





UN-ESCWA ICT Division Activities in Bridging the Digital Divide

Vision



- Aspires to play a major role with ESCWA member countries in their transformation towards knowledge-based economies, while striving to increase employment and reduce poverty, utilizing ICT and its applications.
- Narrowing the digital divide at the national and regional levels remains a primary objective by building a development-oriented I.S. in line with WSIS outcomes.

2012-2013 Expected Accomplishments



- (a) Perceptible progress towards the development of knowledge based economies in ESCWA member countries, substantiated by the formulation and implementation of pertinent policies and strategies.
- (b) Enhanced capacity towards competitiveness of the ICT sector in the region on the production and service delivery levels with special focus on partnerships, research, development and innovation.

2012-2013 Strategy



- Narrow the digital divide in Western Asia and help build an inclusive, people-centred and development-oriented information society.
- Conceptualize and implement programmes related to the development of enabling environments, capacity building, ICT applications, digital Arabic content, and promoting the ICT sector.
- Assess and update existing plans of action through analytical studies, meetings, advisory services and training.
- Enhance the currently used set of ICT indicators.
- Implement pilot field projects to enhance national capacity for development.



UN-ESCWA and Alcatel-Lucent Partnership: Overall objectives

The partnership constitutes an illustration of the multi– stakeholder approach advocated by the outcome of the World Summit on the Information Society

Both organizations are committed to contributing to the implementation of the Geneva Plan of Action and the Tunis Agenda, in order to reduce the digital divide and bring the benefits of information and communication technologies to all

Joint study on Broadband for Development in the ESCWA region



- Not only a study but also a tool to promote action:
 - Highlights the development potential in the ESCWA region;
 - Provides assessment of factors that hinder the wide-scale deployment;
 - Proposes concrete actions to guide ESCWA Member Countries.
- Based on two complementary know-hows:
 - A leader in telecommunications, particularly in broadband equipment manufacturing;
 - A United Nations organization in charge of regional economic and social development;
 - Capitalizes on the two organizations' complementary expertise and objectives, and is aimed at allowing stakeholders to benefit from the development of broadband in the ESCWA region.



With Alcatel-Lucent (February 2007)

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Broadband for Development Study: Content

- Overview
- Broadband market take-up in the ESCWA region
- Broadband demand and supply patterns in the ESCWA region
- Selected broadband deployment case studies
- Factors affecting broadband demand in the ESCWA region
- Going forward (findings and recommendations)



Broadband for Development Study: Main findings

- The dramatic take—up of broadband access in developed countries is basically due to the introduction of **competitive** offers for **bundled** broadband access, telephony and TV services (so-called Triple Play)
- The economic case for broadband access cannot be made separately from the revenue generated by voice telephony and TV distribution, with their associated advertising—based or subscription—based paradigms
- The study recommendations focus on factors having a substantial impact on the demand and supply aspects of Broadband in the ESCWA region
- The list of proposed recommendations must be considered as a set of coherent action items rather than a "one—size—fits—all" recipe

Broadband study is the main success of UN-ESCWA collaboration with Alcatel-Lucent but it remains to be translated into a real tool for broadband promotion in the region.

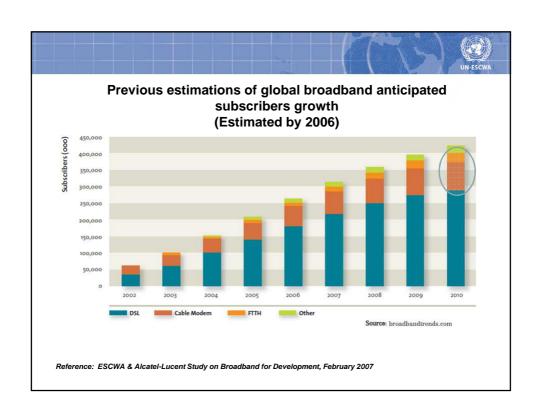


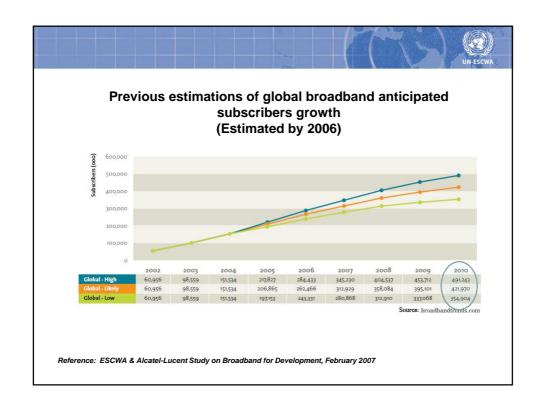
Broadband For Development: Boosting Economies Used by more than 500 million people worldwide Changing the landscape of telecom and media and blurring boundaries between service and content providers. Drastically changing the economic model for operators. Leading to accelerated socioeconomic development How investing in broadband can boost economies High-income economies Low- and middle- income economies Fixed Mobile Internet Broadband Source World Bark (2000). Reference: Broadband: Platform for Progress, Broadband Commission, 2010

