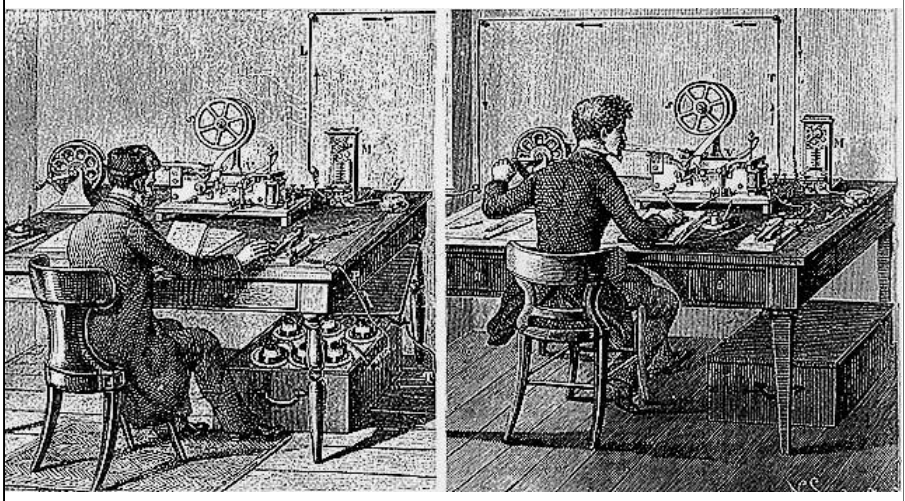
# Is the networked economy truly global?

**Dr Pekka Tarjanne, Secretary-General, International Telecommunication Union, 7th Annual Networked Economy Conference, Paris, 20-21 May, 1997**

The patron saint of Wired Magazine, our chairman's employer, is the Canadian writer and social commentator, Marshall McLuhan. In his 1962 book "The Gutenberg Galaxy", he wrote "*since the telegraph and the radio, the globe has contracted, spatially, into a single large village*". That concept of a "global village" is now part of the mythology of the information age in which we live. The global village, according to McLuhan, began in the 19th Century.

## The birth of the networked economy



The networked economy begins as the German telegraph operator on the left, sends a message and the French operator on the right, receives it.

It may seem strange to our eyes to attribute to the telegraph, such as this one used by French and German operators in this picture, or to HF radio the accolade of creating the global village. Surely the Internet or the new generation of handheld satellite phones, undreamt of in 1962, would hold a stronger claim?

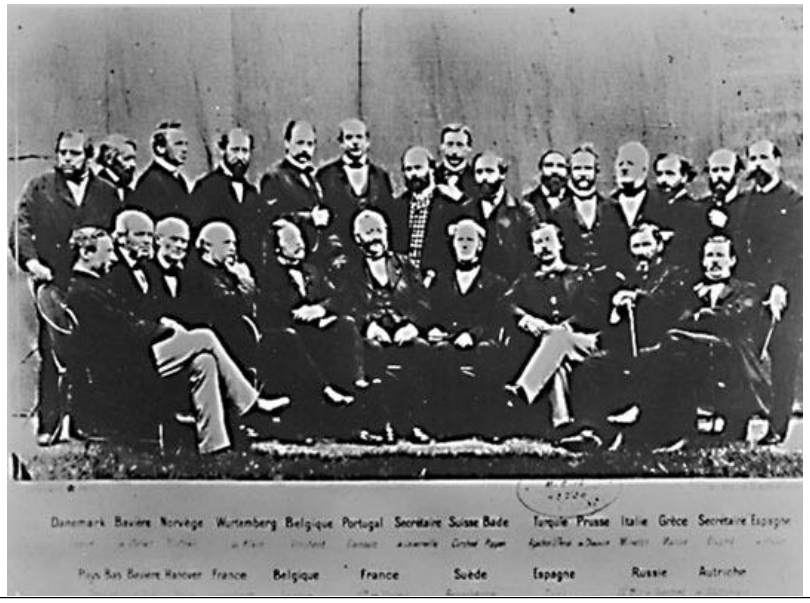
But think a little more about what a global networked economy actually means. According to the definition adopted by McLuhan, it means that what happens in one part of the globe is instantly relayed to other parts. So that, for instance, an exchange rate fluctuation in New York is instantly on the screens in Japan. Arguably, these two concepts of instantaneous communication and the erosion of geographical space were achieved as long ago as 16th August 1858 when the first trans-Atlantic telegraph cable between the United Kingdom and the United States worked for long enough for Queen Victoria to send a message of congratulation to President Buchanan. Admittedly, the 99 word message did take sixteen and a half hours to send, receive and verify, but my connection to the Internet is not always that much faster. And they were more likely to have discussed the weather than the exchange rate. So the principle of global, or at least inter-continental, communications had been established.


