from the EU: Carrefour 5(France) n°2, Metro (Germany) n°3, Tesco (UK° n°4 and Schwarz Treuhand (Lidl: Germany) n°5. Lang (2012).

<sup>330</sup> No hidden allusion or meaning.

<sup>331</sup> Taking into account that all patents are not innovative and some innovative industries do not patent much.

different agendas but apparently remained mostly upstream. The first digital innovations of the 80s and 90s did not have a disruptive character. This phase did not extend to distribution, and therefore did not directly affect customers and the management of the commercial relationship with them.

It is often argued that this slow adoption of digitalization, common to all sectors, stemmed from concerns that the new products (which had insignificant revenues) would cannibalize existing products.<sup>332</sup> However, the example of the introduction of videotape (to be replaced later by DVD) in the 80s clearly prove this fear to be unfounded. Videotape now provides the main source of revenues even though it took some time to stabilize. Nevertheless, legacy companies have to find ways to balance their vested interests and existing investments with their new investments. Companies are uncertain about how the new markets will develop, and the opportunities may not appear too financially attractive as they have to face up to increased competition and lower margins.

### **Changing markets structures, new streams of revenues and innovative business models**

The traditional, oligopolistic and vertically-integrated market structure of the media industry is being challenged, as the industry is moving towards a value chain with many heterogeneous participants. The traditional value chain was dominated by the publisher/aggregator segment, which was often made up of integrated firms (production/ publishing/ distribution-retail). Some aggregators even owned technical segments of the industry (printers in the case of newspapers and book publishers, technical industries in the cinema). The only link that was not under some kind of control by the publisher was the enabling devices (radios, TVs, record, CD and DVD players). The one notable exception<sup>333</sup> is the “new” videogames sector where hardware manufacturers (consoles: Sony, Microsoft and Nintendo) dominate and also exercise a lot of power over the other segments.

The closed shop model allowed publishers not only to maintain a major influence on the distribution and retail segments but also to manage their customer base as a major asset. They could sell additional services or products: for instance, newspapers could use their data bases for direct and indirect marketing. It also offered better protection of other assets like copyrighted contents.

The world of edited media is moving toward a world of aggregation, keeping some dimensions of the earlier world(s) like bundling/ editing, but also adding others. In an online world, bundles will more and more include numerous services, bringing secondary and additional revenues. Some will be provided by new entrants and suppliers. App stores are offering brokerage services and indirect marketing (like newspapers used to do). New entrants such as telcos can offer billing services. Other services will be introduced by legacy players: for instance, the video games industry will sell virtual items such as avatars and

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<sup>332</sup> A fear that seems to be unfounded according to some management studies: “*Cannibalization of retail channels, that means the growth of one channel to the detriment of another channel, is a danger very often expressed, but studies show that the overall amount spent with a retailer by multichannel shoppers is much more important than the amount spent by single channel shoppers (e.g. EEC University of Köln, in: Heinemann, 2009). So the benefits for the global sales of a company seem to outweigh the cannibalization effects of a new channel.* (Lang, 2012: 31-32).

<sup>333</sup> Although historically when radio was first introduced, manufacturers subsidized contents to sell their devices. Later, this role shifted to advertisers (soap manufacturers), the notorious “soap operas”. Sony Paramount is another exception, but the synergy between the content departments and manufacturing departments is far from obvious.

others. Apps are companion services on BskyB's Sky Player. New European players have appeared like Spotify, DailyMotion, Last.fm; and new services and digital platforms have been launched by legacy players (ePresse, Kioskoymas...)

During the first phases of online distribution, the "natural" tendency was to duplicate the legacy business models from the analogue/physical world to the digital world. This was even the case with the video games industry, where video games publishers tried to adapt the "old" video games industry business models to their online and mobile distribution. New business models have been slowly adopted by traditional media companies, especially during what we described as the first phase (Chapter 1). They have therefore found themselves under pressure from new entrants from other sectors or "pure players" (YouTube, Netflix, Hulu).

As underlined, the evolving business models are outputs of two simultaneous processes: the overall trend of transformation of digital products into services, and the processes of "disintermediation" and "re-intermediation". This two-pronged process increases the complexity of business models, bringing some to an end and opening up new ones. Online distribution offers a new channel for distribution, much in the way the cinema and broadcasting industries have benefitted from each technological waves (cable, pay TV, DBS, home video and now the Internet) as illustrated by the data on the US market over 40 years (Figures 8, and 9). Studios are benefiting from online distribution, with increased margins (Table 1) compared to physical distribution.

