

**The Future Digital Economy  
Digital Content – Creation, Distribution and Access**

**Organised jointly by the Italian Minister for Innovation and Technologies and the  
Organisation for Economic Co-operation and Development**

**30-31 January 2006, Rome, Italy**

**Presentation by the Hon. Donald J. Johnston, Secretary-General of the OECD**

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**Session 1: The importance and role of digital content:  
Encouraging production and enhancing access**

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I would like to welcome you all to this important Conference, and offer our sincere gratitude to the Minister Lucio Stanca and his colleagues for jointly organizing this event and for hosting it in such a splendid setting.

I note that you have a very ambitious programme at this conference. Quite frankly, I am here mainly to listen and perhaps raise a few questions rather than to impart any sophisticated knowledge which would cast light on the rather complex issues you are going to tackle.

I am attracted to Maynard Keynes wise counsel to "examine the present, in light of the past, for the purposes of the future".

As I look at your programme it strikes me that that is exactly the challenge that you have set yourselves today.

But we should also remember the wisdom of Yogi Berra, the famous American baseball player, namely that it is tough to make predictions, especially about the future.

Now let me, if I may, offer a few personal recollections on the past, and in doing so I must recognise that my past is quickly approaching the biblical lifespan of three score years and ten.

This means that while I was not around to see the introduction of electricity to the rural farm community in which I grew up, I very well remember cranking up by hand a Victrola for my grandfather and placing those old records from the 1920s on the turntable. I inherited quite a large collection of those records, which had grooves only on one side. I was only about 9 years old at the time, and you can appreciate from my perspective, the explosion of technology over the past 60 years has been nothing less than stunning.

When I think back to that Victrola of my grandfathers and to the crystal sets that my brother and I used to listen to when we were young living on a farm, you might well imagine my personal reaction to this revolution which has taken place in Information and Communication Technology, and which is day by day transforming our societies. But it is the more recent, current and future developments that we are here to discuss today. And I am glad to see that with your presence at this conference; we have the breadth and depth to provide an interdisciplinary approach if I may use those words, because we have economists, business leaders, artists, policy makers, representatives of trade unions and civil society.

I am also stimulated by this discussion because, as I am sure that none of you know, I myself used to be involved in the film industry. As a lawyer, I put together the first film "tax shelters" in Canada, and indeed was the executive producer of Oliver Stone's first film, which was called "Seizure" and was shot in Canada in 1974. I spent many years in the 1970s, working partially on the tax and financial side of the film industry as a lawyer, right up until I embarked on my political career, principally as a Minister in the Cabinet of Pierre Elliott Trudeau during the

1980s. As you can see my career has spanned many of the areas that capture the creative tensions in this Conference – content, technology, business, economics, and law, national and international policy

Let me roll the tape forward (although even that is now a dated expression since the tapes I had and the machines that played them have also been relegated to museums). But as I said, let me move forward to 1984 when I was the Minister responsible for science and technology in the Canadian Federal Government.

At that time, we were all excited about what was then known as the information society, about fifth generation computers, and about the potential of biotechnology. Against this background of expectation for the future, I organised an international conference which was entitled "Canada Tomorrow".

The discussion and exchanges between experts at that conference made us look into an extraordinary future, not only for Canada but for the world.

Returning to Keynes and my theme that we should examine the present in light of the past, the Canada of tomorrow that we discussed is far from the Canada of today. I would say that what characterises the present and, indeed, the recent past is the rapidity of change and the challenge to adapt to change. In the context of this conference, we should tease out what a rapidly changing landscape means for the potential of digital media and Internet content and policy.

Time is not on the side of those of my generation who are inclined to look at slower historical evolution. This world is now analogous to a very fast forward button on a VCR (another example of a technology being consigned to the archives of history).

To show the pace of recent innovation. I would recall that just 8 years ago in 1998 the OECD organized, in collaboration with the Government of Canada, a broad and far reaching Ministerial conference entitled "A Borderless World: Realising the Potential of Global Electronic Commerce". The focus at that time was on selling on-line. The analytical and policy role of the OECD was firmly established as was that of numerous other international organisations and business and civil society groups who participated in the conference.

