

The Olympic Movement and Information Society: New Internet Challenges and Opportunities

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This document corresponds to a paper given at the International Symposium on Television in the Olympic Games held in Lausanne in 1999 and published as part of the symposium conference proceedings

The basic research for this paper was done with assistance from the DGICYT (Spanish Ministry of Education and Culture) and the International Chair in Olympism. IOC -UAB. I would like to thank Berta Cerezuela for her documentary support and Joan López Graupera (LOTUS, Spain) for his technological advice

Ref. WP101

To refer to this document you can use the following reference:

Moragas, Miquel de (1999): *Olympic Movement and Information Society: new Internet challenges and opportunities* [online article]. Barcelona: Centre d'Estudis Olímpics UAB. [Consulted: dd/mm/yy]
<http://olympicstudies.uab.es/pdf/wp101_eng.pdf>

Original reference: Moragas i Spà, Miquel de (1999): "The Olympic Movement and the Information Society. New Challenges and Opportunities", in *Television in the Olympic Games: the new era: International symposium, Lausanne 1998*. Lausanne: International Olympic Committee, pp. 161-201.

[Date of publication: 1999]

1. The Internet. An appraisal of the current situation and future prospects

1.1. Analysis of the difficulties posed by Internet implantation on a world-wide scale

An analysis of Internet implantation on a world-wide scale - an indispensable approach when referring to phenomena such as the Olympic Games which are defined by their "universal" scope - must deal with numerous statistical and theoretical difficulties:

- First of all, it must deal with the huge statistical differences and shortcomings that exist between different countries and, subsequently, the risk of extrapolating data and experiences from the world's richest and most technologically developed countries to other countries with limited technological development, as happened in the past with mass communication research for television.
- Secondly, it must deal with the diversity and heterogeneity of the phenomena involved in the development of the Internet, from technologies (information technologies and telecommunications) to the cultural and social conditions involved in the production and use of information.
- Thirdly, the difficulties involved in identifying and isolating the elements of the analysis should be mentioned, even the most quantifiable ones. These are mainly: the number and percentage of users connected to the Internet by country, the specific uses of the Internet by its users, the total number of Web site and Web page hosts (hard to find because of the branching structure of the Web and the complexity of its domains).
- Fourthly, and immersed in difficulties that have yet to be overcome, we should mention the constant, extremely fast changes in statistical information, which are continually rendered obsolete due to the phenomenon's rapid growth.

However, these difficulties should not stop us from making an initial qualitative appraisal of the phenomenon, especially if what we are proposing is the design of future scenarios and strategies to promote the social uses of the Internet and an estimate of its likely impact on the Olympic Movement and contemporary sport.

1.2. The first dilemma: Mass media or individual, selective communication

The first dilemma posed by the analysis of Internet implantation is this: are we dealing with new mass media or rather an individual, selective medium?

The solution to this dilemma can be nothing but contradictory: both at the same time, depending on social contexts and different historic stages. What is selective or minority today may be massive in the very same place tomorrow. What is already massive today for some social groups may also be massive for other groups tomorrow, which are still unaware of or take a sceptical approach to this new medium. Furthermore, in some countries (like South Africa, Taiwan or Brazil) the Internet is, at one and the same time, an

instrument of enormous importance for certain social sectors (universities, the armed forces, the administration, the tourist industry, etc.) and a totally inaccessible medium for the majority of social sectors.

1.3. The importance (and inequalities) of Internet access levels

In the United States for example, the country with the highest rate of Internet penetration, access to the Internet already reaches between 25% and 30% of the adult population according to various sources. It therefore constitutes an important market for many commercial initiatives and communications applications.

In Europe, Internet penetration is (still) much lower than in the United States, though it is now very important, especially if compared with world's least technologically developed countries. Penetration reaches 20% in Finland, between 7% and 9% in Germany and Great Britain, and is somewhat lower in countries like France (6-7%) and Spain (5.4%).

The Internet penetration rate in societies as technologically developed as Japan is similar to the European average (6%), experiencing annual growth rates of up to 80%. In Japan for example, the estimated number of Internet users in 1997 was 4 million, whereas in 1998 the figure had already gone up to 12 million users. (See Table 1)

Therefore, in some countries, although it is not yet possible to speak of mass audiences in the same sense as when referring to television, it is indeed possible to speak of "large" audiences, with communications functions and, above all, advertising functions that are inherent to mass media.

In other regions of the world (Africa, Latin America, Asia), the Internet penetration rates need to be estimated in a very different way. The per capita penetration rates in these countries are effectively very low, but that in no way means that social penetration of the Internet is not significant in other areas of information management (universities, agencies, institutions).

For example, how should we interpret the data about the existence of 5,000 Internet users in Kenya, 4,500 users in Ghana, 2,500 in Senegal and 1,000 in Nigeria? Is there any sense in making linear comparisons between these data and Internet's implantation in California?

According to several different sources, the number of Internet users in Latin America was 800,000 in 1995. This figure had multiplied until reaching 7,000,000 in 1997 (8,500,000 if we include Brazil), and it is estimated that the figure will reach 34,000,000 by the year 2000, meaning that between 1995 and 1997 there was an annual growth of 800%, almost twice the Internet's general global growth¹.

¹ Juan Carlos Pérez, "Latin Americans flocking to the Internet", *Internet News Story*, 1998, Computerworld, Inc.

Limitations and inequalities do not stem from the Internet, but from the today's world's major technological and economic inequalities. Africa, for example, with a population that accounts for approximately 13% of the world population, only has 0.1% of the world's computers according to ITU sources, with an approximate total of 1.5 million PCs (50% of which are in South Africa). Furthermore, it only has 1.7 phone lines per 100 inhabitants, whereas the rate in Europe is around 32%.

The statistical data available are therefore more than enough to highlight the nature and scope of Internet implantation inequalities. A few countries in the world (the United States, Canada, Japan and Western Europe) account for 90% the Internet's world-wide use. (See Tables 1 and 2).

Inequalities in information content and production

The inequalities do not solely stem from the equipment and Internet access opportunities. Inequalities also stem from the information, content availability and languages used on the Web.

In 1997 for example, the United States (70%) and Europe (23%) had almost 95% of the global total of host computers connected to the Internet. The number of domains (Web site and Web page identifiers) existing in countries like the United States (1,076,583), Japan (1,168,956) and Western Europe (See Table 2) is astronomic when compared to the number of domains existing in countries with huge populations and limited economic and technological development like China (16,322) or India (7,175). These figures are even more diverse if we bear in mind that the generic domains shown in Table 2 mostly belong to the same developed countries.

There isn't any data available about the percentage of written information in English in comparison to the whole on the Internet. We could estimate, however, that the percentage at the moment must be around 60% to 80% of the Web's content.

Information gathered by Euro-Marketing (See Table 3) shows that English speakers, who represent 8.3% of the world population, account for 58% of Internet users. The rest of the world population, 91.7%, account for only 42%.

1.4. A lot of surfers though still very few people

According to the sources², the number of e-mail boxes in the world in 1997 was 146,700,000. In March 1998, the number of e-mail boxes was put at 205,100,000, with a growth rate of around 40%.

These figures confirm a very important piece of information: there are a lot of Internet users from the point of view of market and business expectations, though there are very few from the point of view of mass access to these technologies by the world's population.

² Data supplied by EMMS, Quarterly Emailbox Census, 1998.

Such a rapid growth in the number of Internet users in developed countries and its subsequent commercial and advertising impact has aroused the logical interest of dozens of market research companies. These companies are fighting to gain a position in the Internet similar to the one that the audience certification authority Nielsen enjoys for television³.

Some Internet suppliers, taking advantage of this medium's interactive facilities, have created research programmes about the evolution of Internet use. One of these surveys, probably one of the most important ones in the world about Internet users, is the one being carried out by Georgia Tech Research Corporation, University of Georgia, Atlanta. This survey, in its seventh edition in May 1998, analysed 87,000 replies gathered from 19,970 users. Most of the replies came from users in the United States (84.19%), Europe (6.67%) and Canada (4.63%), which does not allow a direct extrapolation of the data to world-wide use of the Internet to be made, though it does throw some light onto the evolution that the most technologically developed countries are experiencing.

Of the many noteworthy data gathered from these analyses, we consider it worthwhile pointing out those referring to the situation of balance between professional and domestic use of the Internet, because this distinction marks the dual professional and recreational function of this new medium.

In Spain for example, less than 50% of the users (46%) uses the Internet from home (See Table 4) and only some of them have reduced the amount of television viewing time as a result of the increased amount of time they are connected to the Internet (See Table 5).

1.5. Very rapid growth

All these phenomena are now happening extremely fast. It could be said that all societies throughout history have been "information societies". We could also assert that "information/communication" has always been the core of those societies' organisation. However, the changes in this important sector have never occurred in any period or society at such a fast rate as the one we have been experiencing over the last few decades. In a recent analysis by Mac Luhan (from the Gutenberg Galaxy to the Marconi Galaxy), the changes in the information society – or in the "Informational Society" as preferred by Manuel Castells – are taking place faster than ever before.

Some analysts⁴ have stated that between 1995 and 1998, the number of Web sites that can be accessed on the Internet has doubled every 53 days and that the number of people using the Internet doubles every year. These are approximate figures, but they serve to demonstrate perfectly well the degree of

³ Concerning the complexity of this type of study, see: Thomas P. Novak and Donna L. Hoffman (Project 2000), *New Metrics for New Media: Toward the Development of Web Measurement Standards*, (www2000.ogsm.vanderbilt.edu), 1996, Vanderbilt University. In September of the same year the first ever "Audience Measurement Summit" was organised by the Internet Advertising Bureau (IAB) in order to draft a final document about audience measurement on the Internet.

⁴ Alexander Ntoko, *The Internet: Past, Present and Future Trends*, International Telecommunication Union, ITU, 1998.

acceleration that the Internet has experienced so far and will experience over the coming years.

1.6. New, different informational functions on the Internet

Having passed the first threshold concerning the use of these technologies⁵, with Internet use approaching 10% of the population in most developed countries, the motors of their development are no longer the following topics:

- Military
- Education and science

They have been replaced by five other major information sectors⁶:

- Commercial exchange (finance, shopping and advertising)
- Daily management of personal information (e-mail, agenda and contacts)
- Business information management (Intranet/Internet)
- Institutional promotion (projects, ideological groups, governments, NGOs, etc.)
- "Journalistic" information
- Entertainment (games, sex, travel, chats, fiction, news, sport, etc.)