But of course, the networked economy has several other meanings and connotations. I would suggest there are three stages towards a truly global networked economy:

• The first, as discussed above, is the McLuhan definition of instantaneous communication across geographical space. The performance of the 1858 telegraph has subsequently been improved beyond all recognition. The current incarnation of the global information infrastructure is the Internet. Both the telegraph and the Internet are digital technologies, sending information in terms of dots and dashes, ones and zeros. The intervening period, when the telegraph gave way to analogue technologies such as the telephone and to radio, can be seen as a necessary diversion while we waited for science to catch up. Interestingly, the routes taken by the telegraph cables that supported 19th Century trade are often the same routes which are followed by today's fibre-optic cables carrying the Internet. The concept of a spider's "web" , in which the first links are very thin but are progressively strengthened over time, captures the picture very accurately.

• A second meaning of the term "networked economy" is that of connectivity and interoperability: I can call from my telephone or from my mobile to any of the other 900 million or more telephones and mobiles around the world in the time it takes me to dial 15 or so digits.

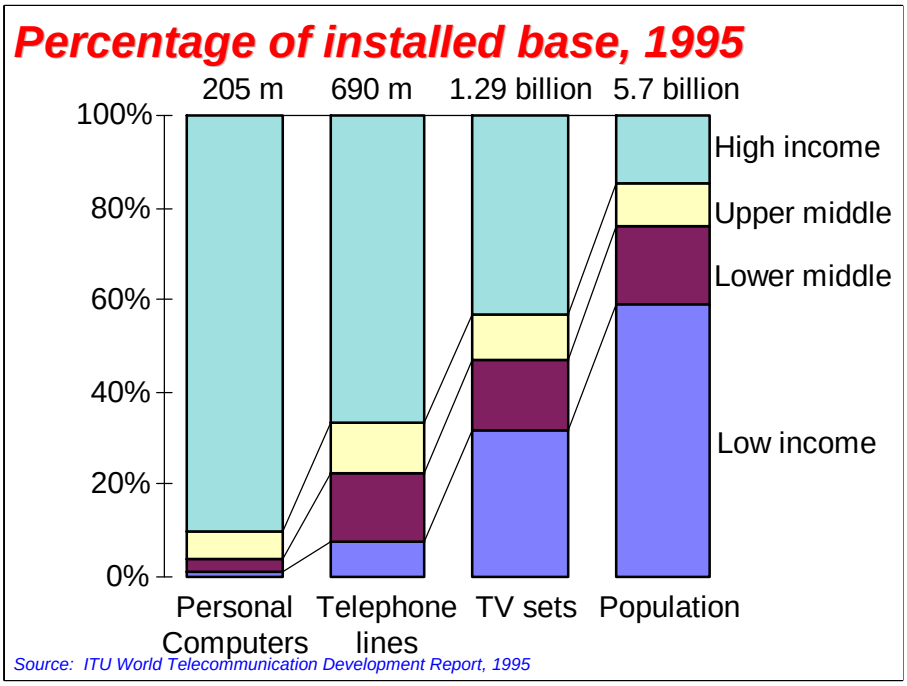
## The first "Networked economy" conference




Global connectivity has been the traditional domain in which the ITU has worked. Indeed, it was the ITU that convened the first "Networked Economy" conference, held here in Paris as recently as 1865, albeit a full seven years after the first trans-Atlantic cable was laid. As ever, governments were following rather than leading the entrepreneurs. As you can see from this historical photograph, there was as much facial hair on display at that meeting as in any meeting of self-respecting Internet enthusiasts.

