

Broadband Challenges

Acceptance Speech Presented at the Ceremony of Awarding Dr. Hamadoun Touré the Title of Doctor Honoris Causa of Wrocław University of Technology, Poland, 14 of September 2010

Dr. Hamadoun Touré
ITU Secretary General

Excellencies,
Distinguished guests,
Ladies and gentlemen,

It is a great pleasure to be here with you in Wrocław today and it is a tremendous honour for me to have been made an Honorary Doctor of this fine institution.

I am here today to accept this honour, but also to share with you my passion, as leader of the International Telecommunication Union, to Connect the World – and in particular to ensure that the digital divide is not allowed to become a broadband divide.

Here in Poland, tremendous progress has been made in the adoption and use of information and communication technologies, ICTs, especially over the past decade.

Indeed, with mobile cellular penetration of 117% at the beginning of 2010, it would be hard to find a Polish person of any age today without access to a mobile phone.

And an emerging knowledge society is clearly taking shape here, with close to 60% Internet penetration in Poland by the end of last year, and almost all access to the Internet now taking place over broadband connections.

Ladies and gentlemen,

Is broadband really that important? It is that important! I cannot over-stress this. Imagine trying to do any skilled work or apply for any skilled job in the modern world today without a broadband connection. Imagine how difficult things would be for any of us in the room here today, without email or web access. No online shopping. No access to the vast wealth of information resources on the internet. And this is just the very beginning.

We cannot predict how the development of the information society, built on broadband, will enrich the lives of everyone on the planet, but we can already see, as the second decade of the 21st century unfolds, that broadband is an extraordinary tool for social and economic development.

Indeed, it is perhaps the greatest opportunity we have ever known for human progress.

It is my firm belief that broadband is – and will continue to be – an extraordinary enabler; especially in the developing world, and especially in countries with large rural and remote populations.

Let me give you just a few examples:

With broadband networks, health services can be delivered far more effectively to ageing or isolated populations. Re-

mote monitoring of patients, for example, has proven to be far more effective than bringing people in to clinics or hospitals.

With broadband networks, we can better educate the next generations of children, wherever they live. With wireless and mobile networks we can reach out to them wherever they are.

With broadband networks, traffic networks can be streamlined, government services can be delivered more efficiently, and energy supplies can be properly monitored, controlled and conserved.

With broadband networks, we can create the right environment for applications like mobile banking, which can improve the lives of hundreds of millions of people around the world.

With broadband networks we can help to ensure environmental sustainability and help to manage and mitigate climate change.

And with broadband networks, progress can be accelerated towards meeting the Millennium Development Goals.

Distinguished guests,

Two things need to change if broadband is to become a ubiquitous resource for all the world's people.

Firstly, governments need to raise broadband to the top of the development agenda so that rollout is accelerated and the benefits are brought to as many people as possible.

And secondly, broadband needs to become much more affordable around the world.

Looking at the second point first, there are quite extraordinary disparities today between the affordability of broadband access in different countries around the world.

Let me give you some dramatic figures from ITU's 'Measuring the Information Society 2010' report.

In the top 21 countries included in the fixed broadband Internet sub-basket, published in the report, broadband subscriptions cost less than 1% of average monthly income – and under 3% of average monthly income in a further 22 countries. Here in Poland, for example, the figure is just 1.4%.

At the other end of the scale, in the most expensive 28 countries in ITU's list – most of which are UN-designated Least Developed Countries, LDCs – a monthly broadband subscription costs over 100% of average monthly income.

What a terrible irony that is!



Fig. 1. Dr. Hamadoun Touré receives his certificate of Ph.D. HC awarded him by the Wrocław University of Technology, Poland (handed by prof. Daniel Bem). © Wrocław University of Technology.



Fig. 2. Dr. Hamadoun Touré in the Hall of Wrocław University of Technology offering his formal Acceptance Speech. © Wrocław University of Technology.



Fig. 3. Dr. Hamadoun Touré opening the commemorating inscription with his name accompanied by prof. Tadeusz Więckowski (Rector of Wrocław University of Technology). © Wrocław University of Technology.

The people who can least afford access to broadband are being asked to pay the most, relative to their income.