According to various research companies, advertising investment in the Internet in 1997 was between \$130 million and \$301 million⁷. Some estimates (Jupiter Comms) assert that this investment will rise to \$7,000 million by the year 2002.

The coming years will be an explosive time for businesses on the Internet. According to Forrester Research, this increase may reach enormous proportions, as impressive growth of businesses on the Internet is expected, going up from \$1,200 million in 1998 to a forecast \$64,400 million in the year 2001. According to a survey done by British Telecom⁸, 40% of shopping and financial transaction will be done via the Internet within the next five years

The individual and institutional uses of information are already multiplying as users, many of whom have experience of the Internet through their work, understand the use of on-line information and the need for a gradual replacement of the old and more and more costly forms of information and information management (mail, travel, locating people and institutions, weather, training, ticket reservations, shopping, etc.) by these new forms of communication.

⁵ For an interesting and detailed history of the Internet, see: Barry M. Leiner et al., *A Brief History of the Internet*, Internet Society (ISOC), (<http://www.isoc.org/isoc>).

⁶ For example, the Web site Quokka created for the International Olympic Committee includes the following representative questionnaire:
- "When surfing the Web, what do you look for in an Olympics/Sports site?: News, Profiles, Facts, History, Games, Photos, Statistics
- "For which activities do you primarily use the Internet?: Entertainment, Research, Shopping/Product information, Work/Business, Communication with others, Chatrooms, Education.

⁷ Laurenz Zuckerman, "Who Uses The Web And How?", *Digital Commerce*, 21st April, 1997.

⁸ BBC Web site (<http://www.bbc.co.uk/>), 8th September, 1998.

Business administration can no longer do without the large Intranet/Internet information packages. This is now a major field of action for software multinationals.

Institutional promotion on the Internet is going through its initial stages in which thousands of institutions, the most advanced and sensitive to this area, have already created their own Web sites. However, experience shows that most of these institutions (cultural foundations, governments, churches, city councils, universities, museum, etc.) have restricted themselves to offering promotional information and messages about their own institutions without changing their communications practices or strategies, and even less so their objectives or organisational forms. Things have to change radically in the future. For example, the "Dearing" report about the future of universities in the United Kingdom⁹ recommends not only a radical change in the current forms of knowledge production and dissemination, but also the application of new information technologies to new forms of organisation and interactivity between students and lecturers¹⁰.

Finally, there are two information areas that are rapidly growing on the Internet which display numerous similarities to the traditional mass media. These areas are "journalistic information" and "entertainment".

These areas have developed very quickly on the Internet due to the involvement of big media communications industries, who have taken advantage of its exceptional cultural and informational production capabilities. The first of such experiences was for newspapers, which initially restricted themselves to offering their dailies on line. Then the news agencies moved in, understanding that the Internet represented the end of the separation of traditional functions between mass media and information agencies. Soon after, in 1996-1997, radio station began to offer information about their programming and live programmes via the Internet as a result of the advent of the first audio reproduction software.

1997-1998 were the years when the presence of major international broadcasters on the Internet took off. But this presence is worthy of a special section: it is the beginning of the Webcasting era.

The initial stages of the Webcasting era

As from 1997, with the popularisation of video broadcasting software on the Internet with programmes such as RealPlayer (stream video) and the spread of new, more powerful modems (28.8Kbps and 56.6Kbps), the Webcasting era began, with more and more active involvement by the broadcasters on the Internet. At the end of 1998, we can assert that we are in the initial stages of the Webcasting era, though we already have enough experience to appreciate the possibilities of its future development¹¹.

From the very beginning, it has been clear to see that Webcasting does not consist and will not consist simply of a television broadcast via the Internet. Instead, it will involve the creation of new media, or rather

⁹ Ron Dearing, *Higher Education in the Learning Society*, (<http://www.leeds.ac.uk/educol/ncihe/>).

¹⁰ Bing J. Sheu, "Higher Education for the Information Age", en *Circuit Devices*, May 1998.

¹¹ In the United States, a company (<http://www.broadcast.com/>) has been created to "put" radio and television stations on the Internet. This company claims to broadcast over 300 radio stations and the first groups of television channels. For Europe, see EUROTV (<http://www.eurotv.com/>).

new multimedia that can include video, stills, data, text, hypertext, dialogue boxes, statistics, interactive information selection, etc.

Some major sites of the world's largest broadcasters – CBS (<http://www.cbs.com/>), CNN (<http://www.cnn.com>), NBC (<http://www.nbc.com/>), RAI (<http://www.rai.it>), BBC (<http://www.bbc.co.uk>) are already at the forefront of this experience.

On no account does such convergence mean that the Internet will finally turn into a diffuser of conventional communications media. On the contrary, what such convergence now highlights is the need to create specific informational products purpose-designed for the Internet. The possibility of source sharing by the Internet and other media does not do away with the need to create specific languages for the Internet.

In this scenario, as we shall see in greater depth in our analysis of sport and the Olympic Games, broadcasters no longer look on the Internet as a new channel for broadcasting their programmes. They have begun to discover a new medium that will allow them to capitalise on and reinforce their information sources and communications production capacity.

1.7. Obstacles in the way of Internet use

This new scenario should also allow institutions like the International Olympic Committee to discover that they too have a role to play; a leading role when it comes to information dissemination. Their control over information production and sources puts them just a step away – a digital step – from becoming communications media, too.

Among those in charge of administering our institutions (universities, municipalities, Olympic Committees, sports federation, businesses, public authorities, professional bodies, etc.), we still find that there are a lot of people who are sceptical about or reluctant to consider the Internet as an indispensable instrument for the administration of their institutions and for daily communications.

Alongside these people, we also find that there are numerous “enthusiasts” who ignore all the Internet’s real communications difficulties because they are selling services or blinded by the technological novelties in this sector.

Such reticence and optimism (a new version of the “Apocalyptic” and “Integrated” alternative?) must be overcome by a critical, rigorous analysis of the pros and cons of the new ways of living and producing in the information society¹².

In this analysis, here an introductory one, about the pros and cons of Internet implantation, I suggest dividing the obstacles into four different categories:

¹² See: Manuel Castells, *The Information Age: Economy, Society and Culture*, Blackwell Publishers, Massachusetts, 1996. Spanish version: *La Era de la Información*, Alianza Editorial, Madrid, 1997.

1.7.1. Technology access difficulties

First of all, I would reiterate the enormous inequalities of access to information technologies on a world-wide scale. Turning a blind eye to such inequalities is like falsifying the Internet's real global panorama. Worse still, it is like shutting the doors on the potential positive actions of applying these technologies to the needs of technologically less developed countries.

How can we justify the use of more sophisticated technologies when it comes to designing the Web sites of international organisation which must target countries with serious technological shortcomings and imbalances, incapable of upgrading their computer software and hardware at the same rate as the world's richest markets? How can we explain the non existence of development programmes to help our less fortunate partners use these technologies?

These approach errors only have one explanation: some institutions think about the Internet and design their Web sites by solely and exclusively taking into account the most technologically advanced users. These institutions do not think in terms of the "information society", but in terms of the "technological and competitive society" or the "bit society".

The use of technologies should not be a patrimonial objective, or worse still, a colonising objective in the hands of great powers. Instead it should be an objective of global, sustainable and solidary development. This is the first obstacle, the first challenge, of the informational era.

1.7.2. Cultural, social and communicative difficulties

Before referring to the technological obstacles it is essential to refer to the cultural, social or communicative obstacles that restrict today's Internet diffusion.

According to the survey by the College of Computing at Georgia Institute of Technology, the principal obstacles that Internet users come across today refer to the system's shortcomings (speeds and breaks), as well as logical difficulties when looking for information and communication design deficiencies of the Internet's Web sites. (See Table 6)

Despite the Internet's vast development over the last few years and the existence of hundreds of millions of pages on it, designers are still looking for a new multimedia language which is better suited to the technical conditions of the medium and the demands of the human eye which is still not used to this new experience of comprehension.

Jakob Nielsen has disseminated a suggestive catalogue with the most common mistakes made in the construction and design of Web sites (<http://www.useit.com/alertbox/9605.html>). A very obvious one is the proliferation of logical errors in the construction of pages, such as gratuitous use of the latest technologies, too many animated images and active texts, the existence of excessively long and complicated addresses (domains) in the Internet, links that do not work, or badly laid out or out of date information.

Notice that these obstacles basically involve difficulties in finding the right language capable of adequately combining the technological conditions of the medium, the amount of information available and the user's comprehension capacity. The best design for an illustrated magazine or for a CD-ROM can be the worst design for a Web page.

But the obstacles are not just the language, design or logical construction of Internet Web pages. In my opinion, the biggest obstacles refer to three types of problem:

- Poverty and limitations of available contents
- Access (and financial) obstacles to the available contents
- The institutions' inability to adapt to the new communication conditions in the informational society

Content limitations

First of all, we shall deal with the major limitations with regard to available contents. In fact, this is nothing new in the history of information. The introduction of technologies has never directly generated any contents. Instead, they have transmitted already existing contents. Rather than changing contents, what now changes is the way these contents are accessed. Thanks to the Internet, a lot (or rather a few) people can gain access to contents that up to now have been reserved for a minority. Technological transformation has more of an indirect influence on the contents by generating social attitudes, opening doors to new cultural behaviours and practices, breaking down customs and barriers and opening up new fields of interest. However, what it does most is this: it opens up new ways of gaining access to information.

In the meantime, the Internet is full of Web sites that aren't really "Web sites" at all.

Elsewhere I have defended the importance of the "prior communications needs" of people or institutions in order to subsequently assess the interest that Internet use holds for them. The greater the demand (or need) for information, the greater the interest in using the Internet. Informational richness must not only be sought on the Internet, but above all in the information use practices of individuals and institutions. A different problem is knowing if, finally, the Internet is capable of providing us with the information we need when we need it. Under no circumstances should the amount of information available be confused with the information required.

There is nothing further from reality than the so very widespread advertising idea that "all information is available on the Internet". According to this optimistic approach, all you have to do is browse to find the information required. Informational activity, interactivity and hyperactivity do not equate to information quality or usefulness. A lot of necessary information is still not available on the Internet, and some of it is out of reach due to connection or access charges.