However "re-intermediation" through the new gatekeepers often means working under the conditions they impose on legacy players (e.g. under the agency model as offered by Apple, or wholesaling in the case of Amazon). Selling content wholesale, rather than distributing it directly to customers, creates tensions for the content industries as they no longer control retail. It is all the more uncertain as new entrants can also offer contents as part of various kinds of bundles, pushing their own product or service first, and even selling existing contents at a loss. Amazon did this with books, thereby reducing publishers' already narrow margins. Even though content is clearly a strategic asset for new entrants, it does not provide the bulk of their revenues. For example, only 4.9 billion of Apple's out of global revenues of 57 billion US \$ are derived from content. In 2007 in the music business, Apple derived US \$ 8 billion of its revenues from the sale of iPod, but only US \$ 1.7 billion from the sale of songs. This can be compared with the 2010 annual revenues from the largest music label, Universal Music Group, which were 4.4 billion euros. For most of these players, content is just another important application within a more global strategy. Manufacturers can sell content at a loss to increase the sales of their devices (Amazon with e-books and its Kindle reader). These companies are introducing new forms of bundling that lead to the unbundling of legacy subsidies. For instance, the newspaper industry subsidized quality news with local news, classified ads and advertising. The new players are removing these funding sources.

As a result of disintermediation, direct sales from the producer/ creator/ developer have become possible, as, for example, in the cases of video games and the film industry already mentioned. It opens up a window of opportunity for studios to directly distribute their contents on the market. Bloggers can find various ways to monetize (or not) their contents. However, direct provision, though beneficial to some, may not be the ultimate solution for all. Smaller companies, or companies without strong brand names, are likely to find that their marketing costs are increased.

### Will new sources of revenues compensate for declining revenues?

No wonder, then, that some consider value has not only been shifted but also destroyed for the old media by the capture of consumers and traffic, and can no longer be regained as was once the case. Revenues have been falling or flattening for quite some time in the media and content industries for many reasons, some of which were summarized earlier (changing patterns of consumption, “generational effects”, evolving willingness to pay, increased competition). The decline does not coincide with digitisation and in most cases started earlier. However, digitisation did not help, nor did the economic crisis, especially for the industries relying most on advertising revenues. The global growth forecast by consultancies (see Chapter 3) is modest at best and unevenly distributed between segments and regions. The new revenue streams have not compensated so far for the losses (see Figure 9 for the US<sup>334</sup>).

Besides, even though the digital share of global entertainment is growing steadily, for most content industries it remains modest or low (less than 2% in the EU for e-books even in the fastest growing market the UK). The revenues from new streams of activity such as interactivity of the leading European commercial television groups are thin or inexistent (European Audiovisual Observatory, 2010<sup>335</sup>). The online market is relatively marginal for Pay VOD<sup>336</sup>. Online revenues (VOD online and SVOD) are growing<sup>337</sup> but it includes the fast growing online video games, revenues from VOD and SVOD accounted for less than 1% of the total European audiovisual market (but video games 8%) in 2010.<sup>338</sup>

One exception is the music industry in the US with a digital share of recorded market of 43%<sup>339</sup> - this was only 13% in the EU (IFPI, 2010).<sup>340</sup> Another exception is the video games industry (mobile and online will reach 50% of the global revenues in 2015). From a regional viewpoint it is worth noting that Asia leads in digital sales: South Korea’s share of digital sales reached 85% of total music. Japan is an interesting case: 65% of Japanese mangas on mobile are in digital format. Asia-Pacific has three of the largest world markets for video games out of four in the following order: USA, Japan, China and South Korea. The fastest growing social networks are Chinese: Tencent<sup>341</sup> and Baidu (In-Stat, 2010, b).

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<sup>334</sup> See the data in the report on the quantitative overview, produced by IPTS as part of the project on media and content industries, listed in the “*IPTS MCI reports*” of the bibliography.

<sup>335</sup> For companies like BskyB subscriptions/ distribution fees and PPV are the major contributors but they are not broken down and one can assume that subscriptions are dominant. The breakdown of the turnover offers by the EAO does not allow to distinguish online revenues. TV distribution subscriptions already accounted for 25% of the overall audiovisual market in the EU during 2009 (Sanz, 2012).

<sup>336</sup> The EAO states that it is difficult to assess the development of the VOD market and its impact on the traditional video industry, because the providers hardly supply data and national cinema agencies hardly collect data on the topic (European Audiovisual Observatory, (2011). *Source*: Florence Hartmann, EAO, presentation at the IPTS MCI May 2011 workshop: <http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

<sup>337</sup> Screen Digest, reports a market of \$156 million in the USA and \$38 million in Europe in 2008, quoted by EAO (2011)..

<sup>338</sup> Florence Hartmann, id.

<sup>339</sup> 85% of music sales in South Korea (see Leuridijk, A; de Munck, S; van den Broek, T; van der Plas, A; Manshanden, W; Rietveld, E (2012) Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries: A Quantitative Overview” JRC Technical Report, EUR 25277 EN. Institute for Prospective Technological Studies, Joint Research Centre, European Commission. Available at: <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4999>).