This is scandalous. But there are grounds for optimism, and broadband access is getting more affordable every year. Worldwide, broadband prices dropped by 42% between 2008 and 2009, and broadband became more affordable in almost every market across the globe last year.

There are many reasons for this, and I am confident that broadband will continue to get more affordable as time goes on. One of the most important drivers in terms of bringing down costs in both the developed and the developing world has been an ongoing increase in capacity, itself driven by a newly competitive environment.

In Africa, for example, we are seeing new broadband capacity coming on-stream fast, and I was delighted to be personally present in Kenya when a new submarine cable was brought onshore in March, and then to be in French Guiana just last month to see new satellites for Africa being launched.

These are truly inspirational events, and signs of the very positive times in which we live.

Ladies and gentlemen,

Let me turn now to the need for government leaders to promote broadband at the national level.

Broadband networks deliver benefits across society as a whole, delivering improvements in services and reductions in costs – particularly in sectors such as healthcare, education, energy and transport.

This means that they can quickly pay for themselves. Indeed, estimates show that in most developed countries, cost savings of just 0.5% to 1.5% over ten years, in these four key sectors alone, can justify the entire cost of building national point-to-point, fibre optic networks.

Research also consistently shows that investment in any sort of ICTs has a direct positive effect on GDP growth – and that higher-end technologies, such as broadband networks, deliver the greatest benefits.

So that while a 10% increase in mobile teledensity seems to increase GDP by some 0.7 percentage points, the same increase in broadband penetration can boost GDP by an average of 1.3%.

This is why we launched our 'Build on Broadband' initiative earlier in the year, and why we are so proud to be playing a key leadership role in the 'Broadband Commission for Digital Development', which will deliver its report to the UN Secretary-General, Ban Ki-moon, this coming Sunday, just ahead of the 2010 MDG Summit in New York. The Broadband Commission is chaired by President Kagame of Rwanda and Carlos Slim Helú, Honorary Life-



Fig. 4. Prof. Tadeusz Więckowski, Magdalena Gaj (UnderSecretary of State, Poland) and Dr. Hamadoun Touré. © Wrocław University of Technology.



Fig. 5. Dr. Hamadoun Touré and Wojciech Hałka (General Director of NIT, Poland). © Wrocław University of Technology.

time Chairman of Grupo Carso. The Vice-Chairs are myself, and Irina Bokova, Director General of UNESCO, and we have a total of over 50 very high-profile Commissioners from the public and private sectors.

Our Commissioners come from many different walks of life and many different backgrounds, but they all share a common vision: the desire to see the vast benefits of broadband brought to all the world's people.

Together, we are determined to demonstrate broadband's truly transformational nature.

Together, we believe we have a unique, once-in-a-generation opportunity to drive social and economic progress.

Distinguished guests,

What will these broadband networks of the future look like? From an infrastructure perspective, it is certain that no single technology will be able to provide all the answers. Optical fibre is certainly desirable at the core of the Internet, and for the majority of backhaul traffic, to achieve a high-capacity backbone. But at the edges of the network, and in particular in the hands of end-users, it seems likely that mobile devices will deliver the majority of broadband applications and services to most people.

Indeed, this is already the case, with nearly 900 million mo-

bile broadband subscriptions forecast to be achieved globally in 2010 – even if many mobile broadband subscribers do not yet use their mobile devices for Internet access.

Depending on local conditions – such as geographic location, economic prosperity, etc. – there is a role for a host of different technological solutions for providing broadband access: from cable to fixed wireless; from satellite to microwave; from xDSL to mobile technologies; and many more.

As a result, policy-makers should seek to adopt a technology-neutral approach, as they need to plan and accommodate new upgrades of current fixed and wireless technologies, as well as brand new technologies which do not yet exist.

Policy-makers also need to recognize that demand for radio-frequency spectrum is likely to grow rapidly – bearing in mind that as a precious resource, spectrum allocation must be based on costs, efficiency of use, and the needs of users.

Ladies and gentlemen,

Broadband can bring the world's riches within reach of all the world's people. But it also opens up new opportunities for wrong-doers, and in particular cybercriminals.

It is estimated that each year cybercriminals steal up to

a trillion dollars worth of intellectual property from businesses worldwide. In addition, many millions of individuals have their privacy violated, suffer identity theft or have their hard-earned savings stolen from them.