It is absurd to suggest that Internet searching and browsing will forcibly provide users with the right information. This is the great fallacy of the "information society": the confusion between technological access opportunity and finding the necessary information.

Importance of content production

This fallacy originates from overlooking a basic aspect of information: its production. There isn't any information, and even less so about complex topics, without prior production and research. In this sense it is more accurate to refer to our society as the "knowledge society" rather than the "information society". The information society is the result of transmitting some pieces of knowledge that have been "produced" beforehand with specific objectives and interests in mind.

Access barriers

Other major obstacles arising from the growing "password" practices or conditions to gain access to available information must be added to the obstacles stemming from charges and social interests in information production. It should be borne in mind that in the current phase of Internet introduction, free access to information is, to a large extent, the result of promotional strategies that will turn into forms of pre-payment access in subsequent stages, once the corresponding information offer has been consolidated.

Access will still be free in those cases where information production costs can be offset by advertising or by the added market value that each Web site can incorporate. For example, it is interesting to notice how some sources set a single access condition to their information by accrediting user identity, with the aim of taking commercial advantage of the data at a later stage.

But in the years to come, we will undoubtedly see access barriers to the available information multiply, with pre-payment systems being put in place.

This set of problems gives rise to a new scenario for the "public information service", whose validity appeared to have run out in the process of world-wide deregulation of broadcasting and telecommunications. However, it also gives rise to a new area of responsibility for large institutions and non-governmental organisations.

1.7.3. Technological difficulties

Thirdly, and this time finally, we should mention the technological obstacles and consider at least two of their main aspects: software and hardware. The prospects in this area are not good. First of all because the prospects must be put into each specific society's context and, secondly because in fact it is not easy, as we can see from the case of introducing video on computers, to establish a detailed schedule of progress in communications innovation on a world-wide scale. However, we do know what the direction is: digital communications connected by a series of large communications networks that are getting faster and faster, with information packages that are more and more compressed and transportable, which should allow on-line communication to take place at the same speed as today's CD ROMs, for example.

Besides the precariousness of viewing animated images (video), which we shall discuss later, the technological obstacles of the Internet can be condensed into two major problem areas:

- Delays and access times
- Risk of communications breaks

Users still mostly complain about the constant communications breaks (60%), and more so about the delays in gaining access to the information (62.82%) (See Table 6).

According to Jakob Nielsen, "The rules of traditional human values show 10 seconds to be the maximum response time before users lose interest. However, it would be acceptable to raise this limit to 15 seconds to get hold of a few pages", and, for the moment, this waiting time forms part of our daily Internet experience.

But all these obstacles seem to be accessible to technology. While I was writing the first draft of this paper (August 1998), a new Macintosh terminal was internationally presented, the iMAC, already technologically designed as a PC for the Internet¹³, without a disk drive, yet equipped with an internal 56Kbps modem, the one best suited to video decoding on the computer.

We can conclude, therefore, that the technological obstacles will not be the most difficult to overcome in the course of the Internet's social implantation.

1.8. The important function of the new "mediators" on the Internet

The Internet era is giving rise to the creation of a "large digital world memory" or "large global documentation centre" accessible on line and made up by hundreds of pages, data and digital images. This "world memory" will grow at a geometric rate as a result of one of the basic characteristics of modern communications: digitalisation and the subsequent possibilities of automatic information storage and recovery.

What's more, the task of large global documentation centres will involve progressive "digitalisation" of their old stock (books, magazines, documents, films, images, etc), whose access has up to now been restricted to the world's best libraries, to put them at our disposal or, depending on the case, to sell them to us via the Internet.

¹³ The new iMac 15" monitor (CM 284) incorporates a 56Kbps modem and does not have a disk drive. It places its bets on the new potential to access information and software directly via the Web. iMac has complete pre-installed software for Internet browsing ("making this the best Internet Mac ever"). It costs \$1299.

This opportunity is an important prospect for an Olympic Museum like the one that is welcoming us today.

The "multiplication" of documents available on the Internet in recent years is truly spectacular. The 29,670,000 hosts (computers supplying information for the Internet) in operation in January 1998 had already risen to 36,739,000 in August of the same year. It is estimated that by the year 2000, the Internet will be able to connect us to 100,000,000 hosts¹⁴. If we look for topics as popular as "Sport" or "Olympics" on the Internet, we get search results with lists of hundreds of thousands of references (See Table 7)

It cannot and should not surprise us, therefore, that after the initial years of the Internet's existence users are beginning to feel a sensation of fatigue in terms of too many "links" and pieces of information available. In all, they are missing new ways of mediation that guarantee quality and certify the origin of the information.

The growth of information sources and the users' demands for guarantees have rendered the resources of the traditional "search engines" more and more obsolete. These used to locate html pages on the Internet in groups of 10. This search system left an enormous margin of initiative up to the users, curiously called "surfers", and also caused them to waste huge amounts of time browsing and sifting through hundreds of Web sites.

But in 1998, these search engines (Altavista, Excite, Infoseek, Lycos, Magellan, Yahoo, etc.) introduced major improvements in their search logic, thus turning them into real mediators and information sifters.

"Search engines" now combine automatic search techniques with customised search requirements, and add their own networks and preferential sources to all of that. They do not just search, but offer predetermined sources and search paths.

Rather than "search engines" they are now information "mediators".

Therefore, it seems that after a very short space of time (1994-1997), when individual users took the lead, now on the Internet there is a tendency towards information mediation. In some ways, the "media" in Internet communications are resurfacing.

The geometric progression towards the amount of information available on the Internet is somewhat "offset" by the development of several forms of mediation between the information sources and the users. Thus, new ways of organising the Web are taking shape, where exponential information growth is controlled by the creation of large nodes – and true gatekeepers – of information.

¹⁴ See: Killen & Associates, "Internet: Global Penetration 1996 and Forecast for the year 2000" and Network Wizard, The Internet Domain Survey, February, 1998

Types of Internet mediators

The convergence of technology that characterises the Internet does not allow rigid typological distinctions to be established for these new forms of mediation. However, by way of an introduction, I propose 7 types of mediation between information sources and Internet users:

1 – Universal search engines, like those already mentioned, Altavista, Excite, Infoseek, Lycos, Magellan, Yahoo, which are adapting their services to the Internet's new conditions and the users' new demands by adopting new classifications and taxonomies, though they are still ways of selecting and hierarchically organising the information.

2 – Local search engines, unlike the large search engines, and without forsaking global browsing, new local search engines have appeared on the scene, aware of the users' potential demands for information, which establish taxonomies that are better suited to such demand, supplementing the information with on-line discussions connected with local current affairs.

They started off as specialist search engines in different languages (not English), though now these experiences have spread to other information services. See, for example, the Catalan experience of "vilaweb" (<http://vilaweb.com/>), more of a "mediator" than a "search engine", specialising in topics of interest to the Catalan countries (with a population of 10,000,000 inhabitants).

3 – Single topic information services (weather, religion, pornography, education, sport, economy, etc.) supplied by a whole range of institutions. Some of them (fewer and fewer) are not for profit organisations whereas others take the approach of new businesses selling information or advertising.

4 – Traditional Mass Media which adapt their information strategies to new Internet forms. This is the case for several newspapers, broadcasters or news agencies who no longer restrict themselves to providing their own product on line, but create a new one adapted to the Internet.

5 - New "multicasting" conglomerates, resulting from the merger of formerly independent organisations: broadcasters, telecommunications, software suppliers, etc. such as the new service offered by MS NBC (broadcast, cable and Internet) with major implications for the future convergence of television and the Internet.

6 –New channels, "Internet kiosks" or "Webcasting" (depending on the name given by Microsoft), specialising in segmenting the topics offered by customising the information.

7 – Finally, new "multimedia software" should be mentioned and emphasised. This goes far beyond the "technical" functions and has an increasingly greater impact on content selection. It too becomes a true mediator for locating information.

RealPlayer, for example, (software for listening to sound and viewing videos on the Internet) offers a direct

link to the CBS Sport Line and Warner Bros, whereas Media Player (by Microsoft) offers a direct connection with NBC.

Microsoft "Webcasting": "software" or "mediator"?

A basic feature of these new "mediators" is the automation and customisation of the information selection processes. They also offer the possibility of integrating these mechanisms into basic browser software. In this context, the debate about the dangers of a new information monopoly arises, through the "pre-set" exclusives set up in the protocols of the software used.

An outstanding example of this trend is Microsoft's new product which has been called "Webcasting"¹⁵, thus changing the meaning that up until now this term has had as a result of the convergence of the Internet (Web) and television (casting).

Microsoft's "Webcasting", which is described as "the automated delivery of personalised and up-to-date information" and based on a technology called "the Channel Definition Format (CDF)", aims to solve the main problems information users and managers on the Internet.

It allows users to perform preferential information searches without having to restart the processes, by capturing updates of preferred sites off line and cutting costs. "Webcasting helps you spend less time looking for information. Distributing contents or information, directly updating the users. Webcasting helps users spend less time looking for information on the Internet and to enjoy viewing interesting, up-to-date information".

The new software not only provides but also selects the information, in the same way as the new format of Microsoft's Windows 98 does not restrict itself to "helping us" to write, manage and look for information, but also directs us towards information provided by its own sources.

The hundreds of thousands of individual stations, like new "speaker's corners" of the digital era, can still be located on the Internet, but the major communications flows will flow in few directions, conditioned by the new forms of mediation.

1.9. Video on the Internet. The application's current status and future prospects

Before referring more directly to the synergies between the Olympic Games and the Internet, I feel that is necessary to introduce some ideas about the current status and future prospects of video use in Web sites. I consider that this could be a key issue for future relations between sport and the Internet, bearing in mind the extraordinary degree of importance given to images and television in particular when marketing sport and making it popular.

¹⁵ See: Webcasting White Paper, Microsoft® Internet Explorer 4.0, September 1997.

As we have already seen in the section given over to the evolution of Internet implantation obstacles, receiving video on our computer screens is no longer a dream. It is now a possibility within reach of anyone who has the computer resources that are more and more accessible.

As far as the software is concerned, a whole range of companies have begun to offer Internet video viewing¹⁶. One of the most widely used programmes is RealPlayer and, more recently, Media Player by Microsoft has begun to compete directly with the former. Microsoft Windows Media Player is a universal multimedia player that can be used to receive sound, video and multimedia files in the most commonly used formats. Media Player is used to listen to and view live news updates or broadcasts of your favourite team, to see a Web site's video again, to attend a concert or seminar or to see excerpts of a new film.

