

Connecting the Unconnected: Global and regional initiatives and approaches

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Why connect People?

- ❑ ITU's motto: "**Committed to connecting the World**"
 - ❑ ITU has the mandate to work for ICT accessibility for all
 - ❑ Example of Resolutions supporting ITU's mandate:
 - ❑ PP-14 Resolution 200 : **Connect 2020 Agenda** for Global Telecommunication/ICT Development-> setting out the shared vision, goals and targets that Member States have committed to achieve by 2020 in collaboration with all stakeholders across the ICT ecosystem
 - ❑ WTDC-14 Resolution 76: promoting ICT among young women and men for socio economic empowerment
 - ❑ ITU-R Resolution 67: Telecoms/ICT accessibility for persons with disabilities and persons with specific needs
 - ❑ PP-14 Resolution 140: ITU's role in implementing the outcomes of WSIS
- ❑ ICT empowers people:
 - ❑ ICT are cross-cutting to all sectors of life
 - ❑ ICT are a strong catalyst for socio-economic development
 - ❑ ICT development helps bridge the digital divide
- ❑ **Broadband** is key to ICT development
 - ❑ Brings more value-added: e.g. e-Apps
 - ❑ Is a milestone towards the achievement of digital economy

Drivers for broadband development

- ❑ ICTs are an important development and growth tool:
 - ❑ They are present in every day's life; e.g.:
 - ❑ Work: internet at the office, telecommuting, etc.
 - ❑ School: internet at school, e-learning, etc.
 - ❑ Gambling
 - ❑ Entertainment
 - ❑ In each economic sector in general
 - ❑ Despite the world financial crisis of 2008:
 - ❑ ICT sector has been witnessing a remarkable growth
 - ❑ Innovation has also been the key word: e.g. 2G/2.5G, 3G/3G+, 4G
 - ❑ Advent of new ICT applications with more requirements:
 - ❑ Better response time required: e.g. videoconferencing, telepresence, VoIP, etc.
 - ❑ More bandwidth required: e.g. e-Health, e-education
 - ❑ The future is broadband:
 - ❑ A lot of facts confirm

The future is broadband!

□ Statement:

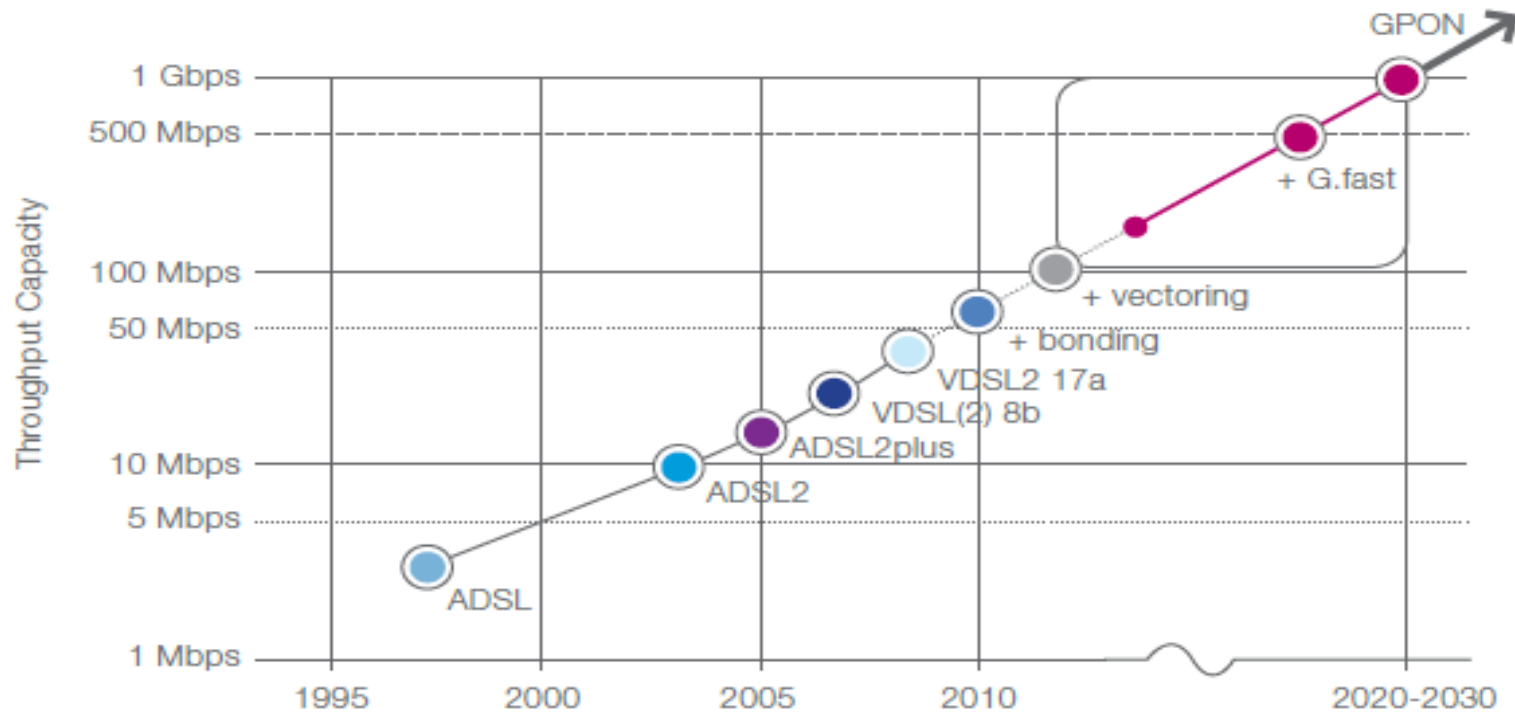
“The future is Internet and the future is broadband. The future is broadband and Internet” Dr Hamadoun Touré, ITU’s Former Secretary-General, during the WCIT-12 in Dubai, UAE