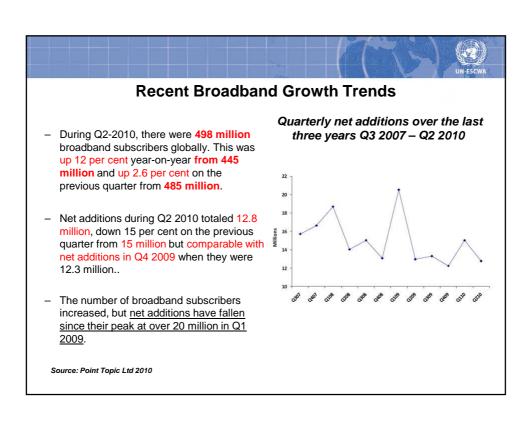


- An additional GBP 5 billion investment in broadband networks would create or retain an estimated 280,500 UK jobs for a year.
- Broadband network construction will create 304,000 jobs between 2010 and 2014, and 237,000 between 2015 and 2020.
- Based on regression-based forecasting, it is estimated that an additional 427,000 jobs will be created: 103,000 in 2010–2014 and 324,000 in 2015–2020. The accumulated total jobs over a ten year period (2010–2020) will reach 968,000.
- Broadband leads to a 0.2% to 0.3% increase in employment in a US state for a 10% increase in broadband lines.
- Broadband has added about 1-1.4% to the employment growth rate.
- In the United States, a 1% increase in broadband penetration leads to a 0.2 0.3% growth in employment.
- Broadband added 10-14% to the growth rate in the number of jobs between 1998-2002.

Reference: Broadband: Platform for Progress, Broadband Commission, 2010

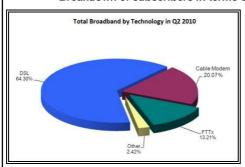


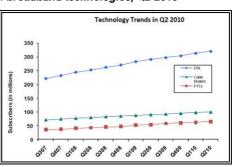




Recent Broadband Technology Trends

Breakdown of subscribers in terms of broadband technologies, Q2-2010





- The use of all three technologies continues to increase.
 - DSL was the most common technology, used by over 320 million subscribers (over 64 per cent of the total).
 - Cable modem was next, used by 99.9 million subscribers (20 per cent).
 - FTTx was used by 65.76 million subscribers (13.2 per cent).

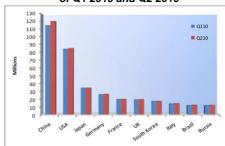
Source: Point Topic Ltd 2010

| Ranking | ADSL | | Cable | | FTTx | |
|---------|-----------|--|------------------|--|-------------------|---------------------------------|
| First | 1.China | Over 95 million subscribers; (29.7 per cent of the worldwide DSL total) | 1. USA | 46.1 million cable modem subscribers; (46.1 per cent of the worldwide cable modem total) | 1. China | 25.14 million subscribers. |
| Second | 2.USA | Over 31 million subscribers (9.6 per cent of the DSL total). | 2. Canada | over 5.7 million lines (5.7 per cent of the cable modem total). | 2. Japan | 18.4 million subscribers. |
| Third | 3.Germany | Over 23 million subscribers (about 7.2 per cent pf the DSL total). | 3.South Korea | 5.1 million lines . | 3. South Korea | with 8.8 millio subscribers. |
| Fourth | 4.France | 18 million | 4.Japan | 4.22 million lines. | 4. USA | 6.07 million subscribers. |

Current Broadband Technology Trends

- Since displacing the USA in Q2 2008, China has maintained its number one position while the USA is in second place.
 - China (including Hong Kong and Macau) was in first place with over 120.6 million subscribers. This was up 4.7 per cent on the previous quarter from 115.12 million.
 - The USA had 85.75 million subscribers. This was up by less than 1 per cent on the previous quarter from 84.9 million.