The major browsers (Netscape, Explorer) both include these programmes in their menu bars. Netscape, for example, offers its software in the following manner: "Can you get video through standard phone lines and modems? Give it a try. If you own a 28Kbps modem and a fast processor you can download this programme and check it out for yourself."

The evolution of video presence on the Internet is also connected with the evolution of modems. In 1994, there were some 7.5 million computers with 14.4Kbps modems in the world. These modems formed part of the minimum requirements for Internet browsing.

Two years later, in 1996, it was estimated that an approximate total of 60 million users accessed the Internet at much higher speeds, with 28Kbps capacity modems. Toward the end of 1998, it is estimated that there will be 100 million users who will be able to gain access to images, sound and video at a speed of 56Kbps.

By the year 2000, we will probably have gone through a new frontier of connectivity, with ADSL signal compression and decompression formulas, which will provide speeds of access that today we consider as being ideal or to dream for.

Due to its undeniable commercial and scientific repercussions, research into video on the Internet is a priority objective of many large corporations' R&D departments. Technological evolution will have a powerful influence on that, not only as a result of better speeds for domestic modems, which are getting faster and faster (56Kbps and over), but above all as a result of the implantation of new signal packet compression and decompression technologies (carrying animated images), which will optimise the now poor quality of these images on our computers.

As a result of all the above, we can foresee the future of video on PCs. Access to television images on the Internet will be a consolidated fact commonly used by advanced users of the Internet in 10 years' time.

¹⁶ For detailed information about all the companies offering software to view videos on the Internet, enter "Webcasting" in the Yahoo search engine.

The major events planned for the year 2004, such as the Athens Olympics or Barcelona's Universal Forum of Cultures, will undoubtedly be able to use video broadcasting via the Internet in a generalised way.

2. Sport on the Internet. A privileged future scenario

2.1. Sport on the Internet. A field of experimentation

To go further into the interpretation of this mediation process which affects all areas and contents of the Internet (tourism, education, information, culture, science, technology, etc.), I suggest that we now pay special attention to a specific field which is particularly attractive for experimentation on the Internet: sport.

All the previously mentioned "mediators", especially broadcasters, search engines and new channels on the Internet, have developed the best technology to create their programmes specialising in sports information, thus capitalising on their sources of information and experimenting with multimedia resources which, in the future, may spread to other topics and sectors.

This isn't the place to reiterate the social and cultural importance of sport in contemporary society. The fact is that "sport", probably because of its popularity, has become one of the most important thematic areas on the Internet.

The "sport" category can invariably be found in the 12 or 15 basic categories of all search engines (See Table 8).

These thematic indicators are increasingly turning into true "specialist channels", thus giving rise to new specialist multimedia and, consequently, to new multimedia about sport and the Olympic Games.

See, for example, Infoseek's Sports Channel (<http://sports.infoseek.com/Topic/Sports>), where you can find several sections ranging from a selection of sports sites, chats, book buying, latest news and results to special dossiers dedicated to major events (e.g., World Cup France'98, or the Olympic Games Nagano'98). Another interesting example of "sports multimedia" on the Internet resulting from the re-use of information sources is the "World Sport" programme by the news agency Reuters (<http://www.sportweb.com/>).

But, we should particularly highlight the creation of new sports multimedia by major broadcasters.

This is the case for information available on the Internet about sport from large American consortiums like CNN / Sport Illustrated, MS/NBC, CBS, ESPN, or large European broadcasting corporations such as the BBC or RAI.

Any user visiting these Web sites will find really new "on-line multimedia" (in some ways hybrids of traditional media: magazines, radio, television, phone and video) whose form and content are still in the definition stage. However, in them we can find several very specific communications functions:

entertainment, sales of goods, videos, photos, connections to other Web sites, texts, classifications, news headlines, etc., and a special taxonomy for the classification of sports disciplines and geographical zones.

CNN / SI, for example, besides information (texts, graphics and images) about major sporting events, offers specific communications resources like the following:

- MULTIMEDIA (Audio, Video, Photo Galleries)
- COMMUNICATIONS FUNCTIONS (E-mail, Software, etc.)
- ENTERTAINMENT AND GAMES
- TELEVISION (Sports programmes on TV)
- COMMUNITY (Messages, Forums, etc.)
- SHOPPING
- CHILDREN
- BROWSING RESOURCES AND HELP (Contents, Feedback, Help, Searches, etc.)

2.2. Sport and the initial video experiments on the Internet

The acid test for the development of new sports multimedia on the Internet is, of course, the development of video broadcasting and television in general on the Web.

Despite the previously mentioned developments, in 1998 video applications via the Internet are still very limited and can be qualified as experimental.

In these initial experiments, the presence of video on the Web still plays a secondary communications role. The initial applications generally consist of short segments of sporting events (lasting between 1 and 2 minutes) and press conference statements and interviews with the sports stars.

More recently, one of the most unusual things offered on sports Web sites is a selection of short segments from the broadcasters' picture archives. For example, CNN /SI ("click to watch a memorable video clip") offers pictures about the United States' boycott of the Moscow Olympic Games in 1980, Ben Johnson's disqualification in the 1988 Olympics due to steroid consumption, or the famous Tonya Harding and Nancy Kerrigan in the 1994 Winter Olympics.

These limitations can be explained by the fact that image quality is still deficient. In fact they are better compared with the beginnings of silent movies than analogue television.

In 1995 Mark Cuban and Todd Wagner had the good sense and intuition to create a company specialising in radio and television programme broadcasting on the Internet (<http://www.broadcast.com>), with a series of channels, among which they have their own channel dedicated to sport (<http://www.broadcast.com/sports/>).

IBM, an organisation that has been present at the Olympic Games since Tokyo 1964, in collaboration with NBC were the “cybercast” pioneers with the 1996 XXX Super Bowl Web site (“the Web’s first sports cybercast”). In January 1998, IBM and NBC reached a new agreement to jointly produce the “Super Web” of the XXXII Super Bowl. This Web site is one of the first to include audio/video in the direct coverage of a sporting event, with interviews with coaches and players, press conferences and news. “The multimedia project will feature an extensive on-air and on-line cross-promotional campaign by NBC, IBM and the NFL” (<http://www.ibm.com>).

Of these initial video experiments on the Internet, the official Web site of the Nagano Olympics in 1998 should be mentioned. It was created by IBM (with support by RealPlayer) (<http://www.nagano.olympic.org/>) and included a weekly video for the first time ever.

Very special mentioned should however be given to the CBS Web site for Nagano’98 (<http://cbs.sportsline.com/u/olympics/nagano98/>), which constitutes a pioneering example of a multimedia system with a wide selection of audio and video.

Since the Nagano Olympics in February 1998, progress has speeded up. Coinciding with the football World Cup in France (July 1998), we found that numerous broadcasters had already introduced video into their Web sites.

Video on the Internet also has important niches in other sectors, particularly in general information, education and information dissemination by large institutions. Due to the comparative value that this experience holds for the International Olympic Committee, I consider it to be appropriate to mention the International Telecommunications Union’s Web site (<http://www.itu.int>), which has a section and a special programme about broadcasting television images on the Web in order to facilitate distance participation of its member states in the Union’s activities, thus providing all of its members with access to the institutions’ document archives and stocks.

2.3. The institution’s own media on the Internet

The new mediation logic and new facilities for producing and broadcasting information on the Internet define a new phenomenon with enormous implications in contemporary forms of social communications and major repercussions on the organisation of communications in the world of sport.

With the new information technologies, institutions have increasingly greater facilities to create their own “media”. Therefore, there is a tendency towards doing away with the traditional difference of roles between the media which “inform others” and the social subjects of the information. The Internet now puts the opportunity of creating one’s own media within reach of every institution, using the privileged information they have available to them to benefit their strategies.

These new opportunities are forcing all institutions, especially those which have major social dimensions, to reconsider their communications policies, and particularly to ask themselves a key question: how do we define, design and maintain our institutional web site?

The communications policies of contemporary institutions can no longer be restricted to filtering information and having an influence on the media. Instead, they now have the opportunity to offer direct information to the public through new media, like personal publishing or via the Internet in particular.

We can therefore see how sports clubs, federations and organisers of major sporting events also become true media. It is no longer strange to see Web sites posted ("www.uefa.com", for example) in stadium advertising, and it will probably not be long before we see Web site addresses on the shirts of some sports teams.

In May 1998, around 70% of Olympic International Federations had their own Web sites, some of which fulfilled all the requirements of large sports multimedia. Big clubs - FC Barcelona (<http://www.fcbarcelona.es>), Chicago Bulls (<http://www.nba.com/bulls/index.html>), Manchester United (<http://www.manutd.com/>) have their own Web sites which get millions of visitors.

Major sporting events – football world cups (<http://www.france98.com/>), Tour de France (<http://www.tourvoile.fr>), Wimbledon (<http://www.wimbledon-fc.com/>) or the Super Bowl (<http://www.superbowl.com/>) and, as we shall see in greater detail, the Olympic Games – have the opportunity to employ powerful and efficient communications instruments via the Internet.

The Nagano'98 Web site, for example, as we shall see later, had 634,000,000 hits, a record-breaking figure that has probably only been surpassed since then by the publication of the Starr report about the relationships between President Clinton and Monica Lewinsky on the Internet.

But this sports communications potential isn't all benefits – financial and informational – for sports institutions, as there are multiple contradictions. The new synergies between communications and sport may also mean major losses of independence of the sports institutions to the logic of communications. The communicative power of sport defines a new media "hunger" to make the sports institutions their own. Rupert Murdoch's - owner of BSkyB - purchase of Manchester United in September 1998 for the sum of £625 million (156,000 million Pesetas), with a series of former cases such as Berlusconi's purchase of Milan, do nothing but confirm the loss of independence of sports institutions to the media.

3. The Internet and the Olympic Movement

All of these new forms of mediation, broadcasting, production and access to information question the Olympic Movement and will force it to redefine its communication policies and strategies in the Internet era.

In the following section we shall analyse the background, some recent and pioneering experiences (Barcelona'92, Atlanta'96 and Nagano'98) and conclude with some proposals or suggestion for a new

communications policy for the Olympic Movement in the Internet era.