<sup>340</sup> Quoted by Digital Europe, Meeting with Mr Antonio Vitorino, European Commission Copyright Levies Mediator, 16 April 2012.

<sup>341</sup> The Chinese site overtook Facebook reaching 637 million active monthly users as of 2010.

As a channel, online distribution of physical products is not the main distribution channel. Retailers (small and big) remain the main channels, typically for books, on both sides of the Atlantic. Again, the exception is music, especially in the US and the UK where retailers<sup>342</sup> and retail chains are closing. The music industry claimed that over 60% of the decrease of physical sales was not compensated for between 2006 and 2010 (IFPI, quoted by the music report). However “compensation” may not be the relevant economic indicator in a declining market, just as the lower number of passengers for stagecoaches was not the adequate indicator for the growth of the transport market.

Two-sided markets seem to bring more flexibility. One can for instance contrast a one-side market such as the music market and a two-sided market such as the broadcasting market. However, what looks as if it (still) works properly in the case of the broadcasting market does not seem to operate any more in the newspaper market. Previous ways of subsidising edited news (the most expensive to produce) seem to have broken down as customers do not appear to value it in the same way they used to. The Internet revealed that the “analytic” part of news is less attractive than the news industry thought it was for consumers who can now access a huge sample of information. Besides (see Box 3), the network effects brought by two-sided markets are highly beneficial for high quality products with strong brands like the NY Times but not for lower quality products such as many of the US local newspapers. The online availability of a strong brand may be devastating for local online papers.

Two-sided markets allow very aggressive pricing strategies. For instance, games console manufacturers sell their consoles at a negative margin, anticipating the increased sales of games and other services, shifting the value toward the content they produce and not toward the device. This differs again from one-sided markets such as books and music where, as mentioned, manufacturers and distributors (Apple, Amazon) are not betting on increased sales of content.

The other side of the equation is the cost structure. Though the cost structure is obviously changing, the impact of the changes is not clear. Some costs disappear, some costs remain unaffected (creation/ development, editorial process, marketing and sales), while others are shifted and new costs appear. Most of the involved industries will argue that the savings are not big enough to drive prices significantly down, and that the bulk of the remaining costs such as creation/ development, and the editorial process remain important. Indeed in the film sector, production costs are going up. Marketing expenses in a highly competitive environment of diversified sales channels are bound to increase. These industries are prototypes with fixed costs (from modest to very high), using overproduction (see Chapter 3) as a way to deal with uncertainty. The main gains (cost efficiency, flexibility and enhanced quality) come from some elements of the production function (with sector-specific variations) and, above all, from the distribution side, where there have been tremendous decreases in the price of media distribution and information (Graphs 1 and 2).

From an economic viewpoint, the core question is: do these new forms of distribution contribute to increased media production, more diversity and enhanced consumer and producer surplus? Another difficult side of the issue is how to find the proper indicators to answer to these questions. If the answer to the question is negative, then the crucial

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<sup>342</sup> For example, in the UK, in 2009 around 1,000 outlets were closed. See the report on the music industry, produced by IPTS as part of the project on media and content industries, listed in the “IPTS MCI reports” of the bibliography.



question becomes: how can production and consumption be supported in a sustainable way? This raises the issue of public intervention which is also a common feature in most of these industries. Cultural goods have a special value to society and, as such, deserve to be treated differently from other tradable commodities. The production of these merit goods generates further externalities for society as a whole (cultural, societal...) beyond the mere correction of an imperfect market and market failures. Governments often interfere directly (subsidies in the case of cinema in France, or zero VAT on books in the UK, for instance) or indirectly (various tax breaks, reduced postal rates for the distribution of newspaper or books).

Nevertheless, before considering any intervention one should look carefully at how these digital markets are working. In a properly functioning market, the production of such goods should eventually find adequate financial resources. As noted, the debate on the funding of production or on cultural diversity is often confused and confusing, and plagued with entrenched positions. Most often, measures to support the legacy players are implemented through a tax levied (typically hardware-based levies) on some segments of the industry (the growing segment) to fund another one (a declining or more troubled segment), a rather distorting approach with potentially negative effects on new markets. Most of the time, the outputs of such measures are difficult to assess properly: for example, in the case of copyright levies, some questioned their effectiveness to achieve their goal.

Besides, industrial policies meant to prop up legacy players have not had an impressive track record. The fixed price policy for books is allegedly considered as a success for maintaining the network of retailers in the countries where it was implemented. It may be linked to the fact that, as noted by F. Benhamou, the major EU book markets like France or Germany and Spain are “*markets of bookshops*”.<sup>343</sup> Though such structural factors cannot be overlooked, it does not follow that policies designed for the physical world will be effective in the digital world, as has apparently been assumed when the same policies for e-books were implemented. Distribution in the digital world is very different from physical distribution; these supply-side policies may reach their limits. Therefore, not surprisingly competition authorities are not willing to give any protection against (new) competitors and aim instead to enable a diversified offer (prices and features). In an emerging market, it would be unwise to freeze the market. When setting policies outside market mechanisms, policy makers should clearly identify market deficiencies first of all, and then select adequate remedies on a case-by-case basis.