□ The future is broadband:

- Figures tend to confirm this in several reports:
 - ICT facts and figures 2015
 - Trends in Telecommunication Reform 2015
 - Measuring the information society 2016
- A broadband penetration rate of 10% leads to a GDP growth of 1.3% (cf. World Bank study titled: [Information and Communications for Development 2009 : Extending Reach and Increasing Impact](#))

Global trends for broadband (1)

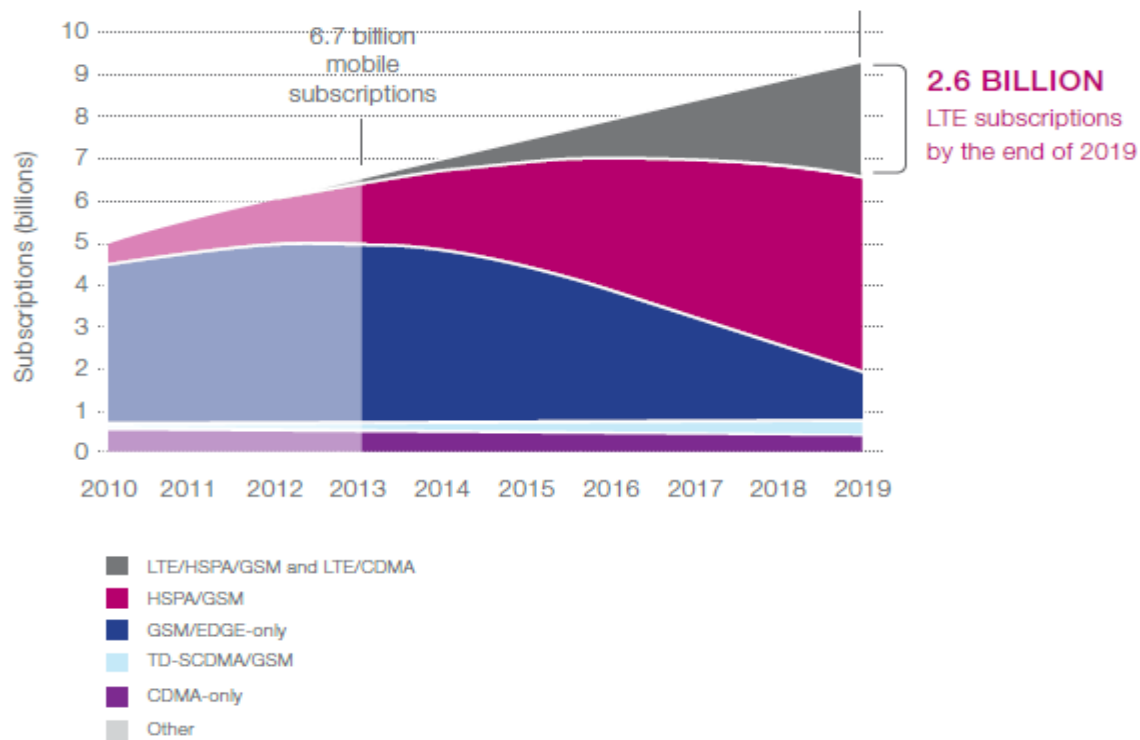
Growth in speed for communication technologies