3.1. Background: The Olympic Games – a laboratory for innovation in information

Historically, the Olympic Games have been a privileged place for experimenting with new information technologies. Few events concentrate so many major information technology challenges in so few days as the modern Olympics:

- Planning and organisation
- Telecommunications services
- Security
- Press, radio and television
- Internet and Intranet
- Archives and Documentation

In addition, these applications are employed in a context of maximum visibility and promotional opportunity, before the largest possible media concentration. That's why "the Olympics" have become one of the privileged scenarios and showcases for large multinationals in the communications sector (telecommunications, the media and information technologies).

The initial stages of the information era in the Olympic Games

The Squaw Valley Games in 1960 were the first ones that counted on IBM's collaboration for results management. This initial experience was followed up at the Tokyo Games in 1964, characterised by the introduction of other new information technologies, including communications satellites for the first time in Olympic history.

In Tokyo, IBM used a "large" computer for results management ... with less capacity (64K) than any of the electronic agendas we use today. A Comsat series satellite, the Symcom III, was used to transmit a limited number of air time (5 hours 41 minutes, to be precise) from Japan to the United States¹⁷.

But the "modernisation" of those Games did not end with the introduction of specific information technologies, as it also signalled the start of other major development objectives (technological, town planning, social, economic) connected with the organisation of the Games.

As we have shown elsewhere (*The Keys to Success. The Social, Sporting, Economic and Communications Impact of Barcelona'92*)¹⁸, the Barcelona Games in 1992 led to the consolidation of the model that was first used in 1964 in Tokyo, considering the Olympic Games as a large global development and modernisation

¹⁷ For detailed information about this process, see: Moragas, Miquel de, (1992), *Los Juegos de la Comunicación*, FUNDESCO, Madrid and IBM, Web site for Nagano'98: <http://www.olympic.ibm.com>

¹⁸ Moragas, Miquel de & Botella, Miquel, *The Keys to Success. The Social, Sporting, Economic and Communications Impact of Barcelona'92*, Olympic Museum, Olympic Studies Centre, Barcelona. 1994.

project with telecommunications and information technologies as the core features¹⁹.

The organisational model announced for Sydney'2000 and Athens'2004 appear to confirm the consolidation of the global strategic planning model defined in Barcelona²⁰.

3.2. Atlanta'96: The first Olympics of the Internet era

Although the presence of information technologies at the Olympics dates back to the Tokyo Games and that there were some telematic forerunners at Barcelona'92 and Albertville'92, the fact is that the Internet era of the Olympic Games did not begin until Atlanta'96.

Let us remind ourselves of the fact that the only telematic technology available at Barcelona'92 was videotext and that the International Olympic Committee's Web site did not come into operation until the end of 1995. It was in Atlanta, by this time in 1996, where, for the first time ever, this new information technology was used. IBM had set up a major computer base as the solution to all the areas of information management which included "Info'96" and the "Commentators Information System". It was estimated that this system received up to 31 million requests for information and almost 5 million e-mail contacts²¹.

And the figures are even higher if we take into account the use of the Internet during the Centennial Games. According to IBM sources in Atlanta, 100,000 e-mail messages were sent by the Olympic family and athletes. Atlanta's official Web site (<http://www.atlanta.olympic.org>) had 11 million visitors per day, a total of 185 million visitors over the 16 days of the Games.

This initial experience at Atlanta demonstrated the possibilities, and the shortcomings and contradictions of the new information technologies in this new phase.

Three main contradictions were apparent in this initial phase:

- Operational shortcomings in the systems ("transmission interrupted").
- A lack of network transmission capacity ("waiting for reply").
- A lack of experience among users and information managers in the use of these new communications opportunities.

IBM, on the very same day that the Olympics were closed, (<http://www.ibm.com/olympic/>) started a new plan of major material investment and human effort that made it deserving of a "Gold Medal" at the following edition of the Winter Games in Nagano two years later.

¹⁹ See, for example, the BIT'92 plan for investments in the electronic industry, information technology and telecommunications summarised in Moragas, Miquel de, *Los Juegos de la Comunicación*, FUNDESCO, Madrid, 1992.

²⁰ Concerning town planning policies, see: Moragas Spà, Miquel de, Montserrat Llinés and Bruce Kidd (eds.), (1997), *Olympic Villages: A Hundred Years of Urban Planning and Shared Experiences*, International Symposium on Olympic Villages, Olympic Museum, Lausanne, November 1996.

²¹ The available equipment consisted of 7000 IBM PCs, 250 LANs, 80 AS/400s, 30 RS/6000s and 4 System/390s. "What really Happened?", *The IBM Employee Magazine*, issue 1, 1996.

3.3. Nagano'98: A huge investment for the success of the Internet and the Intranet

"We took measures to prevent the communication breakdown problems that were seen in Atlanta, said Shuniji Aoki, head of the Info'98 system for the Nagano Olympic organizing committee (NAOC)"

"Technology did win Gold in Nagano," said Francois Carrard, Director General of the International Olympic Committee, at an on-site press conference"²².

In fact, the Atlanta experience and the development of computer management systems on a world-wide scale allowed an important information management base to be applied to the organisation of the Nagano Olympics which, once again, beat all previous records. IBM, which counted on the collaboration of the Lotus software company, which IBM had recently bought out, was able to provide the Olympic organisers with all the necessary elements for communications management and broadcasting in various formats: text, images, data and, still in its experimental stages, voice and video for computers.

A clear example of this rapid progression is the huge qualitative leap forward experienced by the use of the Internet at the Nagano Winter Games in comparison to the Atlanta Summer Games just two years later. According to IBM sources, Nagano's official Web site had a total of 634 million hits over the 16 days of the event, reaching a record of 110,414 per minute on 2nd February, coinciding with "Figure Skating" and "Ice Hockey". It was a new record in the history of Internet traffic. (See Table 9 and Chart 10).

(This record was apparently smashed by the diffusion of the Starr report about the Clinton – Lewinsky case on the Internet on 12th September, 1998, when MSCNN's Web site achieved a new record of 340,000 hits per minute²³).

The experience of Nagano's official Web site also provides us with some interesting information about the origin of Internet users on a world-wide scale (See Charts 11 and 12). There is an overwhelming presence of users from the United States (56.8%), a very special presence of Japanese users (24%), bearing witness to the importance of the local factor, and a rather limited presence of European users (16.7%).

Apart from these countries, the most technologically developed, access to the Nagano Web site was limited or practically non-existent (2,5%). This highlights the major imbalances in Internet implantation and the unsuitability of referring to this medium as a true mass media with global coverage.

3.4. The new actors of Olympic communication on the Internet

The new information technologies and the Nagano'98 Web site are good examples of this new process: they put the opportunity of becoming communications broadcasters within the reach of Olympic institutions themselves. What is the situation in 1998?

²² IBM internal message via E-Mail, 24th January 1998.

²³ *El País*, 13th September, 1998.

An analysis of Olympic information available on the Internet and its evolution shows us that there are some opportunities and successes, though there are some shortcomings and contradictions, too.

On the one hand, the existence of large projects, particularly large official Web sites of the Olympic Games and, on the other, the sluggishness in adapting elementary and basic aspects of information to the Internet era.

On the one hand, the existence of hundreds of thousands of "pages" available and, on the other, evidence of the limited quality of their information, particularly concerning the cultural, social and educational aspects of Olympism.

On the one hand, the presence of many anonymous actors, small institutions and even individual initiatives and, on the other, the slowness of decision making or quite simply the absence of some large Olympic institutions on the Internet.

For example, the search results given for "Olympic" by Internet search engines include hundreds of thousands of matches (949,210 in Altavista and 375,524 in Hotbot). The number of matches falls when looking for "Olympics" (566,690 in Altavista and 280,018 in Hotbot) and even further when looking for "Olympism" (479 in Altavista and 514 in Hotbot). (See Table 13)

The search results given for "Olympic" provide a large amount of geographical, commercial and cultural references that have nothing to do with the Olympic Movement. That's why a search using "Olympic Movement" is much more efficient than "Olympics" (a term that doesn't have any strict equivalent in other Latin languages), or "Olympism", whose limited results produced by Internet search engines show that little attention has been paid to those Olympic actors who have dedicated their time and efforts to the cultural and philosophical issues of sport and Olympism - on the Internet at least.

Olympic information actors on the Internet

In order to systematise the presence of Olympic information on the Internet so that it can be analysed later, we suggest the following classification of actors:

- International Olympic Committee (IOC)
- Olympic Organisers (OCOGs)
- National Olympic Committees (NOCs)
- International Sports Federations (recognised by the IOC)
- Candidate cities
- Sponsors
- The media
- Internet mediators (suppliers of software, browsers and search engines)
- Academic institutions
- Miscellaneous initiatives, including private initiatives

In contrast to the large amount of Web pages on the Internet in which the term "Olympic" appears, the presence of Olympic institutions on the Web can still be described as very limited. Besides the IOC's and the Organising Committees' Web sites, which are worthy of mention elsewhere, the low percentage of National Olympic Committees that have their own Web sites in comparison to International Federations is significant. In our last research project (September 1998), 100% of International Federations had their own Web sites, whereas the number of National Olympic Committees present on the Internet had grown very little in comparison to the previous year and was situated at a mere 21%.

In this sense, we should point out that candidate cities have created and set up their own Web sites faster. These are followed by the sponsors' Web sites, whose presence on the Internet has more to do with the objectives of commercial logic than strictly Olympic references.

An interesting aspect concerning the presence of National Olympic Committees on the Internet is the existence of Web sites of committees that do not belong to the first world in terms of technological and industrial development. This is the case for the National Olympic Committee of South Africa. (See Appendix 1)

These contradictions highlight two fundamental aspects connected with the implantation of the Internet in society. First of all, we should consider the possibility of extending this technology to very different countries. This is possible thanks to development platforms in institutions such as universities, multinationals, ministries and embassies, etc. in developing countries. On the other hand, these data also go to show how slow some Olympic institutions are in technologically highly developed environments. Many of these institutions do not even realise the possibilities that modern information technologies can offer them, or the need and opportunity to adapt to these changes. It is interesting to note that some National Olympic Committees in the developed world are, in this sense, far behind some National Olympic Committees in developing countries.

The International Olympic Committee was first present on the Web in 1995. Its Web site was renewed and redesigned in 1996, coinciding with the imminent celebration of the Atlanta Games. The second version of the International Olympic Committee's Web site of 1996 (See Appendix 2) is a version designed in accordance with the standards of the time, with numerous hypertexts and a style that was more documentary than visual, though the contents were interesting from the point of view of information about the institution and the Olympic Movement.