### **Global/ multi-domestic/ local**

The trend toward globalisation has been going on for quite some time and not only in digital markets. In some world markets, like the audiovisual (film, TV) and music industry, US companies dominate. In the publishing industries, however, EU legacy players have achieved a stronger position than US companies with a small number of very large world leaders. In the media and entertainment markets, the book market is the only one where EU companies (Bertelsman, Hachette, Pearson, Wolters Kluwer) lead. In the videogames industry, though they are absent from the console hardware segment, European companies supply a large share of the world's middleware needs. These EU middleware providers even dominate the important South Korean market (EGDF, 2011). Europe hosts many games developer studios, which often produce major market successes. All in all, however,

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<sup>343</sup> “*La France est un marché de librairies*”, presentation at the ‘Jornadas del Libro Digital’, Sevilla 17 May, “*L’économie du livre confrontée au numérique: le cas de la France*”?

the trade balance for the European MCI was negative in 2007, with a total trade deficit of 1 291 million euros.

Various studies have underlined the fact that there is low demand in national markets in the EU for TV or video originating from Member States (EC, Enders, Plum, 2012). The proportion of European TV fiction broadcasted by European TV channels was nearly 40% and for films the single European market seems to work best for European subsidiaries of US firms. There is no single market as such because either US or national films having the largest share of domestic markets: *“the common European film market remains Hollywood-oriented”*.<sup>344</sup> Most of the national films and TV series do not cross-borders. By the same token, local music has an important share in each market, but does not cross borders either. Therefore, firms develop mixed strategies to suit domestic markets based on their local knowledge: for example, they use territorial rights, reformat content according to local conditions,<sup>345</sup> and set up local storefronts. Easing out the clearance of territorial rights on a EU basis is a welcome move, as some of the studies already quoted have shown, however multi-territory licensing for the online distribution of audiovisual works in the European Union may not be a panacea for the lack of demand for non-national works. Firms will licence first and foremost attractive international contents (Plum, 2012), mostly of US origin. Hence, there is a paradox: the less “attractive” national content is likely to cross borders easily, and is more widely distributed – however, it is less often watched, e.g. on TV broadcasted by public channels.

The cost savings allowed by digitisation for distribution seems also to favour US companies on the content side, allowing Hollywood, for instance, to strengthen its economies of scale and blockbuster strategies. The same holds for the distribution side: digitization allows companies like Amazon to dominate in some segments, and raises concerns that this domination could be extended to other segments. This could, however, be addressed by competition law and not necessarily ex ante. For instance, the book industry<sup>346</sup> fears that the existing EU policies meant to foster online distribution may even strengthen this domination as much as in the case of US domination of audiovisual content. Other harmonization measures such as reduced VAT for digital good seems to be lacking or difficult to achieve at the EU level. This has triggered tax shopping by some US companies, wishing to establish themselves in Europe, for the country offering the most attractive tax regimes. As a consequence *“many leading retailers of digital music, video and books are established in Luxemburg”* (Enders, 2012). The European Commission has flagged this lack of fiscal harmonisation as a barrier to intra-EU trade<sup>347</sup> (EC, 2011).

### **The future of the media**

In a prospective research study carried out in July and August 2010 for a French media trade association,<sup>348</sup> A. Busson (2010) suggested two contrasting scenarios for the future. Both scenarios foresee a reorganisation of the sector. In the first one, *“Barbarian Invasions”*, digital natives impose their style of consumption, a major change in content creation takes

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<sup>344</sup> See the report on the film sector, produced by IPTS as part of the project on media and content industries, listed in the “*IPTS MCI reports*” of the bibliography.

<sup>345</sup> See the report on the broadcasting industry, produced by IPTS as part of the project on media and content industries, listed in the “*IPTS MCI reports*” of the bibliography.

<sup>346</sup> Interviews.

<sup>347</sup> “Towards a simpler, more robust and efficient VAT system tailored to the single market”, COM (2011) 851 final.

<sup>348</sup> Funded by UDECAM: Union of French Media Advertising Agencies.

place (with, for instance, the decline of copyright), and new business models emerge under the leadership of new entrants. The second scenario, *"The Empire Strikes back"*, envisages a positive revamping of the media legacy players, with minor changes in the production of contents and with the Internet at the heart of the newspaper business. The future will lie somewhere in the middle, combining different aspects and features of the two. Probably, the two worlds will not merge (legacy players and new entrants), as real synergies will still be lacking. Instead, they will just converge to a certain extent, keeping core businesses and the subsequent way to manage assets separated.