Source: broadband commission report, 2014

Global trends for broadband (2)

Forecast for broadband mobile technologies subscription



Source: broadband commission report, 2014

ITU's ICT development initiatives (1)

- ❑ Connect Africa Summit: Kigali, 2007
 - ❑ Commitment taken by stakeholders for more than USD 55 billion
 - ❑ Led to the development of national OF backbones and submarine cables
- ❑ WTDC-10: 5 RIs, among which 2 deal with broadband
 1. Human and institutional capacity building
 2. Strengthening and harmonizing policy and regulatory frameworks for integration of African telecommunication/ICT markets,
 3. Development of a broadband infrastructure and achievement of regional interconnectivity
 4. Universal access, Introduction of new digital broadcasting technologies
 5. Implementation of the recommendations of the Connect Africa summit

ITU's ICT development initiatives (2)

- ❑ Transform Africa Summit: Kigali, 2013
 - ❑ Led to Smart Africa
 - ❑ Build on ICT to leverage socio-economic development for Africa
- ❑ WTDC-14: 5 RIs, among which **at least 1** deal with broadband
 1. Strengthening human and institutional capacity building
 2. Strengthening and harmonizing policy and regulatory framework for integration of African telecommunications/ICTs market
 3. **Development of broadband access and adoption of broadband**
 4. Spectrum management and **transition to digital broadcasting**
 5. Building confidence and security in the use of telecommunications/ICTs

Focus on connectivity for all (1)

□ Expected results (RI3):

1. National telecommunication/ICT master plans to meet the requirements of developing countries.
2. Improved broadband backbone infrastructure and access to affordable telecommunication/ICT services in urban and rural areas.
3. Guidelines on rural connectivity, including policy, appropriate technologies and power supply issues, and best practices.
4. Enhanced human capacities in the area of broadband communication networks.
5. Interconnection of countries by means of high-capacity links, including access to undersea cables for landlocked countries, as part of the follow up to the Connect Africa summit.

RI 3: Focus on connectivity for all (2)

- ❑ Expected results (RI3, continued):
 6. Development of mechanisms and tools to facilitate the use of ICTs by persons with disabilities and specific needs.
 7. Ease of access to submarine cables for all countries, and especially landlocked countries, on fair terms.
 8. Promoting the establishment of national and regional Internet exchange points (IXPs).
 9. Promoting the development of local content and localized access.
 10. Promoting IPv4 to IPv6 migration.

Concrete achievements (1)