Coinciding with the celebration of the Nagano Games, the International Olympic Committee, in collaboration with various companies²⁴, launched a new version of its Web site (<http://www.olympic.org/>), in which visual and multimedia spectacularity take pride of place over documentary and informational

²⁴ The IOC's new Web site is a Quokka Sports (USA) production in collaboration with Artemedia Online (Switzerland), IBM Global Web Solutions (USA), Sport Illustrated (USA), Olympic Television Archive Bureau (UK), Meridian Management (USA) and Allsport (UK).

functions. Regarding the content and structure of the Web site, the main contents can be seen in Appendix 3²⁵.

Regarding all Olympic Web sites, finally we would point out the lack of educational project development that could take advantage of the extraordinary educational potential of the Internet and its technologies.

For the record, we would cite 5 educational programmes located so far on the Internet.

- Canadian Olympic Association - Youth Olympic Program
(<http://www.youtholympic.coa.ca>)
- Australian Olympic Committee - Education Kits
(<http://www.australian.olympic.org/>)
- British Olympic Association - Olympic Issues
(<http://www.olympics.org.uk/>)
- The Amateur Athletic Foundation of Los Angeles
(<http://www.aafla.org/OlympicInformationCenter/OlympicPrimer/>)
- U.S.Olympics PBS cyberschool
(<http://www.ibm.pbscopyerschool.org/>)
- The Olympic Studies Centre, Barcelona
(<http://blues.uab.es/olympic.studies/campus/>)

We have already said that most of the efforts and resources appear to be dedicated to technological innovation to the detriment of content. But there are other noticeable negative trends that make the absence of educational and cultural projects about Olympism on the Web even more apparent. Some Olympic Web sites use interactive technological resources for entertainment, games and shows rather than informative, cultural or educational contents. This is understandable in the case of purely commercial initiatives but is not in the case of institutional initiatives with the highest degree of responsibility within the Olympic Movement.

3.3. The Internet and “multimedia Olympics”. The need for regulation

The major “Intranet” information management capacity that organising Committees for modern Olympics must acquire is well known²⁶. But the communications “capacities” of Organising Committees, thanks to the Internet, hugely spill over the boundaries of the internal community itself - the accredited Olympic family - to offer unprecedented global communication.

The Organising Committee for Nagano'98 (<http://www.nagano.olympic.org/>) – with almost 50,000 content pages and an unprecedented audience – already took the shape of a new “On-line Olympic Multimedia”, with different functions, still not fully exploited from a social and cultural point of view, yet which allowed us

²⁵ At the time of writing these lines (September 1998), the documentary links about Olympic history still concentrate on the Winter Games and the historic references to the Summer Games still had not been completed.

²⁶ For example, the Info'98 programme with almost 1,100 workstations managed nearly 5.6 million hits and was available to 75,000 accredited people, including Olympic athletes, coaches, press, dignitaries, staff and Olympic

to get some insight into the future possibilities of institutional Olympic communication.

Unlike the first experience in Atlanta '96, the new experience of Nagano'98 made full use of the Internet's multimedia potential, offering conventional information about the host city and the organisation, advanced information services, especially the "real time results", and new forms of participative and interactive communication.

We consider it particularly important to point out the use that this Web site makes of:

- Daily photos ("Daily Snapshot from Nagano City").
- Interactive games ("Competing for the gold at Hockey")
- Participation proposals ("Sign the guestbook")
- Displaying the seats in the facilities ("Take a virtual seat!")
- A presentation, still in the experimental stages, of videos on the browser.

This mixture of contents and information, together with the size of the audience reached, poses new problems for Olympic communications policies, and specifically for its regulation policies for broadcasting rights and exclusive rights. In Nagano, the first signs of friction between the organising Committee and the conventional media could be seen, especially between the large television companies, because of the potential competition that an "official" Web site may create: a Web site that not only offered real time results but also other information and entertainment services, texts, images, games, audio and video about the Games and the athletes²⁷.

The growing popularity of the Internet, which will undoubtedly spread in the most technologically developed countries, will ask the Olympic Movement for an internal regulation to delimit the functions corresponding to the NOCs, OCOGs and the IOC itself, as well as a new external regulation to delimit new competition between and granting of exclusive rights to broadcasters and other mediators on the Internet. The new regulation should take diffusion on the Internet into account which, unlike what happened in the broadcasting era, is global by its very nature. The media on the Internet are both local and global at one and the same time.

The respective Web sites of the Organising Committees (OCOGs) and the IOC may fundamentally differ in that the OCOGs' Web sites will form part of each of the subsequent specific Olympics whereas the IOC's Web site must provide historical continuity.

Greater responsibility in the domain of institutional promotion of Olympic information, documentation and education corresponds to the IOC's Web site, whereas greater coverage of the event and the representation of the organising city's and country's culture corresponds to the OCOGs Web sites.

volunteers.

²⁷ The Organising Committee for the Nagano Games had 40 journalists and editors from 10 different countries working together to fill up the information sources.

In this paper I do not aim to go into the legal details of future regulation between the IOC and broadcasters on Internet issues, but as a conclusion to my earlier thoughts I do indeed consider it to be appropriate to point out that the new regulation must respect the broadcasters' needs to create their own "On-line Olympic Multimedia" and, therefore, the use of texts, sounds and images (including videos) in their Web sites.

At the same time, the IOC must more clearly and accurately define the objectives, limits, contents and functions of its own media on the Internet²⁸. Olympic institutions (OCOGs, NOCs and the IOC) should not and cannot forsake these new media. Instead, they must set their own limits to avoid competing with the mass media to which the very Olympic Movement sells broadcasting rights.

Regulation complexity

In the coming years this regulation should not be overly difficult, as it will still not be possible to speak of "Olympic Games broadcasting on the Internet". "Multimedia information about the Olympic Games on the Internet" will however be viable, though the use of video will still be rather limited.

But, in the future, this regulation will become more and more difficult, partly because of the convergence of Television and the Internet, and, in the case of the most technologically developed countries at least, this could happen experimentally in the year 2004 and wholly operationally in the year 2008.

This regulation will become even more complex as a result of new convergent actions between actors and interests that will necessarily take place in this sector. Negotiations will no longer be held exclusively with the mass media, but with the new conglomerates of information technology, telecommunications and media companies who will be fighting to establish a new form of exclusivity on a world-wide scale.

This process will also give rise to a loss in broadcasters' independence, as they will need to converge and associate with other major actors of Internet business: with software producers (Microsoft, IBM, etc.), with browsers (Explorer, Netscape) or with large telecommunications groups (ATT, MCI, British Telecom, Telefónica, etc.). New forms of concentration - unknown to us today - will emerge from this new scenario.

We can find an example of this complexity in the recent disagreement between IBM and the International Olympic Committee regarding this company's ongoing Olympic sponsorship as from the Sydney Olympics. On 7th August, 1998, an IBM spokesman announced the severance of its agreement with the IOC after 38 years of collaboration to the AP agency. The reasons behind this severance, according to IBM sources, were due to the minimal profitability of Olympic sponsorship and the differences that had arisen regarding the need to include the Internet in the same sponsorship package of computer management of the Games.

"Paying more for less profit doesn't make much sense. Our philosophy is different from the IOC's - they decided that they wanted a separate Internet sponsor and we wanted to offer them all of our technology."

²⁸ I consider that an interesting example for the IOC would be a comparison of its current Web site with other large international organisations' Web sites like, for example, the International Telecommunications Union's (ITU) (<http://www.itu.int>), which already includes its own Broadcasting Service (IBS).

For this reason, the IOC announced that its strategic objective was to try and share out sponsorship among several different information technology and communications companies, differentiating between hardware, software, results, management and the Internet.

IOC Marketing management sources, in its statements to the same agency (AP) justified these demands by referring to the experience of the consortium that managed information technology at Barcelona '92 and the need to guarantee the IOC's control over an emerging technology: the Internet.

"IBM wanted to have Internet rights included as part of a new agreement and we didn't. We see the Internet as a new medium and we still don't know how it will be used in the next 4 years."

3.6. The Internet. A new instrument for Olympism

All specialists assert that information technologies and the Internet in particular will most especially benefit institutions, groups and movements which carry on activities on a global scale. This is the case for the International Olympic Movement, which is represented by almost 200 National Olympic Committees.

If we add the fact that the Olympic Games are itinerant (today in Nagano, yesterday in Atlanta and tomorrow in Sydney) to the condition of universality and their educational vocation, we find that we have before us one of the most exceptional opportunities to use new information technologies in today's world.

Whatever the case, the Olympic Movement's Internet policy should not lose sight of its "global" vocation. That implies rigorous tracking of technological advances and the possibility of upgrading technologies used by members of the Olympic family in less technologically developed areas. However, it goes without saying that these challenges are not solely limited to technological and interface problems in the use of multimedia resources. The real challenge also comes with the policies of content, multi-language approaches and the Olympic institutions' assumption of their own organisational, educational and cultural responsibilities in accordance with the Olympic Charter's mission by adapting them to the new conditions of contemporary communications.

But the Olympic Movement will only be able to benefit from the use of new technologies in an international context characterised by economic and technological imbalance if it is capable of organising its own policy of technological solidarity. These Olympic information policies are faced with a new, top priority challenge: providing the National Olympic Committees with the necessary instruments to gain access to new information technologies. In addition, learning about new technologies may have several beneficial effects. Every country needs telecommunications and computer experts. In some countries this pioneering task may well fall to men and women of the Olympic Movement. That way, two objectives will be attained simultaneously: strengthening everyone's participation in the Olympic Movement and promoting information development in developing countries.

These measures may allow a true historic step forward to be taken in the world of Olympic information. Nowadays, communication via the Internet is much more viable than the traditional distribution of heavy printed documents. Or is it easier to send magazines, leaflets and information to the least developed

places on Earth? What is the current state of Olympic or sports libraries in developing countries?

The Internet offers enormous advantages as the cost of a call to transmit information locally or internationally is the same. Connecting up to Olympic Web sites located anywhere in the world is as easy and cheap as a local call. This is a not-to-be-missed opportunity for the Olympic Movement's information policies.