There are limits to the overlapping between the different activities especially in terms of integration. We noted on several occasions the zigs and zags of telecom operators in the media sector. The demerging of the pioneer of convergence, AOL-Time Warner, tells a similar story of a lack of synergies. Stable relationships within a given "world" or ecosystem are vital for the system to function well. There is a need to create a network of cooperation between the different players, as mandating one's own ecosystem regardless of other forms of cooperation (Apple) may not be sustainable in the long run. New forms of co-opetition are likely to emerge between vertical ecosystems. This provides some space for policies to enable both cooperation and competition.

As this industry is being challenged to transform itself, so to conclude with another quotation from the Chinese philosopher Zhuangzi:<sup>349</sup> *"en accord avec le(s) moments(s) tous (toujours) se transformer"*.<sup>350</sup> Adding another closing quotation from Bob Dylan's "All along the Watchtower": *"There must be some way out of here."*<sup>351</sup>

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<sup>349</sup> 4th century BCE, wrote the work bearing his name.

<sup>350</sup> Quoted by F. Jullien (*Du temps*, 2001: 245).

<sup>351</sup> "There must be some way out of here" said the joker to the thief, "There's too much confusion", I can't get no relief". The song initially appeared on Bob Dylan's 1967 album [John Wesley Harding](#). The song was covered by numerous artists, amongst which the [Jimi Hendrix](#) interpretation is the most famous (*Electric Ladyland*, 1968).



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### **3. EC Regulation of Contents**

*Directive 89/552/EC "Television without Frontiers" of 3rd October 1989 and Directive 97/36/EC of June 30, 1997 amending the 1989 Directive*

The directive was designed to take into account new developments such as cable and Pay TV, program sponsorship and teleshopping. The directive aimed at removing barriers to the free movement of television programming across national European boundaries (art.4&5), promoting European content and Europe's diversity of cultures. The directive draws a distinction between broadcast television and other types of audio-visual: content provided via the Internet and digital TV.

Amended by the *directive 2010/13/EU* of March 10, 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in member states concerning the provision of audiovisual media services (*Audiovisual Media Services Directive*)

The directive applies to audiovisual media services, either scheduled or on-demand services, provided that they are "mass media" meaning that they must be intended for reception by, and could have a clear impact on, a significant proportion of the general public.

- "*On-demand services*" (i.e. non-linear audiovisual media services) are defined as: "*audiovisual media services provided by a media service provider for the viewing of programmes at the time chosen by the user and at his/her individual request on the basis of a catalogue of programmes selected by the media service provider*". A recital specifies that these are television-like services competing for the same audience as television broadcasts.

-*Scheduled services* ("television broadcasting" or "television broadcast") are defined as: "*audiovisual services provided by a media service provider for simultaneous viewing of programmes based on a programme schedule*". A recital specifies that these services include digital television, live streaming, webcasting, and near-video-on-demand.

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The communication reminded and summarised the definitions of information society services as opposed to broadcasting services: "*Services that are transmitted point to point, such as video-on-demand or the provision of commercial communications by electronic mail, are also Information Society services...Television broadcasting within the meaning of Directive 89/552/EEC and radio broadcasting are not Information Society services because they are not provided at individual request.* »

*Directive 93/83* of 27th September 1993 Council Directive 93/83/EEC of 27 September 1993 on the *coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission*. "SatCab". OJ L 248, 6.10.1993, p. 15.

Has imposed a contractual relationship between broadcasters and collecting societies. In practice, introduced one-stop shopping: the satellite industry also negotiates on behalf of the cable industry.

*Directive 98/34/EC* of June 22, 1998 laying down a procedure for the provision of information in the field of technical standards and regulations, and of rules on information society services (as amended by Directive 98/48/EC of July 20, 1998)

The directive has introduced the concept of "information society services" into Community law.

*Directive 2000/31/EC* of June 8, 2000 "*on certain legal aspects of information society services, in particular electronic commerce in the Internal Market*" (Directive on electronic commerce).

Ensures the application of free movement of information society services within the Internal Market. Establishes an exemption from liability for intermediaries in their activity of "mere conduit" of information from third parties.

*Directive 2001/29/EC* "*on the harmonisation of certain aspects of copyright and related rights in the Information Society*". (April 9, 2001) OJ L 167, 22.6.2001, p.10. EC Working Paper of February 14, 2002 on Electronic Copyright Management Systems (Digital Rights Management (DRM)).

Establishes a compulsory exception for technical copies and defines the notion of communication to the public.