It is extraordinary that what we conceived of only 8 years ago as the role of ICT has changed dramatically. It has become much more than a medium for selling on-line. Those eight years represent a period of extraordinary technological change and innovation. From this, I deduce that it would not be prudent to do linear projections of what we see today into the future.

A quick timeline of technological innovation and its impacts on our economies reveals a great deal about the digital revolution. Little more than decade ago, there were few Internet connections in OECD countries and online information systems were largely restricted to specialized users in the military and academic communities; today, citizens of virtually every country of the world have some access to Internet, and the web has become a leading tool for obtaining information about the world around us. In the past decade the use of mobile phones has grown ten fold in OECD.

My staff tell me that there are now more mobile phone subscriptions than people in Italy! Digitalization has also played a key role but by opening telecommunication markets to

competition OECD governments provided the framework for the new potential to be fully utilized and new applications developed including mobile digital content such as music, video and TV.

Yogi Berra was right: predicting the future is difficult.

What are we seeing now?

- The convergence of networks and increased diffusion of high-speed broadband has shifted attention towards digital content and new applications, which offer new business opportunities, growth and employment.
- There is far greater access to a huge amount of public sector information, including archives, libraries and museums.
- This is the age of “King Content” as The Economist described it on its front cover recently: digital content is everywhere and it is changing established patterns of behaviour and business.

As always with new technologies, there is adaptation and creative tensions and changing policy roles.

Allow me to make a few general observations of what I see from my perspective as Secretary-General of the OECD, but also as a user like everybody here. I would like very briefly to touch upon three elements.

First of all, where are we with respect to the infrastructure, the so-called pipes, the delivery systems?

Second, let us consider content, because like any other pipeline, if it is there, there is the expectation that it will be filled and that products will be delivered through that pipeline.

Finally, there is a question of clientele, the users: who are they, how have they (and how will they) adapt to these new technologies, and what will they adopt from the buffet of choices on offer, based on their own personal preferences.

On the question of infrastructure it is extraordinary how fast broadband has been growing: at the beginning of 2006, there are an estimated 155 million subscribers in OECD countries. This means that there is one broadband subscriber for every 7.5 inhabitants. In fact, those OECD countries leading the pack have one broadband subscriber for every 4 inhabitants.

The speed of access has increased incredibly: ADSL and cable in OECD countries now averages 7 Megabits per second and optical fibre is, of course, even faster at something like 56 Megabits per second. This is happening not just within the OECD. We also see other countries such as China, with which the OECD has growing important relations, which now has 36 million broadband subscribers, and 100 million Internet subscribers. You can say that is not very big given a base of 1.3 billion people, but it is a tendency which will accelerate. And the same will be true of India.

As I said a moment ago, we now have these great pipelines, huge access for individuals and businesses which will likely increase exponentially. The question is who is going to fill those pipelines with digital content and with what digital content? Clearly the rapid diffusion of high-

speed broadband has shifted attention towards content and applications, new demands and the promise of new business opportunities through which hopefully we will see growth and increased employment.

What in essence does this mean for our societies in terms of increased productivity, increased employment and of course economic growth?

At this stage it might be difficult to measure in precise quantitative terms, but there is no question that there are increased business opportunities, both upstream and downstream. As the French would say “en amont et en aval”. Upstream is the whole area of creation of product, and downstream there are of course technologies to assure the diffusion and application of content; this combination resulting in synergies for job creation and economic growth.

Before I turn to some of the other areas in which this technology can make a huge impact let me point out that in music 420 million single tracks sold on-line in 2005 which was up from 156 million in 2004. This now represents 6% of global record company revenues.

In games, revenues in 2001 surpassed film box office ticket sales and computer games are close to the recorded music industry in global revenues. And the biggest online game, the “World of Warcraft”, now has 5.5 million customers who could potentially all play at the same time and collectively change it as they play.

These are major contributors to economic growth.