'Top 10' countries in terms of total broadband subscribers as of Q1 2010 and Q2 2010



China and the USA combined control over 41 per cent of the global broadband subscribers in the world. The number of broadband subscribers in China continues to grow at a faster rate than that in the USA.

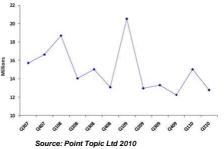
China added the most new subscribers in Q2-2010, at 5.47 million. The USA followed, adding over 842,000 new subscribers and third was India, adding over 677,000 new subscribers. India displaced Germany compared to the previous quarter, which was in fourth place with over 459,000 new subscribers.

Source: Point Topic Ltd 2010

Recent Broadband Growth Trends

- During Q2-2010, there were 498 million broadband subscribers globally. This was up 12 per cent year-on-year from 445 million and up 2.6 per cent on the previous quarter from 485 million.
- Net additions during Q2 2010 totaled 12.8 million, down 15 per cent on the previous quarter from 15 million but comparable with net additions in Q4 2009 when they were 12.3 million..
- The number of broadband subscribers increased, but <u>net additions have fallen</u> <u>since their peak at over 20 million in Q1</u> <u>2009</u>.

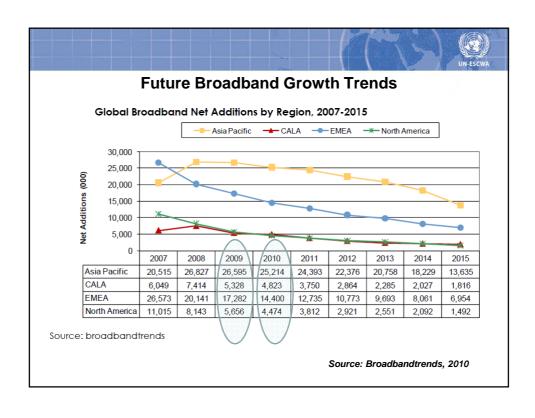
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Quarterly net additions over the last

three years Q3 2007 - Q2 2010

Source: Point Topic Ltd 2010



Broadband Future Outlook by 2015

- Global Fixed Broadband Subscribers will reach 679 million by end of 2015.
- Global Penetration of Households will reach 37 percent; Western Europe will be 80 percent.
- Global FTTH net additions will outpace DSL by 2014.
- FTTH will account for 22 percent of Asia Pacific Fixed Broadband by 2015.
- DSL will remain the leading broadband technology with 59 percent of subscribers by 2015.

Source: Broadbandtrends, 2010

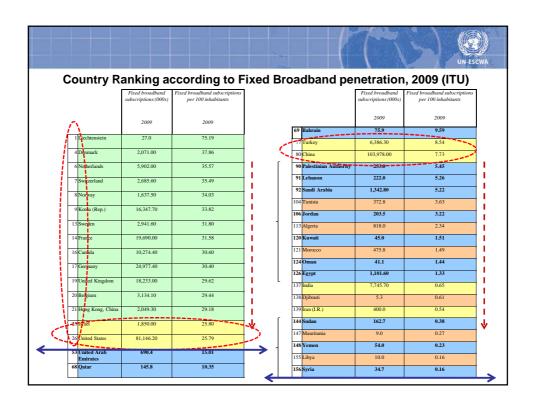


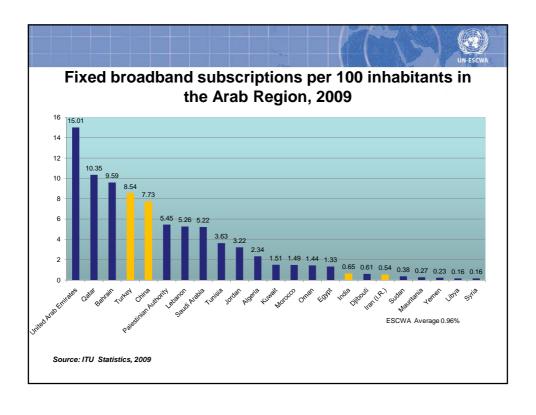
- Although innovative services and applications such as IP-TV will help drive adoption, the strongest factor remains cost.
- From a regional perspective, CALA, Southeast Asia, and Eastern Europe will have the strongest growth during the forecast.
- DSL will remain the dominant broadband technology throughout the forecast period, with 59 percent of total fixed broadband subscribers.
- FTTH will offer the strongest growth opportunity with 21 percent CAGR, while cable will be the lowest at 4 percent.
- Of the alternative broadband technologies, WiMAX holds the most promise for widespread deployment.
- Mobile broadband delivered over LTE networks is likely to have some impact on fixed broadband, especially in emerging markets, where consumer will be more likely to migrate to mobile broadband rather than fixed broadband technologies. (This will also be true in markets where mobile broadband pricing is on par with fixed broadband).