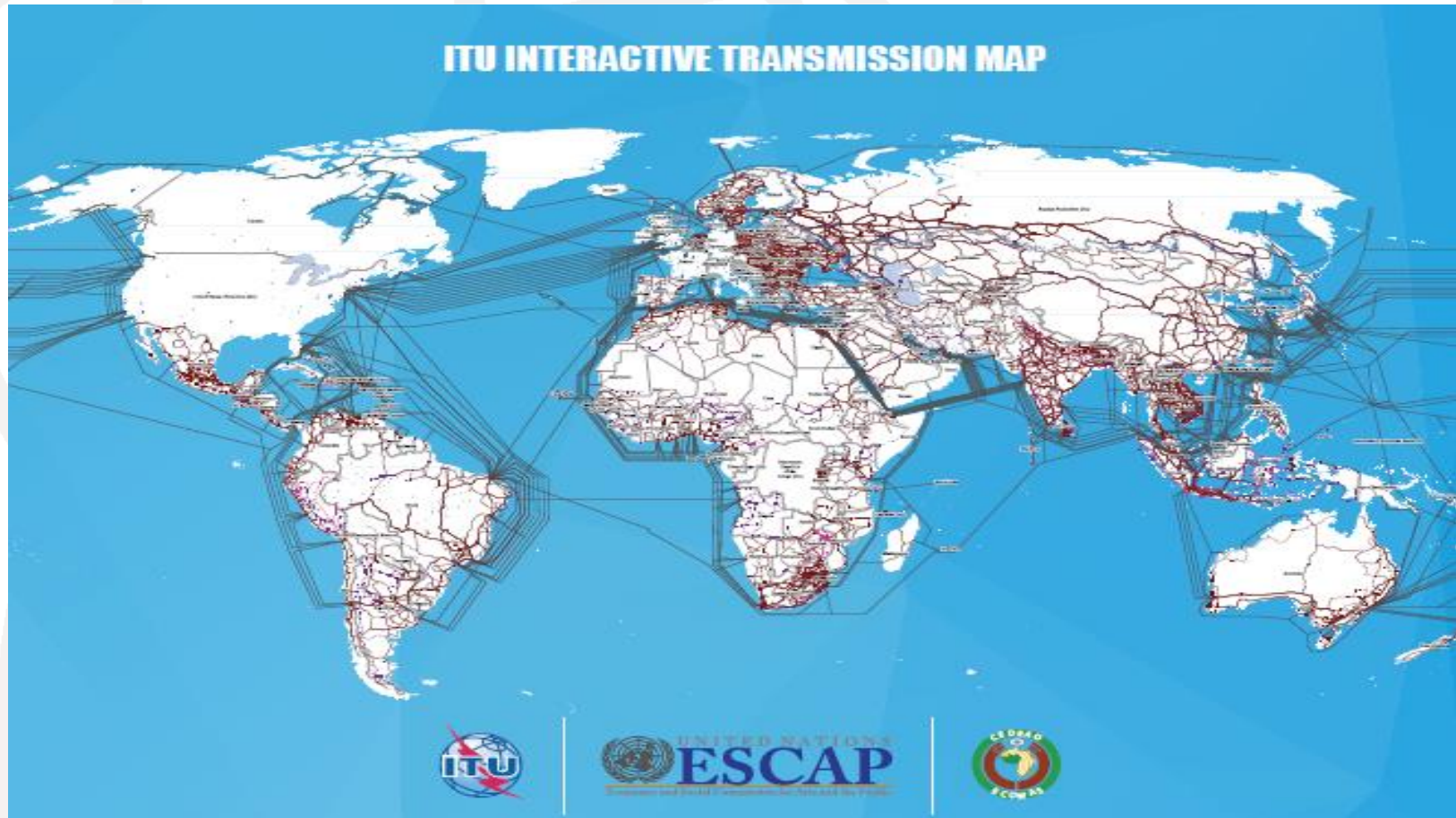
- ❑ The ITU/McCaw foundation broadband wireless project for Africa (budget USD 6.4 million):
 - ❑ Targeting the deployment of broadband wireless networks in the following countries: Burkina, Burundi, Djibouti, Mali, Lesotho, Rwanda, and Swaziland
 - ❑ Aiming at providing free of charge or low cost connectivity to schools, hospitals, and underserved populations in rural and remote areas in selected countries
 - ❑ Aiming at promoting the development of ICT applications for the connected entities

- ❑ Implementation status:
 - ❑ Successfully implemented: Burkina Faso, Burundi, Djibouti
 - ❑ Ongoing: Lesotho, Rwanda, Swaziland
 - ❑ Planned: Mali

Concrete achievements (2)

- ❑ Digital interactive terrestrial network maps for Africa:
 - ❑ Implemented for most operators from most African sub regions
 - ❑ Currently underway for the ECOWAS sub region
 - ❑ Aiming at providing detailed and accurate information on broadband transmission networks in Africa
 - ❑ Public version accessible through <http://www.itu.int/itu-d/tnd-map-public/>
 - ❑ Need of a TIES account for validation process

Overview of the global Digital interactive transmission maps project:



Concrete achievements (3)

- ❑ Master Plan for Wireless Broadband Access in Africa (ITU-Korea Project; budget CHF 379,668):
 - ❑ Survey results on the status of the broadband connectivity in general and wireless broadband access in Africa region
 - ❑ Collection of information on development of appropriate policies, regulations and capacity building, including licensing, and planning for deploying wireless broadband access networks, from Guidelines and Recommendations developed by ITU
 - ❑ Development of Broadband Wireless access Master Plans for at least 2 and up to 4 selected countries in the Africa Region (within the limit of budget)
 - ❑ Enhancement of skills through training for making wireless broadband access master plan
- ❑ Implementation status:
 - ❑ Countries covered: Congo Brazza, Guinea Bissau, Malawi, and South Sudan

Concrete achievements (4)

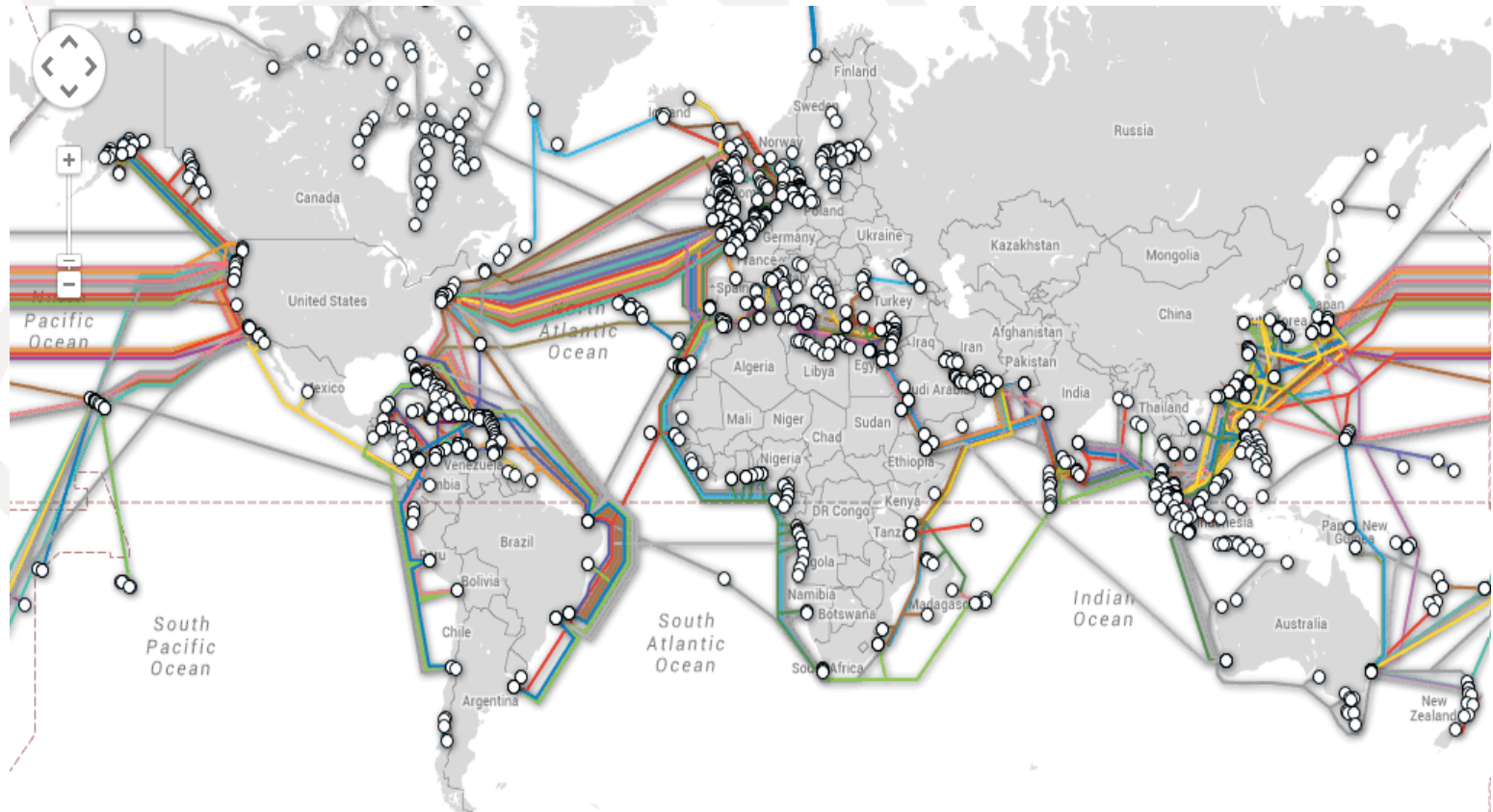
- ❑ In August 2014, assistance to Lesotho in National Broadband Policy
- ❑ Assistance to CRASA (Communications Regulatory Association for Southern Africa) in Broadband plans
- ❑ Assistance to Namibia and Swaziland with their National Broadband Policies including implementation strategies and action plans
- ❑ The “Connect A School, Connect a Community” initiative:
 - ❑ Designed to promote broadband Internet connectivity for schools worldwide
 - ❑ Beneficiary countries in Africa: **Gambia, Niger, Tanzania**