TABLES AND GRAPHS

Table 1 Some data about Internet implantation

October 1997 and August 1998

	Internet Hosts	Users Online (Millions)	% inhabitants	Content pages (Millions approx.)
Europe, Regions	6,982,995	between 23.1 and 28.9		
Europe (EU)	4,380,000			
Great Britain	-	4.31	9	
France	-	2.87	6	
Germany	1,132,174	9.1	9	
Spain	194,196	1.85	5.4	
Unites States (1997)	19,540,325	between 60 and 75	25	
Africa		0.8		
Latin America		8.5		
Brazil		1		
Latin America (year 2000)		34		
Japan		12.1	6	
World-wide (1997)		128.16 – 180		320
World-wide (1998, January)	29,670,000			
World-wide (1998, August)	36,739,000			
World-wide (2000)	96,000,000	250,000,000		1,000 +

Sources: The data were gathered from a range of sources, including:

- ConCult Newsletter (<http://www.concult.de/newsletter/>)
- Thomas P. Novak, Donna L. Hoffman , Access and Internet Use. Project 2000, Vanderbilt University
- CyberAtlas (1998) (<http://www.cyberatlas.com/demographics.html>)
- Nikkei Market (<http://www3.nikkeibp.co.jp/MA/>)
- Killen & Associates, "Internet: Global Penetration 1996 and Forecast for the year 2000".
- EGM, AUI, Spain (<http://www.aimc.es/aimc/html/inter/datos.html>)
- Euro-Marketing (<http://www.euromktg.com/globstats>)
- Network Wizard, The Internet Domain Survey, January, 1998
(<http://www.nw.com/zone/WWW-9801/report.htm>)
- <http://www.businessweek.com/premium/06/b3564014.htm>
- Information Society Project Office (ISPO), USA. (<http://www.ispo.cec.be/>)
- Nua Internet Surveys (<http://www.nua.com/>)

Table 2. Domains on the Internet, by country and category (Level 1) 31/98

More than 200,000		Between 50,000 and 200,000		Between 10,000 and 50,000		Between 1,000 and 10,000	
Generic		Taiwan	176,836	Hungary	46,082	Indonesia	9,603
Commercial (Com)	8,201,511	New Zealand	169,264	Mexico	41,659	Rumania	9,335
Education (Edu)	5,283,568	Spain	168,913	Portugal	39,533	Ukraine	9,179
Nets (Net)	3,944,967	Switzerland	166,000	Ireland	38,406	India	7,175
Military (Mil)	1,099,186	Denmark	159,358	Malaysia	32,269	Croatia	6,509
Not for profit (Org)	519,862	South Africa	122,025	Greece	26,917	Latvia	6,108
Governments (Gov)	497,646	Korea	121,932	Turkey	24,786	Dominican Repub.	4,853
		Brazil	117,200	Russia	20,027	Philippines	4,313
		Austria	109,154	Argentina	19,982	Luxembourg	4,273
By country		Russia	94,137	Chile	17,821	Bulgaria	4,140
Japan	1,168,956	Belgium	87,938	Iceland	17,450	Kuwait	4,057
United States	1,076,583	Poland	77,594	China	16,322	Yugoslavia	4,020
Germany	994,926	Hong Kong	66,617	Slovenia	15,432	Venezuela	3,869
United Kingdom	987,733	Israel	64,233	Thailand	14,378	Lithuania	3,647
Canada	839,141	Singapore	57,605	Estonia	14,299	Peru	3,415
Australia	665,403	Czechoslovakia	52,498	Slovakia	11,836	Costa Rica	2,965
Finland	450,044			Uruguay	10,295	Cyprus	2,621
Holland	381,172			Colombia	10,173	Egypt	2,013
France	333,306					Bermuda	1,990
Sweden	319,065					Arab Emirates	1,940
Norway	286,338					Pakistan	1,291
Italy	243,250					Kazakhstan	1,209
						Lebanon	1,134
						Ecuador	1,036
						Panama	1,019

 European Union countries

Source: Network Wizard, The Internet Domain Survey, January, 1998 (<http://www.nw.com/zone/WWW-9801/report.htm>)

Table 3 – Internet users, by mother tongue (1997 data)

	Access to the Internet (Millions)	% of Internet users	% of the global Internet population	Total population speaking that language
English speakers	82.3	58	8.3%	500,000,000
Others	59	42	91.7%	5,400,000,000
TOTAL	136.8			

Source: Euro-Marketing, 1997 (<http://www.euromktg.com/globstats>)

Table 4. Places from which the Internet is accessed in Spain

From home	46%
From work	35.5%
From universities or studies centres	21.8%
Others / Don't know / No reply	10.8%

Source: EGM, for data about Spain. March 1998.

Table 5. Using the Internet instead of watching TV

Never or not very often	% replies	Often	% replies
Never	12.49	Several times a day	29.48
Occasionally	9.28	Once a day	11.16
Once a month	0.87	Several times a week	24.42
Once a week	2.51	Several times a month	7.01
	25.15		72.07
Don't know/No reply	2.76		

Source: Georgia Tech Research Corporation, University of Georgia, Atlanta (GVU's WWW Surveying Team)

Table 6 – Difficulties stated by Internet users

Transmission delays	62.82%
Unexpected transmission breaks and missing links	60.00%
Finding new information	49.52%
Finding pre-identified information	32.32%
Organising the information	25.28%
Visiting sites again	17.76%
Information display difficulties	8.81%
Feeling lost in the network	6.30%
Connection charges	6.04%

Source: GVU's WWW Surveying Team, College of Computing, Georgia Institute of Technology, Atlanta, 1998.

Table 7 – Pages found for “Olympic” and “Olympics” using several search engines

May 1998	HOTBOT	INFOSEEK	EXCITE	ALTAVISTA
“Olympic”	375,524	228,479	129,766	949,210
“Olympics”	280,018	134,974	80,140	566,690

Source: Olympic Studies Centre, UAB, Barcelona.

Table 8 – Categories of several search engines. (April-August 1998)

Lycos	Excite	Infoseek
Autos	Autos	Automotive
Entertainment	Entertainment	Entertainment
News	News	News
Sports	Sports	Sports
Business	Small Business	Business
Travel	Travel	Travel
Shopping	Shopping	Shopping
Careers	Careers	Careers
Home/Family	Lifestyle	Women's
Computers	Computers	Internet
Health	Games	Health
Kids	People/Chat	Kids & Family
Education		Education
People		Real Estate
Space/Sci-Fi		Personal Finance
Fashion		
Government		
Money		

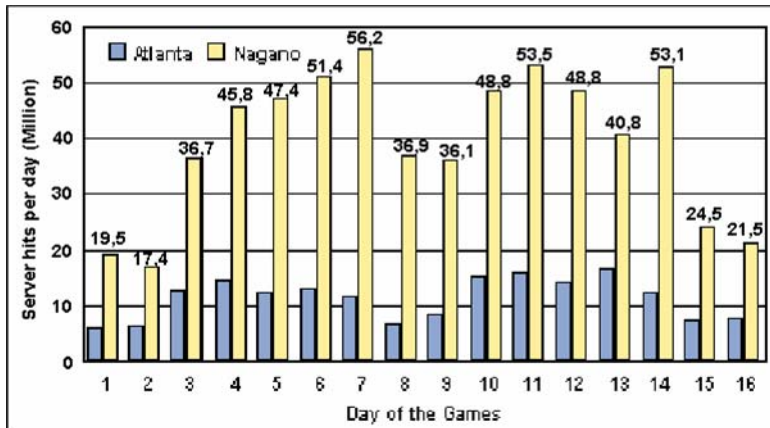
Source: Olympic Studies Centre, UAB, Barcelona.

Table 9 – The official Nagano'98 Web site's hits
(www.nagano.olympic.org)

	Number of hits (Total, 16 days)	Number of hits (per day)	Maximum number of hits (per minute)	Content pages
Atlanta'96	185,800,000	11,000,000		
Nagano'98	634,000,000	39,700,000	110,414	48,493

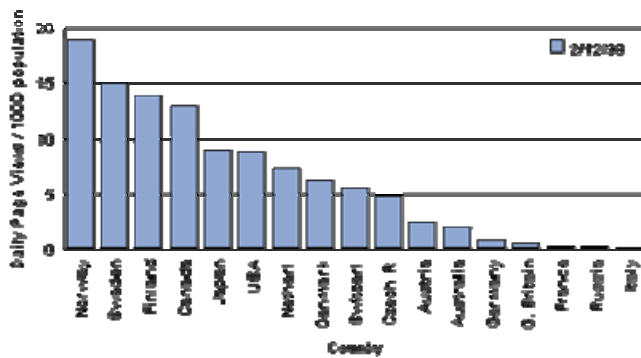
Source: José Luis Iribarren, Prg. Director Internet Strategy, IBM, 1998.

Chart 10 – Server entries per day (millions)



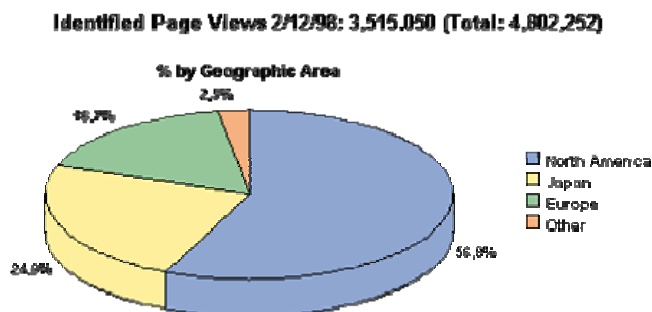
Source: José Luis Iribarren, Prg. Director Internet Strategy, IBM. Presentation given at the *International Seminar on Internet and Olympic Information Technology*, Olympia 13th and 14th May, 1998

Chart 11 – Geographical origins of the Nagano'98 Web site enquiries



Source: José Luis Iribarren, Prg. Director Internet Strategy, IBM. Presentation given at the *International Seminar on Internet and Olympic Information Technology*, Olympia 13th and 14th May, 1998

Chart 12 - Geographical origins of the Nagano'98 Web site enquiries



Source: José Luis Iribarren, Prg. Director Internet Strategy, IBM. Presentation given at the *International Seminar on Internet and Olympic Information Technology*, Olympia 13th and 14th May, 1998

**Table 13 – Pages found for “Olympic”, “Olympics” and “Olympism”
(1st May, 1998)**

	HOTBOT	INFOSEEK	EXCITE	ALTAVISTA
“Olympic”	375,524	228,479	129,766	949,210
“Olympics”	280,018	134,974	80,140	566,690
“Olympism”	514	209	180	479

Source: Olympic Studies Centre, UAB, Barcelona.