*Directive 2001/84/EC* of the European Parliament and of the Council of 27 September 2001 *on the resale right for the benefit of the author of an original work of art*. OJ L 272, 13.10.2001, p. 32. ("Resale Right Directive")

*Directive 2006/115/EC* of the European Parliament and of the Council of 12 December 2006 *on rental right and lending right and on certain rights related to copyright in the field of intellectual property*. OJ L 376, 27.12.2006, p. 28. ("Rental and Lending Directive").

#### *APIs/ EPGs*

*Directive 2002/19/EC* of March 7, 2002 on access to, and interconnection of, electronic communications networks and associated facilities (AID). Regulation of access to other associated facilities such as Application Program Interfaces (APIs) and Electronic Program Guides (EPGs).

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## **6. Competition Law Merger cases**

The EC has been very active taking a look at various media merger cases. Some recent examples:

- 2011: Joint venture between the US audiovisual content producer HBO and the Dutch Media and communications services provider Ziggo. The joint venture HBO Nederland would develop and operate six new HBO-branded pay-TV channels to be broadcast in the Netherlands.
- 2010: Acquisition of British and Irish pay TV operator BSkyB by News Corporation, a global media and communications company headquartered in the US. The Commission concluded that the transaction would not significantly impede effective competition in the EEA or any substantial part of it.
- 2010: Joint venture between the commercial broadcasters ProSiebenSat.1 (Germany) and RTL to create an internet platform on which consumers can re-watch television programmes during seven days after the programme has been broadcast on free-to-air TV. After a preliminary investigation, the Commission found that the proposed transaction would affect competition in national online TV and advertising markets in Austria and Germany. These markets were to be examined by the Austrian and German competition authorities under national law
- 2009: SevenOne Media/G + J Electronic Media Service/Tomorrow Focus Portal/IP Deutschland/JV). G + J Electronic Media Services GmbH: provision and marketing of Internet advertising space, market research IP Deutschland GmbH: sale of advertising time for television networks, customer campaign consultancy, media planning, campaign-accompanying research, SevenOne Media GmbH: marketing for audio-visual media. Tomorrow Focus Portal GmbH: online marketing The planned Joint Venture was about the development and marketing of new products in the area of online advertising.
- 2009: Acquisition by Liberty Global Europe N.V. ('LGE', Netherlands) of Unitymedia GmbH (Germany). LGE is an operator of cable networks in 9 EU member states also active, through a subsidiary, in TV content production. Unitymedia, a regional broadband cable network operator in the German federal states of North Rhine-Westphalia (NRW) and Hesse, also active, through a subsidiary, in the provision of pay TV services.

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## **Annex: IPTS Workshops**

**First IPTS MCI Workshop (2011).** Workshop presentations available at:  
<http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

### **Day 1 -30 May**

**Introduction:** [Setting the scene](#) – J-P Simon, IPTS (Seville)

**Trends:** [A prospective exercise for trends: The French Media up to 2020](#) – A Busson, HEC Business School (Paris)

#### **1. Two sided markets: two views (IPTS chair: Jean-Paul Simon)**

- [The theory](#) – B Jullien, IDEI (Toulouse)
- [Multisided/ multiplatform markets](#) – X Wauthy, University St Louis (Brussels)

#### **2. Pricing or Consumer Surplus (IPTS chair: Geomina Turlea)**

- [The theory: pricing of digital products, the case of music](#) – J Waldfogel, Carlson School of Management (Minneapolis)
- [Case study: the case of tv commercialization](#) – E Sanz, IPTS (Seville)
- [The view from the industry](#) – D Wheeldon, Director of Policy and Public Affairs at BSkyB and Vice-President, Association of Commercial Television in Europe (ACT), (London)

#### **3. Films, TV, Video: trends (chair: Adam Watson Brown, INFSO)**

- [The US view](#) – D Waterman, Indiana University, visiting fellow Oxford University
- [The EU view](#) – F Hartmann, European Audiovisual Observatory (Strasbourg)
- [The view from the industry](#) – C Hutchins, Director Public Policy, Liberty Global Europe (Brussels)

#### **4. Modelling MCI (IPTS chair: Marc Bogdanowicz)**

- [Weighing the media and content sector in the EU](#) – I Kholilul Rohman, Chalmers University of Technology (Gothenburg)
- [Media and Content industry from driver to component of the ICT industry](#) – G Turlea, IPTS (Seville)

### **Day 2 - 31 May**

#### **Catching up with the digital impact 1 (IPTS chair: Jean-Paul Simon)**

- [The Agcom white paper on digital content](#) – A Preta, ITMedia Consulting (Roma)
- [Mobile Media and Content: Successes, failures, lessons learnt and challenges](#) – C Feijoo, Universidad Politecnica de Madrid

#### **5. The industrial economics of media and content (IPTS chair: Esteve Sanz)**

- [Describing media industries](#) – J Waldfogel, Carlson School of Management (Minneapolis)
- [Production and business models in the music industry](#) – Allègre Hadida, Judge Business School (Cambridge)
- [The view from the industry](#) – S Drath, Alta Consult (London)