Concrete achievements (5)

- ❑ IPv6 test bed implementation
 - ❑ Aims at assisting countries/sub regions in mastering IPv6 deployment
 - ❑ Aims at training a critical mass of actors able to run IPv6 migration projects
 - ❑ Test bed implemented: Cote d'Ivoire (WA), Uganda (EA), Zimbabwe (SA, underway), and Cameroon (CA, underway)
- ❑ Feasibility study conducted for a regional IXP (EACO, 2013):
 - ❑ Aims at interconnecting national IXPs among themselves
 - ❑ Beneficiary countries: EACO countries (Burundi, Kenya, Rwanda, Tanzania, and Uganda)
 - ❑ Can be a good catalyst for initiatives such as ONAR
- ❑ Cybersecurity
 - ❑ Cybersecurity readiness assessment conducted for more than 25 countries
 - ❑ National CIRTs installed for about 10 countries

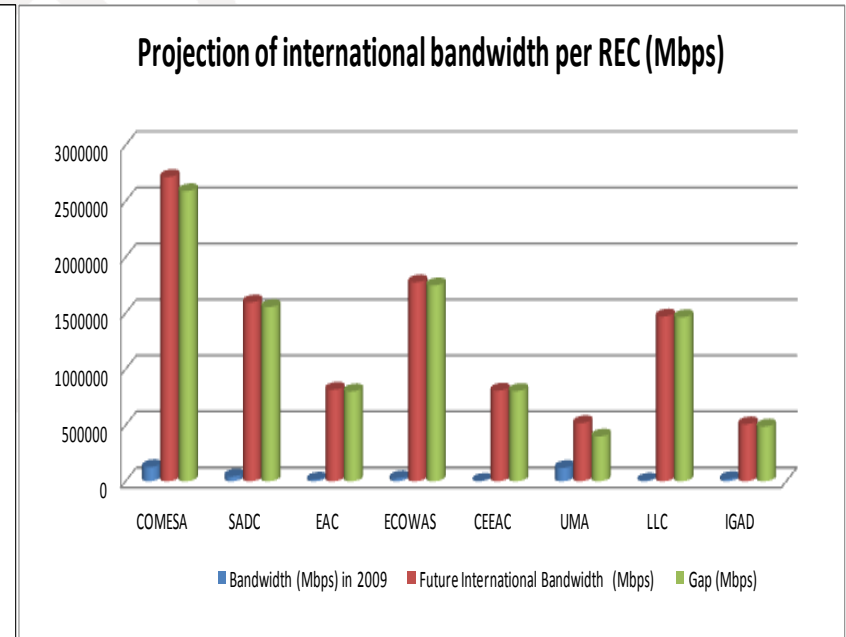
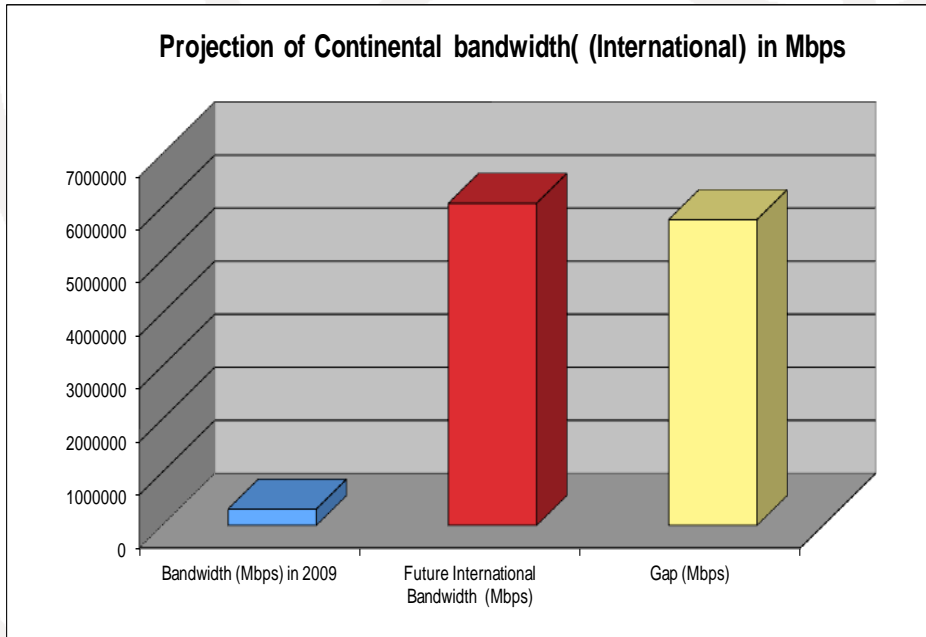
Perspectives (1)