But entertainment is only one side of the digital content coin. Personally I regard the other as much more significant in terms of changing what we do and how we do it. On-line education, health, and public sector information is becoming increasingly important as is the use of digital content in helping government do its work. At the OECD, for example, we are engaged in what is called e-government, surveying and evaluating how effectively governments are using ICT to inform citizens but also to respond to their requirements and offer on-line services such as the preparation and filing of income tax returns, obtaining renewal of licenses, obtaining information on any variety of issues where the government and the citizen interface. This may be more difficult to measure economically in terms of overall societal benefit, but it must be very substantial.

In science, at least 75% of all journals are now published online. About one-half of medical information is being published online. Here there are major issues regarding how digital research data should be accessed, and the OECD has been working to improve access to digital research data from publicly funded research to contribute to the advancement of scientific research and innovation.

We also know today that new content is being created by network users, that is probably called a rise of the amateurs. The creation of blogs, about 22 million not just in English but also a disproportionate share in Japanese and Korean - probably due to the larger diffusion of broadband in those countries.

We have now had a look at the present in light of the past, but what of the future. That is for you to discuss at this gathering here in Rome. What will be the impact? What will be the further creative destruction in this sector? Are there major changes taking place in value chains and in business models? Is digital content and broadband creating new commercial and public sector business models which could exploit new opportunities?

Are some of these technologies disruptive, as they challenge established value chains and business models? Is power shifting more to consumers than to producers through their capacity to access products and services in national and international markets? Are the major concerns with respect to the role of intellectual property in protecting ownership and the management of copyright in a digital field being addressed? If not, how should they be?

These changes have disintermediated many traditional players, and re-structured the ways in which the service oriented economies of the OECD world have functioned. Everything from newspapers to manufacturing and engineering specifications and scientific research is increasingly oriented to Internet models of distribution. Structuring access to this wealth of information has itself become a key factor in our economies - witness the value-added boom of Google and online digital content businesses I mentioned earlier.

The digital revolution has also changed the very heart of the human endeavor. Knowledge, which has always been the source of innovation and change, was traditionally imparted by long years of education and specialization. Now online services offer massive data and information collections that surpass any traditional library or data source.

The skill sets of citizens will change - we will need to know where to find information quickly, how to absorb that information, and how to assess its reliability and use it in a timely and well-articulated fashion. Education will need to train individuals how to use the mass of new information available in a constructive, timely fashion.

Time itself will become the essence of information held and used by citizens. Communication of knowledge in a structured fashion will be an essential skill rather than simply possessing the knowledge itself. Persuasion will become more difficult in an information rich world. How well are we preparing ourselves for this with our educational systems?

And finally an area of which I think you must focus on is the role of government. How should the OECD address and enhance that role?

The OECD obviously has priorities for international co-operation related to digital content. We are analyzing and providing policy guidelines on broadband connectivity, digital content, the future of the Internet, information security and many other areas – and this conference will directly contribute to OECD reflection on all these issues.

Let me a bit more specific. We need to improve our understanding of the implications of the development of digital content, and of the impacts of digital content on value chains - one of the subjects which you will be addressing - as well as providing insights about the development of new business models, and of course identifying business, technological and policy approaches that contribute to a supportive environment for broadband content and digital economy.

We all know how challenging this work is, but it is too important to ignore, and these are issues on the daily policy agenda which OECD is tackling. Governments are in need of independent analysis that involves broad based consultation with all stakeholders, such as that undertaken in preparing in 2004 the *OECD Recommendation on Broadband Development*.

In new work on digital content the OECD is helping governments to understand how high quality "always-on" broadband Internet is changing a host of different business and government

activities. A new project is being developed which will look at the potential and challenges to the Future of the Internet and of course this includes digital content as a major driver of how the Internet is used. This Conference is a major contributor to identification and discussion of new high interest areas which could be examined in future work.

Indeed the future is uncertain. Vinton Cerf, who is sometimes referred to as the Father of the Internet recently announced that he believed that “99 percent of the Internet’s applications have yet to be invented.” This shows the wisdom of something else Yogi Berra once said, “The future ain’t what it used to be”!

We are looking forward to this Conference helping us get a better grip on what the future might be and what this future could mean for us all.