#### **6 Catching up with the digital impact 2 (IPTS chair: Marc Bogdanowicz)**

- [Effects of Technology on U.S. movie production and distribution](#) – D Waterman, Indiana University, visiting fellow Oxford University
- [Case study: The film industry](#) – S Lindmark, senior researcher SMIT (Brussels)

#### **7. Moving toward e-services (IPTS chair: Giuditta De Prato)**

- [The theory](#) – P J Benghozi, Research Director at the Centre National de la Recherche Scientifique (CNRS) and Professor at Ecole Polytechnique, director of the newly created Groupement d'Intérêt Scientifique «Culture-Médias&Numérique» (Paris)
- [Case study: from books to e-books](#) – F Benhamou, Paris 13 University and CRG, Ecole Polytechnique (Paris)
- [The view from the industry](#) – E Turrin, Federation of European Publishers (Brussels)

#### **8. Catching up with the digital impact 2 (IPTS chair: Jean-Paul Simon)**

- Introductory remarks – A Watson Brown, European Commission DG INFSO (Brussels)
- [Case study: The newspaper industry](#) – A Leurdijk, senior researcher, TNO (Delft)

#### **Wrap up: Assessing the digital economy (IPTS chair: Marc Bogdanowicz)**

- [Some views from the Commission on the EU audiovisual policies](#) – A Watson Brown, INFSO (Brussels)

**Second IPTS MCI Workshop:** Workshop presentations available at:

<http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>

**Day 1 -27 October**

Setting the Scene: Jean-Paul Simon, JRC-IPTS

**What can we learn from the statistical report?**

*Chair: Bertin Martens, JRC-IPTS*

- [The Statistical Report](#) - Silvain de Munck, senior researcher, TNO, Delft
- Discussants:
  - Idate (Gilles Fontaine)
  - [Statistical, ecosystem and competitiveness analysis for the Media and Content industries](#) - KEA (Maria Iglesias)

**Case study 1: The music industry**

*Chair: Giuditta de Prato, JRC-IPTS*

- [The music industry](#) - Andra Leurdijk, senior researcher, TNO, Delft
- [The view from the industry](#) - Stephen Drath, Alta consult
- Academic viewpoint - Bertin Martens, JRC-IPTS

**Case study 2: The film industry**

*Chair: Esteve Sanz, JRC-IPTS*

- [The film industry](#) - Sven Lindmark, senior researcher SMIT, Brussels
- The view from the industry - Michael Gubbins, editor, journalist and consultant
- Academic viewpoint - Manel Jimenez, professor at the Communication School of the Pompeu Fabra University

**Case study 3: The newspaper industry**

*Chair: Giuditta de Prato, JRC-IPTS*

- [The newspaper industry](#) - Andra Leurdijk, senior researcher, TNO, Delft
- The view from the industry - Jean-Paul Simon, JRC-IPTS
- [Academic viewpoint](#) - Maria Lamuedra, Professor of journalism and communications, Sevilla university

**Day 2 - 28 October**

**Case study 4: The book industry**

*Chair: Esteve Sanz, JRC-IPTS*

- [The book industry](#) - Giuditta de Prato, IPTS
- [Academic viewpoint](#) - Claudio Feijoo, CedInt, Universidad Politecnica de Madrid

**Case study 5: The broadcasting industry**

*Chair: Jean-Paul Simon, JRC-IPTS*

- [The broadcasting industry](#) - Esteve Sanz, JRC-IPTS
- [The view from the industry](#) - ACT Ross Biggam, director
- Academic viewpoint - Richard Collins, Media studies, former professor at the Open University, London

**Sector dynamics/ Measuring the digital impact, chair Marc Bogdanowicz**

- [Sector dynamics: "shake, rattle and roll"](#) - Jean-Paul Simon, JRC-IPTS
- [Measuring the digital impact](#) - Steve Wildman, Michigan State University

## **Final international conference - "The Dynamics of Media and Content Industries"<sup>352</sup>**

Brussels, 25-26 October 2012

### **Day 1: 25 October**

**Welcome word from the organisers - Marc Bogdanowicz**, Joint Research Centre-IPTS, European Commission.

**Key Note speech - Vladimir Šucha**, Deputy Director General Joint Research Centre, European Commission

#### **Contrasting views from EU and US: Media Futures**

- Professor **Eli Noam**, Director Columbia Institute for Tele-Information, Columbia University, New York, USA
- Professor **Ed Steinmüller**, Science and Technology Policy Research, SPRU, UK

#### **The rocky road to digital media worlds: Upheaval in the media**

- Setting the scene: **Andra Leurdijk**, Netherlands Organisation for Applied Scientific Research, TNO
- Professor **Deniz Bayrakdar**, Kadir Has University, Turkey
- **Gilles Fontaine**, Deputy Director, Idate, France
- **David Waterman**, Dept. of Telecommunications, Indiana University, USA