- ❑ More connectivity for countries:
 - ❑ Encourage countries to build more national backbones
 - ❑ Encourage countries to connect to at least 2 submarine cables



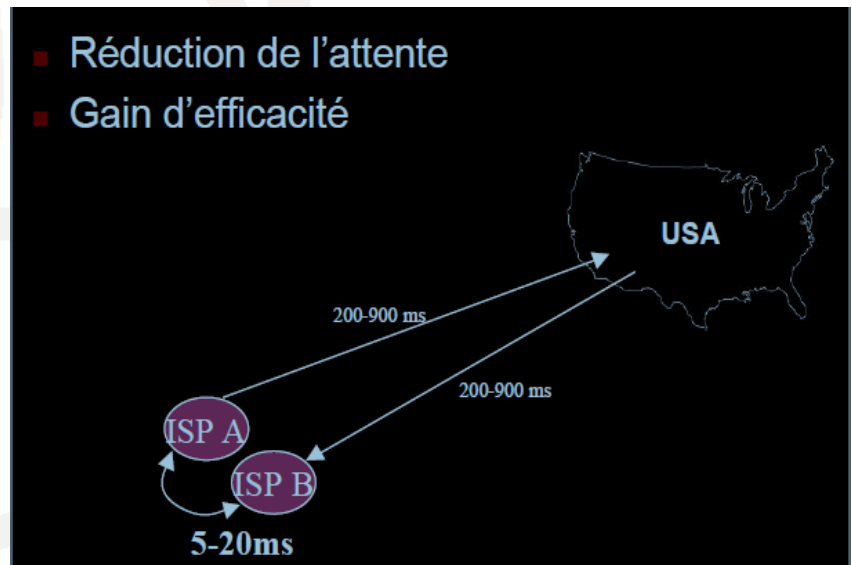
Perspectives (2)

- ❑ Existing bandwidth vs. Bandwidth needs
 - ❑ In Total (by 2030)
 - ❑ Per REC (by 2030)



Perspectives (3)

- ❑ More access technologies for countries:
 - ❑ Fixed: FTTx: FTTB, FTTC, FTTH, FTTN
xDSL: ADSL, ADSL2/2+, VDSL, ..., LS, PLC
 - ❑ Mobile: HSPA, HSDPA, CDMA (1x, 1xEVDO, ...), WiMax (IEEE 802.16e), LTE, TVWS
 - ❑ Satellite: e.g. DVB
- ❑ National universal access initiatives
- ❑ More IXP for Africa:
 - ❑ Improves response-time
 - ❑ More adapted to real-time applications
 - ❑ Improves security





Thank You!

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