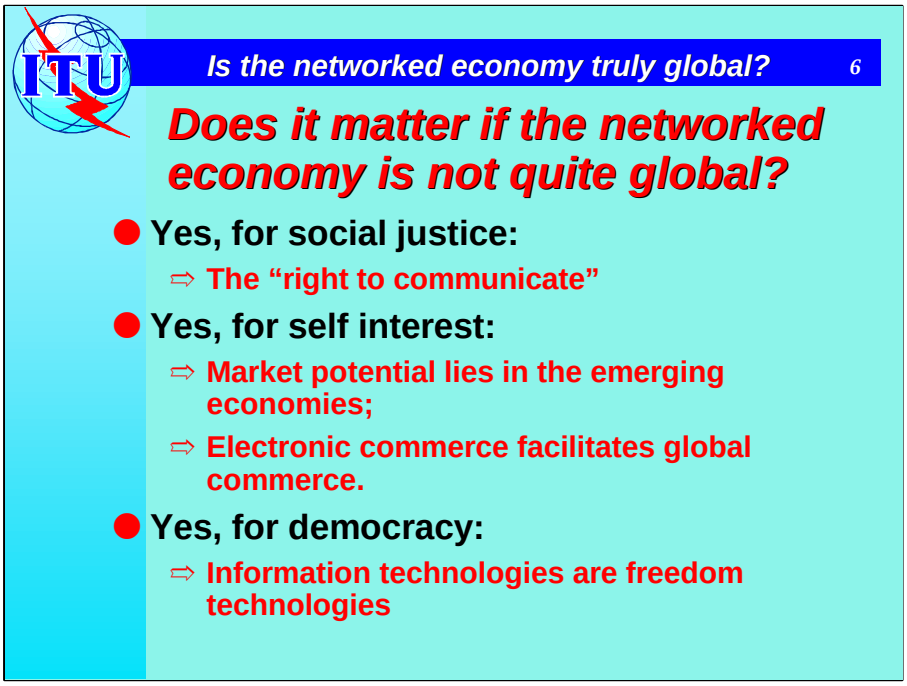
ITU has played a vital part in the second phase of networking based on global connectivity, churning out some 10'000 pages of technical standards every year. This has helped to ensure that, as new services are developed at an ever-faster pace, they can still inter-work with the existing ones. We've also been involved in the political side of networking, ensuring that even when governments don't feel like talking to each other, at least their citizens can. The Radio Regulations, one of the inter-governmental treaties of which ITU is the custodian, recognizes the electro-magnetic spectrum as a common resource of all humanity.

One of the most promising new developments in this field is the development of satellite hand-held telephones or, to use the ITU jargon, Global Mobile Personal Communications by Satellite (GMPCS). By the end of the decade, new satellite systems will make it possible to provide access to basic telecommunications from anywhere in the world -- at a price. This should mark the logical conclusion of this second phase of the establishment of a networked economy. Nowhere on the surface of the earth or in the heavens above will you be able to escape the dreaded sound of a ringing telephone.




But being able to call to or from anywhere in the world is not enough. The biggest challenge the ITU faces over the coming years is encapsulated in the the third meaning of “networked economy”: Can the world reach me? In this sense, the networked economy is still far from being global. Of the nearly 6 billion people on the planet, perhaps three-quarters of them have access to a television, half may have access to a telephone, but less than a tenth have access to a personal computer and less than a quarter of those have access to the Internet. Furthermore, access is greatly dependent on wealth. Some 97 per cent of all Internet hosts are located in the high income countries which constitute only 16 per cent of the world’s population. As many as 50 economies around the globe still do not have a single Internet host on their territory.

One of the objectives of the ITU, as contained in our Constitution, is to “promote the extension of the benefits of the new telecommunications technologies to all the world’s inhabitants”. Fortunately, we are not charged with providing those services ourselves: that is the job of our membership who comprise Governments, Regulators, Public Telecommunication Operators, Telecommunication Equipment Manufacturers and others. Rather our task is to promote the “benefits” of these telecommunication services and technologies and to make sure they are as widely spread as possible. Being realistic, I know that this goal will not be reached in my lifetime and probably not in yours either. As Jesus said, “the poor are always with us” and while we continue to live in an unjust and inequitable society, whose members are expanding at a faster rate than we can count, it will not be feasible to ensure that every home has access to basic telecommunication services. But our members are working on it.




This discussion begs the question "does it really matter if the networked economy is not quite fully global?". After all, if I can reach the world, or at least that part of it that I want to speak to and do business with, does it matter if the world cannot reach me?

I would respond that it does matter: it matters for social justice, for self interest and for democracy. ITU upholds the principle of universal access to basic communication and information services, or "right to communicate" in short. Along with our colleagues in the other UN agencies, we have been working to give weight and depth to this concept. In the global "information society" of the 21st century, probably none of the fundamental human rights established in the Universal Declaration could be implemented fully in the absence of communication between those who lay claim to them. Arguably, it will be impossible to create an enabling environment for economic and social development, to provide employment and sustainable livelihoods, or access to social services for all without universal access to basic communication and information services.

But the argument for access to basic services goes beyond altruism. There is a high degree of self interest too for those of us who come from developed economies. In 1995, the lower income countries, with a level of GDP per capita of less than the price of a new PC, accounted for more than half of the total number of new telephone lines installed worldwide and a growing share of the new mobilephones and Internet connections. By contrast, the high income countries provided only a third of the world market for new telephone lines. The age profile of developing countries is also very much in their favour when it comes to the paradigm shift to a digital world. Furthermore, the emerging markets are not only customers for the network that will constitute the networked economy, but also for the electronic commerce that it will support.

Finally, there is the argument that information technologies are freedom technologies. The PC, the fax, the telephone and the Internet are some of our strongest weapons in the fight against dictatorship and oppression. If we wish to create a networked economy which is based on the widest possible level of participation and empowerment, then it must, by definition, be a global one.