#### **Enabling the new media world: The changing nature of competition in the ICT ecosystem and the deployment of new networks**

- Setting the scene: **Jean-Paul Simon**, JPS Public Policy Consulting
- **Sergio Gil Trullen**, Director of Content, Content Corporate Unit, Telefónica Digital
- **Andrew Stirling**, Senior EU policy advisor, Microsoft
- **Jacques Bughin**, Director, McKinsey Belgium

#### **The funding of creation**

- Setting the scene: **Sophie de Vinck**, Studies on Media, Information and Telecommunication, IBBT-SMIT/VUB
- **Ted Shapiro**, Vice President and General Counsel, Motion Picture Association of America (MPAA)
- **Michael Gubbins**, Chairman of Film agency for Wales

### **Day 2: 26 October**

**Welcome word - Marc Bogdanowicz**, Joint Research Centre-IPTS, European Commission

#### **Communication from the Commission (...): Promoting cultural and creative sectors for growth and jobs in the EU**

- **General presentation of the Communication - Xavier Troussard**, Acting Director, Culture and Media, Directorate-General for Education and Culture, European Commission
- **Industrial and entrepreneurial aspects of the Communication - Reinhard Büscher**, Head of Unit, Clusters and Support for SMEs, Directorate-General for Enterprise and Industry, European Commission

#### **Changing cost structures, value creation**

- **Setting the scene: Giuditta de Prato**, Joint Research Centre-IPTS, European Commission

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<sup>352</sup> <http://is.jrc.ec.europa.eu/pages/ISG/MCI.html>



- **Jesus Badenes**, CEO, Grupo Planeta, Spain
- **Richard Collins**, Visiting Professor in the Centre for Law, Justice and Journalism at City University London, UK

### **Looking for business models**

- Setting the scene: Professor [Claudio Feijoo](#), Universidad Politécnica de Madrid, Spain
- **Malte Behrmann**, General Secretary, European Games Developer Federation
- **Arnaud Decker**, Secrétaire général Pôle Radio – TV, Lagardère Active
- **Anna Vondracek**, KEA European Affairs, Senior Project Manager Europe, Belgium

### **Asset management in the digital age: beyond copyright**

- Setting the scene: **Andra Leurdijk**, Netherlands Organisation for Applied Scientific Research, TNO
- **Enrico Turrin**, Economist at the Federation of European Publishers
- **Paolo Lanteri**, Assistant Legal Officer, Copyright Law Division, World Intellectual Property Organization, WIPO
- **Luc Delany**, European Policy manager, Facebook

**Key note speech – Roberto Viola**, Deputy Director General, Directorate-General for Communication Networks, Content and Technology, European Commission

### **Contrasting views from EU and US**

- Professor **Augusto Preta**, Director IT Media, Roma, Italy
- Professor **David Waterman**, Dept. of Telecommunications, Indiana University, USA

### **The scope of EU Policies: Enabling creation and distribution**

- **Xavier Troussard**, Acting Director, Culture and Media, Directorate-General for Education and Culture, European Commission
- **Carsten Schierenbeck**, Policy Officer, Clusters and Support for SMEs, Directorate-General for Enterprise and Industry, European Commission
- **Maria Martin-Prat**, Head of Unit, Copyright, Directorate-General for Internal Market and Services, European Commission
- **Harald Trettenbrein**, Deputy Head of Unit, Converging Media and Content, Directorate-General for Communication Networks, Content and Technology, European Commission



European Commission

**EUR 25277 – Joint Research Centre – Institute for Prospective Technological Studies**

**Title: The Dynamics of the Media and Content Industries: A Synthesis**

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#### Abstract

Chapters 1 and 2 of this report deal with the evolution of the media and contents sector towards a digital world, documenting the evolution of the strategy of the legacy players from a defensive behaviour to a more proactive one, striking deals with new entrants, creating new products online. They also explore the disruptions and underline the positive changes that took place recently and the weaving of new interactions between legacy players and new entrants. Chapter 3 focuses on core economic issues such as the costs structure and the mechanisms of value creation. Chapter 4 describes the business models, highlighting some of the innovative ones adapted to a digital world. Chapter 5 concentrates on other trends such as patterns of consumption and production and follows the evolution of the labour force. Chapter 6 deals with infrastructure as the enabler of the transformation has undergone and takes a closer look at the recent changes that have affected the telecom-IT ecosystem in order to identify the trends that are most likely to impact the content sector in the future. Chapters 7 and 8 introduce regulatory and policy issues. Chapter 7 relates to the funding of creation and the protection of creation (copyright as asset management) and innovation. Chapter 8 concentrates on the protection of consumers and competition.

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