First and foremost, I would like to thank our President, Jacques Rogge, for inviting me to make a presentation at the 2009 Olympic Congress. It is an honour of the highest order to be part of the Olympic Movement, and a privilege to speak to you today and share this forum with such distinguished panellists.

The topic under discussion is of great interest to all of us here, and is one I have followed closely since my days as a graduate student majoring in information technology. Yes, a long, long time ago!

Digital technology has indeed revolutionised not only the way we communicate, but the way we work and interact. It has also changed the way we view the world and, not surprisingly, the way we watch sports.

So let me begin with a performance that demonstrated at an early stage what broadcasting technology can do for sport, and what sport can do for broadcasting technology.

When Nadia Comaneci became the first gymnast in Olympic history to be awarded the perfect score of 10 at the 1976 Olympic Games in Montreal, advances in technology enabled ABC to broadcast her performance in slow-motion montages set to an American soap opera theme, renamed Nadia’s Theme. Ironically, the scoreboard in Montreal was not able to display a four-digit score. Instead, it showed a three-digit score: the number “one”, followed by a decimal point and two zeroes. Despite the scoring constraints, the broadcast captured a historic performance, flawless, perfectly beautiful, and one that is still freely available for anyone to watch over and over again.

Comaneci became a global star. Her performance marked an important development in her sport, ensuring that gymnastics would feature prominently in future Olympic broadcasting.

The posting and availability of this video on the web today carries a number of implications, which reflect today’s digital world.

When Michael Phelps and Usain Bolt captured the imagination of the world at the 2008 Beijing Olympic Games, audiences everywhere were able to watch repeats of their historic performances at their convenience, set them to their own music theme, and watch them again after work, during work, at home or on the move – an advantage Olympic fans did not have in 1976.

The contrast shows what digital technology can provide: digital… gives us more.

Digital gives more options, tailored to individual preferences, whether people tune in to watch Michael Phelps or Usain Bolt perform live or visit the Beijing Olympics Channel on YouTube, which is averaging some twenty thousand views per day, even a year after the Games Closing Ceremony.

The benefits of digital, which today I will use as a synonym for all post-analogue broadcast technologies, can be summed up in the following points:

- Digital develops broadcast value to help amortise the cost of broadcasting: the value of digital broadcasts on the web will accelerate as we continue to move away from internet productions based on TV-production formulas, as production costs continue to decrease, and as online advertising continues to evolve.
- Digital expands distribution: this proves to be the same for Olympic-Games-type coverage and individual sports, for instance rowing, being able to aggregate their members on the internet for a particular championship.
- Digital fills the gap between other media and builds on this principle. Beijing brought an end to the myth whereby digital media had been considered to have a cannibalising effect on television.

Today, Olympic right-holder broadcasters acquire and can monetise five thousand hours of Olympic Summer Games content and a thousand hours of the Olympic Winter Games in high definition for multi-platform exploitation. The different components of the platform do not compete against each other, but are complementary.

Back in 2004, the only monetisation was through traditional free-to-air broadcasting, with a maximum of 300 hours to be broadcast and sold to interested advertisers.

Athens proved the Olympics could be broadcast on broadband; Beijing that it could be monetised. Beijing showed that the more we watch, the more we want.

NBC discovered that viewers watching the Beijing Olympic Games on both internet and TV consumed more than twice the content consumed by viewers on TV alone. The first truly digital games shattered what were perhaps unduly low expectations for online viewership. During those two weeks, millions of individual visitors flocked to the different Olympic websites.

But who wants more? And where do we find them?

Unfortunately, broadcasting markets do not move at the same pace as broadcasting technologies. The regions that received broadcast signals from the first ever televised Olympic Games, the 1960 Summer Games in Rome, still dominate the international TV market. The United States, Europe and Japan still account for 80% of Olympic broadcast rights fees, even though their populations amount to only about 20% of the world’s population.
Nonetheless, the door was opened in Rome, where videotaped performances were put on an airplane and delivered to the rest of Europe, the USA and Japan, to provide the best product that sport can offer: the human spirit. These tapes contained timeless stories, such as that of 1960 Olympian Abebe Bikila of Ethiopia, who, running barefoot, became the first black African Olympic marathon champion. It is as striking to watch today as it was then.

Forty-eight years later, record-breaking audiences tuned in, searching for performances like Bikila’s via an array of broadcast channels that were unthinkable in 1960. Broadband gave the Beijing Games the capacity to overcome the time difference in ways never imagined back then.

In half a century, video broadcasts have gone from antenna, to cable, to satellite, to broadband, and now to mobile.