Table 14 – Olympic institutions with Web sites (1997-1998)

	May 1997	May 1998	September 1998
International Federations	54%	68%	100% (34 Web sites)
National Olympic Committees	17%	18%	21% (41 Web sites)*

Source: Olympic Studies Centre, UAB, Barcelona.

* 20% of them do not have their own Web sites. AGFIS offers information about every international federation.

Appendix 1**WEB RESOURCES ON SPORT AND OLYMPISM ON THE INTERNET**

International Olympic Committee <http://www.olympic.org/>
Olympic Museum Lausanne <http://www.olympic.org/museum/>
International Olympic Academy <http://www.ioa.com.gr/>

Olympic Games

Nagano 1998 <http://www.nagano.olympic.org/>
<http://www.ibm.nagano.org/>
Sydney 2000 <http://www.sydney.olympic.org>
Salt Lake 2002 <http://www.slc2002.org/>
Athens 2004 <http://www.athens2004.gr/>

Bid Cities**2006 Winter Olympics**

Zakopane: <http://zakopane2006.site.com.pl>
Innsbruck: <http://www.tis.co.at/galleria/0/olymp/>
Kitzbuehel: <http://www.tirol.com/olympia2006/>
Salzburg: <http://www.olympia-2006.at/>

2008 Summer Olympics

Boston: <http://www.olympia-2006.at/>
Cincinnati: <http://www.gc2008.com/index2.html>
Osaka: <http://www.osakawtc.or.jp/wtco/e/olympic/~olympics.html>
Toronto: <http://user.centrenet.on.ca/djf/2008bid.html>
Yokohama: <http://www.city.yokohama.jp:80/wnew/olympic/index.html>

2012 Winter Olympics

Pittsburg: <http://www.contrib.andrew.cmu.edu/usr/mmdg>
Warsan: <http://www.ternet.pl/~mcsr/Olympic/intro.htm>

History of the Olympic Games

The Olympic Almanac (<http://www.andrew.cmu.edu/~mmdg/Almanac/>)

A website offering complete information about the history of the Olympic Games elaborated by Michael S. Monaco , Chairman Pittsburgh Olympic Bid Organizing Committee

The Olympic Games through the Encyclopaedia Britannica (<http://sports.eb.com>)

All the information provide at the EB about the Olympics. Available only for subscribers

Ancient Olympic Games Exhibition (<http://olympics.tufts.edu/>)

The Classics Department at Tufts University created an exhibit on the ancient Olympics that provides you information on the ancient and the modern Olympic Games, the philosophy of the ancient Olympics, information on the athletes and a tour to Olympia.

Foundation of the Hellenic Word

<http://www.fhw.gr/projects/olympics>

Athens 1896

<http://www.orama.com/athens1896>

Berlin 1936 (<http://www.ushmm.org/olympics/index1.html>)

The United States Holocaust Memorial Museum offers anon-line exhibition about The Nazi Olympics Berlin 1936

Lillehamer 1994

<http://wc94.oslonett.no/OL/OL94.html>

Research and Information Centres

Centre d'Estudis Olímpics i de l'Esport, Barcelona	http://blues.uab.es/olympic.studies/
Centre for Olympic Studies, New South Wales	http://www.unsw.edu.au/clients/olympic/
Centre for Olympic Studies, Ontario	http://www.uwo.ca/olympic
Fundacio Barcelona Olimpica	http://www.fundaciobarcelonaolimpica.es/
The Amateur Athletic Foundation Los Angeles	http://www.aafla.com
The Ancient Olympic Games Virtual Museum	http://www.cs.dartmouth.edu/olympic

National Olympic Committees

Australia	http://www.australian.olympic.org.au/
Austria	http://www.oeoc.at/
Bermuda	http://www.bermuda.bm/olympic/
Bulgary	http://www.infotel.bg/bocbg/
China	http://www.chinaolympics.com/
Croatia	http://www.hoo.tel.hr/hoo/
Cyprus	http://www.olympic.org.cy/
Denmark	http://www.dif.dk
Dominican Republic	http://delphis.netgate.net/olympic.htm
Ecuador	http://www.onnet-ec-com/COE/home.htm
Egypt	http://www.instinct.net/eoc/
Estonia	http://www.online.eok.ee/
Finland	http://www.noc.fi/
Fiji	http://www.fijifvb.gov.fj/sports/fasanoc.htm
France	http://www.comité-olympique.asso.fr/
Greece	http://www.forthnet.gr/eoa/
Guam	http://www.gnoc.com/
Guatemala	http://www.guate.net/congua
Ireland	http://www.dskyline.com/teamireland
Italy	http://www.eznet.it/coni/
Japan	http://www.joc.or.jp
Korea	http://www.sports.or.kr
Liechtenstein	http://www.Lie-games.li
Lithuania	http://www.ltok.lt/
Malta	http://www.digigate.net/moc/
New Zealand	http://www.olympic.org.nz
Norway	http://www.nif.idrett.no
Poland	http://www.it.com.pl/pkol/
Portugal	http://www.comiteolimpico.pt/
Russia	http://www.roc.ru
San Marino	http://www.omniway.sm/cons/
Slovakia	http://www.olympic.sk/
Slovenia	http://ero.sp.uni-lj.si/oks/e_oks.html
South Africa	http://www.nocsa.org.za
Spain	http://www.sportec.com/www/coe/main.htm
Sweden	http://www.svenskidrott.se/os/sok.htm
Switzerland	http://www.swiss-sport.ch
Thailand	http://www.asiangames.th
United Kingdom	http://www.olympics.org.uk/
Ukraine	http://www.mwukr.ca/olympics.html
United States	http://www.olympic-usa.org/
Yugoslavia	http://www.beonet.yu/jok/index.html

International Sport Federations

General Association of International Sports Federations

<http://www.worldsport.com/>

International Amateur Athletic Federation (IAAF)

<http://www.iaaf.org>

International Baseball Association (IBA)

<http://www.alpcom.it/digesu>

Fédération Internationale de Basketball Association (FIBA)

<http://www.fiba.com>

International Badminton Federation (IBF)

<http://www.intbadfed.org>

Association Internationale de Boxe Amateur (AIBA)

<http://www.uni-leipzig.de/~iat/aiba1.htm>

International Bobsleigh and Tobogganing Federation (FIBT)

<http://www.fibt.corel.com/>

International Canoe Federation (ICF)

http://www.datanet.hu/icf_hq

Union Cycliste Internationale (UCI)

<http://www.uci.ch>

World Curling Federation

<http://www.curling.org/>

Fédération Equestre Internationale (FEI)

<http://www.worldsport.com/sports/equestrian/home.html>

Fédération Internationale d'Esime (FIE)

<http://www.calvacom.fr/fie>

Fédération Internationale de Football Association (FIFA)

<http://www.fifa.com>

Fédération Internationale de Gymnastique (FIG)

<http://www.worldsport.com/sports/gymnastics/home.html>

International Weightlifting Federation (IWF)

<http://www.worldsport.com/sports/weightlifting/home.html>

Fédération Internationale de Handball (IHF)

<http://www.worldsport.com/sports/handball/home.html>

Fédération Internationale de Hockey (FIH)

<http://www.fihockey.org/>

International Ice Hockey Federation (IIHF)

<http://www.iihf.com/>

International Judo Federation (IJF)

<http://www.ijf.org/index.html>

Fédération Internationale de Luge de Course

<http://members.aol.com/fil01/filhome.htm>

Fédération Internationale des Lutttes Associées (FILA)

<http://www.fila.wrestling.org/>

Fédération Internationale de Natation Amateur (FINA)

<http://www.hk.super.net/~kff/wmsf.html>

Union Internationale de Pentathlon Moderne et Biathlon (UIPMB)

<http://www.pentathlon.org/>

<http://www.ibu.at>

Fédération Internationale de Softball (ISF)

<http://www.worldsport.com/sports/softball/home.html>

International Skating Union (ISU)

<http://www.isu.org/>

International Table Tennis Federation (ITTF)

<http://www.ittf.com/>

Fédération Internationale de Tennis (ITF)

<http://www.itftennis.com>

Union Internationale de Tir (UIT)

<http://www.worldsport.com/sports/shootingl/home.html>

Fédération Internationale de Tir à l'Arc

<http://www.archery.org/>

International Triathlon Union (ITU)

<http://www.triathlon.org>

The World Taekwondo Federation (WTF)

<http://www.wtf.or.kr/>

Fédération Internationale de Ski (FIS)

<http://www.fis.netica.net>

Fédération Internationale des Sociétés d'Aviron (FISA)

<http://erebus.rutgers.edu/~ronchen/fisa.html>

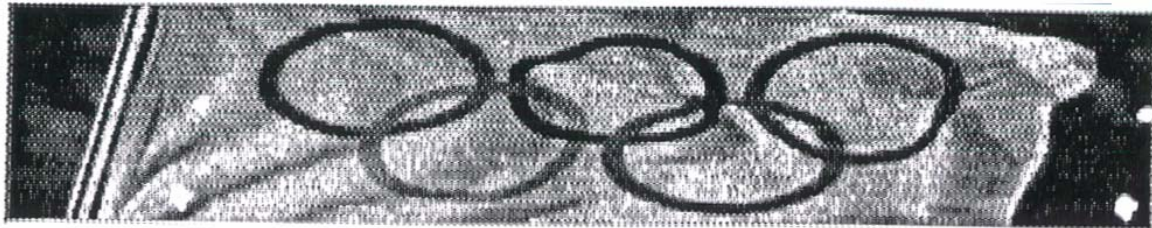
Fédération Internationale de Volley-Ball (FIVB)

<http://www.fivb.ch/>

International Sailing Federation (ISAF)

<http://www.sailing.org>

Appendix 2



The Olympic Movement

The World-Wide Web Home Page of the International Olympic Committee



Welcome
by the
President

To find out more about "The Olympic Movement",
click below on the version you prefer:

➔ [\[French version\]](#) [\[English version\]](#) ➔



The "Olympic
Charter"



News and Press
Releases



Programme of
Meetings



days to
Nagano '98



days to
Sydney 2000



days to
Salt Lake 2002



days to
Athens 2004

● Electing a city to host the Olympic Games ●



The Olympic Museum, Lausanne