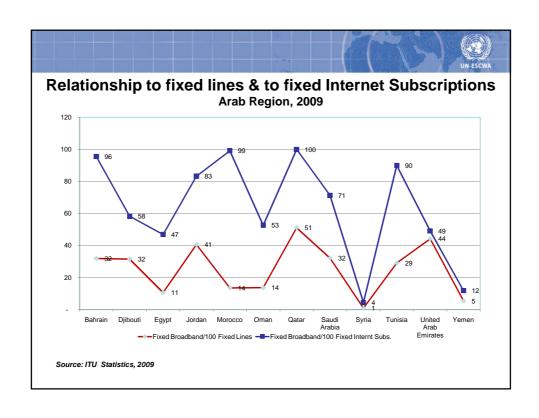
Source: Broadbandtrends, 2010



Recent Regional Perspectives on Broadband







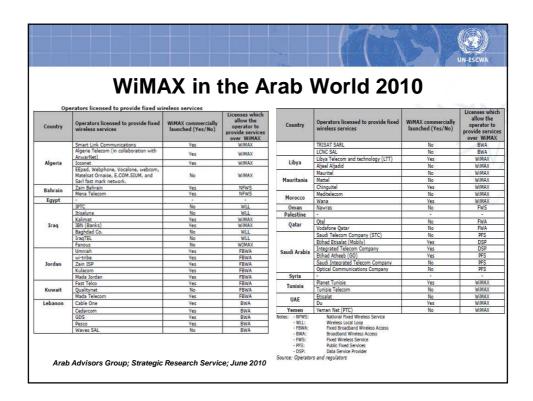
Competition in the Telecom & Internet Landscape

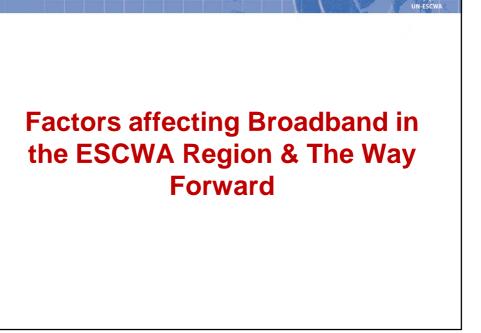
• Mobile Market the most competitive and liberalized.

Competition in the telecom and Internet markets in the ESCWA region, July 2009

| | | | Fixed-line services (according to | |
|----------------------|-------------------|-----------------|--------------------------------------|--|
| Country or territory | Internet services | Mobile services | operational networks) | |
| Bahrain | Competitive | Competitive | Competitive | |
| Egypt | Competitive | Competitive | Monopoly | |
| Iraq | Competitive | Competitive | Competitive | |
| Jordan | Competitive | Competitive | Competitive | |
| Kuwait | Competitive | Competitive | Monopoly | |
| Lebanon | Competitive | Duopoly | Monopoly | |
| Oman | Monopoly | Competitive | Monopoly | |
| Palestine | Competitive | Competitive | Monopoly | |
| Qatar | Monopoly | Duopoly | Monopoly | |
| Saudi Arabia | Competitive | Competitive | Competitive | |
| The Sudan | Competitive | Competitive | Duopoly | |
| Syrian Arab Republic | Competitive | Duopoly | Monopoly | |
| United Arab Emirates | Duopoly | Duopoly | Duopoly | |
| Yemen | Duopoly | Competitive | Monopoly | |

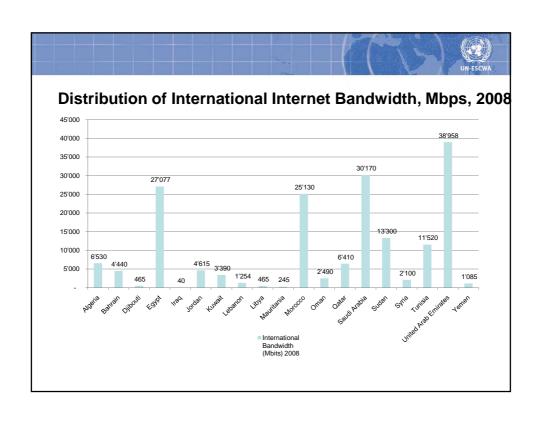
Source: Arab Advisors Group (AAG), Strategic Research Service (23 July 2009).