CCTV’s mobile platform for Olympic coverage enjoyed an average of more than 50 million video streams during those two weeks, compared to just 2.4 million in Athens.

This diversity and this specialisation are perhaps the richest outcomes of the Digital Revolution.

Diversity and specialisation provide advertisers with a sharper focus, and therefore opportunity to target their messages more accurately. Advertising will find its way, if you give it time. On the net, advertising has moved on from the early days of banners, ranging now from simple text ads on search engines to rich media videos that are able to create both brand awareness and promotional value.

Nature will find its way, they say. So does advertising, if you give it time.

Initially feared, the fragmented audience of cable television has pushed the US cable industry beyond the broadcasting industry. Cable now earns more revenue than broadcast television. Its growth attests to the fact that the more options we are offered, the more we will consume. Nine years ago, only six US cable networks had more than 80 million subscribers. By 2014, thirty-five US cable networks are expected to have more than 100 million subscribers.

Besides diversity and specialisation, digital also provides the opportunity to reinvent.

And this applies not only to the Olympic Games.

College basketball is popular in the United States, but when the final, single-elimination, sixty-four-team tournament comes around in spring, its fans turn frenetic; hence the term “March madness”. Searching for more ways to increase its production value, rights-holder CBS started broadcasting games live on the internet in 2003. Three years into the venture, CBS changed strategy to make the content freely available. The results have been remarkable.

The National Collegiate Athletic Association (NCAA) Final Four tournament runs for 19 days. Yet, last year, CBS had surpassed its previous year’s total of visitors to its website by the fourth day.

The Digital Revolution is not just in sport, either. The success of online music stores such as iTunes have proved that consumers are willing to sacrifice quality – at least in the eyes of musical purists – for quantity and convenience.

Compression technologies have turned many of us into record collectors, photo-editors and movie producers. Storage media not only speed up the flow of new information, but revive the old.

This enables network companies to re-broadcast shows outside of television, extending the life of old shows, reviving others and finding new media for movies beyond the traditional ones. Some shows have attracted more advertising revenues through online platforms like Hulu and TV.com than on prime-time television.

Storage media have also allowed news broadcasters to radically improve their production value.

In the case of sports, archives in the form of still and video images, along with massive text data, provide a great opportunity to communicate with audiences outside of Games Time.

Two years ago, the International Olympic Committee (IOC) launched the Patrimonial Asset Management (PAM) project to digitalise all Olympic Games archive and video material. The IOC has available in digital form more than forty thousand hours of video, seven hundred thousand still images and data, including results that date back to 1896. It is a very long tail of Olympic content that we want to exploit and make available to the public.

Having a presence on digital-media platforms is essential, connecting you with the communities of athletes, volunteers, collectors and spectators. It also allows those communities to connect with each other and, for example, listen to athletes such as Michael Phelps talking about “one of the greatest feelings.”

Looking ahead, digital is not without its challenges.

If fault is to be found with the Digital Revolution, it is perhaps with the other side of digital reinvention, the one that leaves behind rapidly outdated programming, obsolete applications and extinct files. Floppy disks and VHS technology are two examples that come to mind.

The threat of leakage creates an incentive for broadcasters to seek rights on all media, so as to protect and maximise broadcasting value. Clearly, the multiplicity of channels and platforms for rights-holders is here to stay. Going forward, it is less clear whether this will be on a one-company basis, or whether it will require company partnerships.

Finally, piracy is forcing right-holders to adapt to new threats that can undermine the value of their rights.

So far, the traditional media have generated enough money to compensate for leakage-derived losses. The threat of user-generated content and online platforms with massive reach, forces producers to make a better product, and right-holders to exploit digital media rights and broadcast live.

The 2010 Vancouver Winter Games will show very clearly where the Digital Revolution is heading.
And Copenhagen is the ideal place to look ahead. Denmark has once again been ranked at the top of this year’s Global Information Technology Report, in which the World Economic Forum ranks the world’s most networked economies. Broadband penetration is particularly high in the Nordic countries: Sweden was ranked second, while Finland and Norway stand at sixth and eighth out of 134 countries.

Coming in the wake of Beijing’s digital triumph, the Vancouver Games are perfectly placed to derive maximum benefit from broadcasting technologies in the Nordic countries, where winter sports are king, and where the Nordic Games are a prelude to the Winter Olympic Games.

We can already feel the excitement, which will only increase as February draws near. After Vancouver, the media may be compelled to ask whether the 2012 Summer Olympics in London will become the first truly “Mobile Games”.

The technology is expected to be ready, but only time will tell. So far, it has been a fascinating story, whether scored in four digits or in three!