Governments constantly face cyberattacks – and terrorists increasingly rely not just on their weapons, but on the power of cyberspace technologies like GPS and VoIP to sow destruction.

As a result, the next major war will probably begin in cyberspace rather than on the ground.

Given the scale of the threat – and the phenomenal harm that can be caused by even a single cyber attack – we cannot rely on ad hoc solutions or hope to survive by strengthening our defences only after attacks have occurred.

No – we must work together, to ensure a coordinated response.

This is why ITU is playing a lead role in coordinating global efforts in this area, and why we launched the Global Cybersecurity Agenda in 2007.

The GCA is now in its operational phase, with a physical home in Malaysia at the headquarters of IMPACT – the International Multilateral Partnership Against Cyber-Threats – and I strongly encourage all ITU Members to take advantage of these facilities.

We are also increasingly seeing children being targeted online by all manner of wrong-doers, including paedophiles.

As a result we also launched – within the framework of the GCA – the Child Online Protection (COP) initiative, which has been established by ITU and other stakeholders as an international collaborative network for action to promote the online protection of children worldwide.

Cybersecurity is a global issue, which can only be solved with global solutions. So one of the most important actions we must take to enhance security in cyberspace is to increase cooperation and coordination at the global level.

Existing frameworks, while good, are not in fact global. The best example is the Budapest Convention on Cyber-crime, which has been ratified by only 26 countries. The nature of the convention makes it hard for other countries to join.

ITU therefore offers to host international discussion – identifying aspects we can agree on (there are many); recognizing that there are many different viewpoints; and working with all stakeholders, from government, industry and civil society.

Distinguished guests,

In closing, I would like to mention one further issue which is of importance to every single person on the planet: I refer of course to the environment, and the prospect of catastrophic climate change.

I am personally proud and pleased to be working in a sector where we can act as a strong force for good in this area.

ICTs are the single most powerful tool humankind has at its disposal to avoid potential climate catastrophe. While technology contributes around 2.5% of global greenhouse

gas emissions, more efficient use of modern technologies could cut global power consumption by 15%.

ICTs help to reduce waste, cut business travel and make industry more efficient. And new technologies being developed within ITU – such as Next-Generation Networks – can reduce network and data centre power consumption by up to 40%.

The universal charger, which was standardized by ITU last year, will deliver a 50% reduction in standby energy consumption, eliminate up to 80,000 tonnes of redundant chargers, and cut GHG emissions by at least 13 million tonnes annually.

Satellites are also tremendously important – not just in monitoring, but in helping increase food output and reduce emissions. Satellite-based intelligence services for farmers, for example, which cost less than US \$ 15 per hectare annually, can increase yields by as much as 10%. And using satellite monitoring produces 98% fewer emissions than ordinary ground monitoring.

Satellites also play a vital role when natural disasters and catastrophes occur, often providing the only reliable communications links when other networks have been destroyed. ITU is proud to play a very active role wherever we can – in Haiti and Chile, earlier this year, for example, where we were quick to provide emergency communications services after the earthquakes there.

To close, let me thank you once again for the honour you have bestowed upon me here today – and let me encourage each and every one of you to act as an ‘ICT advocate’, and in particular as a broadband advocate!

Dr. Hamadoun Touré is the ITU Secretary-General since 2006, after serving eight years as Director ITU/BDT. Prior to his election as Director of BDT he worked for ICO Global Communications. Earlier he was employed by the International Telecommunications Satellite Organization (INTELSAT). On the national scene, he was with the national telecommunication operator in Mali. He holds a Masters Degree in Electrical Engineering from the Technical Institute of Electronics and Telecommunications of Leningrad (USSR) and Doctor of Philosophy Degree (Ph.D.) from the University of Electronics, Telecommunications and Informatics of Moscow (Russia). He is proficient in English, French and Russian. Dr Touré contributed to many important projects and conferences. As Director BDT, he played a key role in the WSIS process. As the Secretary General, he is leading the ITU toward an innovative, forward looking organization satisfying the needs of ITU Members and meeting new challenges. Dr. Touré has been awarded the highest national decorations and honorary doctorates of six universities. He is a member of IEEE, of International Telecommunication Academy, and of the Royal Swedish Academy of Engineering Sciences.