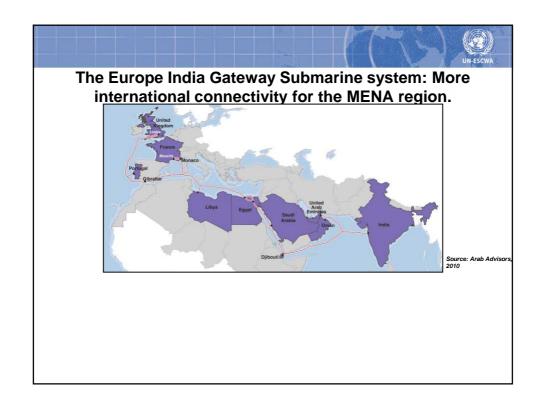


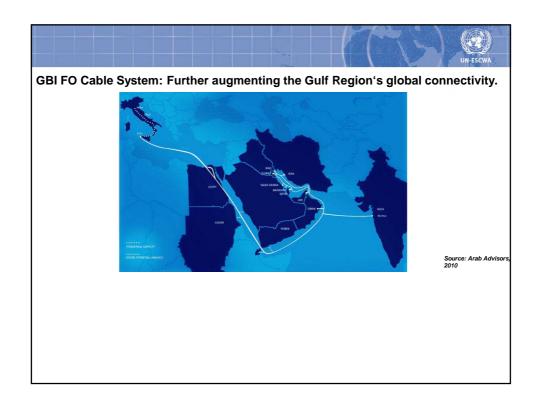


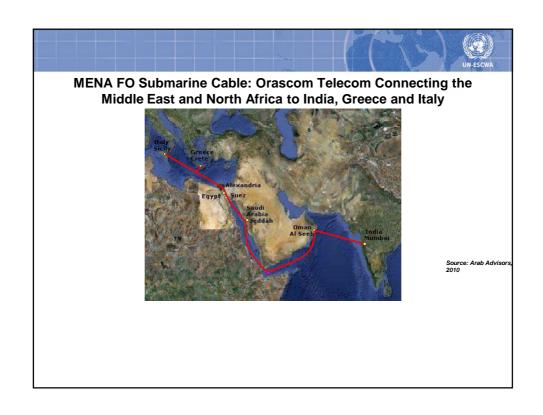
Factors affecting demand for broadband in the ESCWA Region

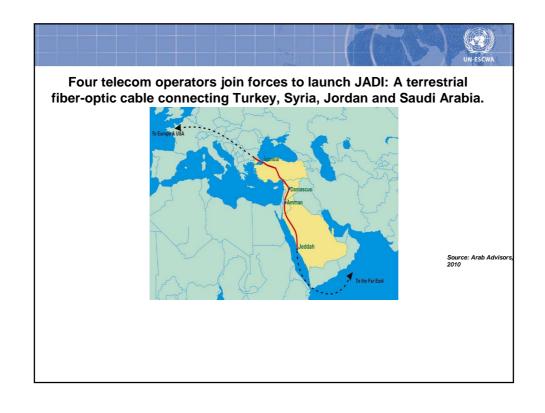
- 1. Service Prices
- 2. Regional and international connectivity
- 3. Quality of service
- 4. Existence of relevant content and applications
- 5. Penetration and means of access
- 6. Development oriented policies
- 7. Convergence

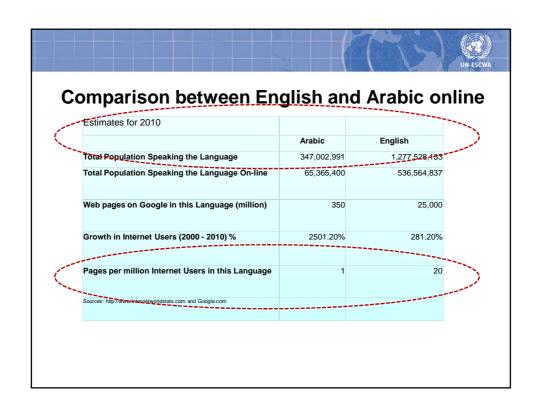


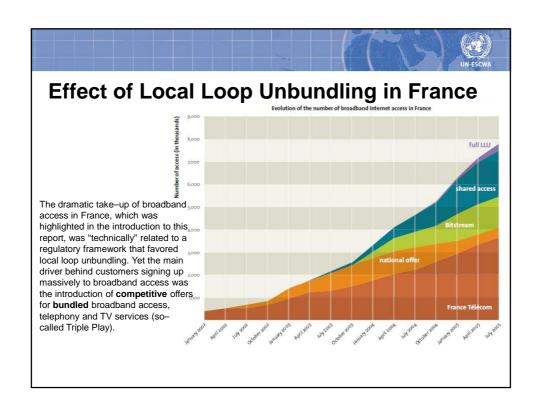










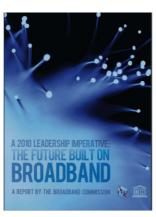


The Way Forward

- The following recommendations are closely inter-related, and depend overall on one overarching principle: the economic case for broadband access cannot be made separately from voice telephony and TV distribution, with their associated advertising—based or subscription—based paradigms.
- The list of ideas below must be considered as recommendations for coherent action, rather than a "one-size-fits-all" recipe. The ESCWA region consists of 14 countries that share many sociological, political and cultural aspects, but also demonstrate profound disparities in economic, social, and human terms. Hence, what is proposed below is a general framework for action. Implementation must be adapted to each country-specific situation.
- Bring down broadband prices with bundled service offers, and create a virtuous adoption circle
- Improve regional connectivity and peering, and allow the emergence of powerful regional service providers.
- Improve technical and human factors related to Quality of Service as a key enabler for mass broadband adoption
- Provide relevant content and applications, and use broadband access as a lever to improve human development deficiencies in the region
- Develop collective means of access to the Internet and affordable PCs
- Include broadband access as a Universal Service Obligation
- Develop and generalize local loop unbundling and the emergence of multiple-service offers by newcomers and incumbents

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Global Broadband Commission's Report



New York, September 19, 2010

- A 2010 Declaration of Broadband Inclusion for All
- Executive Summary A 2010 Leadership Imperative: Towards a Future Built on Broadband
- Creating a Broadband Development Dynamic: A Strategic Framework for Action
 - Policy: From Clear Policy Leadership to an Enabling Environment
 - Infrastructure: Investing in Infrastructure for the Future
 Technology: Future-proofing Technology
 Innovation: The Changing Face of Innovation
 Content and Applications: The Growing Importance of Content

 - People: Building the Network of Ideas and Information Government: Government takes the lead in creating demand
- Broadband and the Interlinked and Interdependent MDG Agenda
- Broadband and Beyond the MDGs
- Recommendations and Proposed Plan of Action



ESCWA and Internet Governance

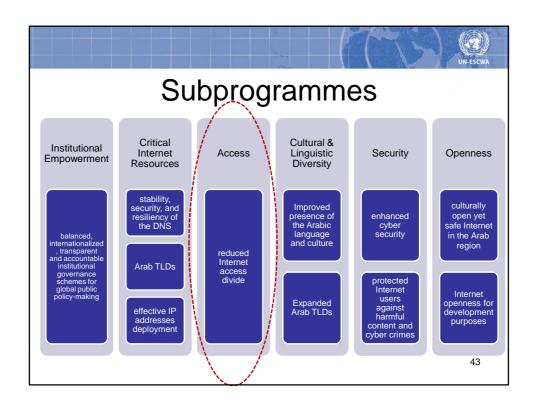
- ICTD at ESCWA became involved in the IGF process since its inception.
- ESCWA drafted a key contribution to the global workshop on IG, in March 2004 advocating increased participation in the existing IG mechanisms.
- ESCWA serves in the ICANN GAC since 2008 to cater for the interests of its Member countries.
- ESCWA served in the Selection Committee for ICANN global fellowship program
- ICTD at ESCWA developed a study in 2009: "Internet Governance: Challenges and **Opportunities for the ESCWA Member** Countries":
- Launched in 2010, the Arab Dialogue on Internet Governance (ADIG) Initiative.

Major Components of the Arab Dialogue on Internet Governance Study on Internet Governance Collaborative Roadmap on IG

A proposed Arab IGF concept

Interactive Portal Joint Public Meetings

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Benefits of an Arab IGF

The Arab IGF will be:

- A platform for empowering the region in global Internet Governance arena;
- A venue to follow-up on the progress of the Proposed Regional Roadmap for Internet Governance in Arab Countries;
- A replica of the global IGF process on a regional level for the period of 2011-2015;
- An interface and liaison to the global IGF process in its second phase;
- An umbrella to launch a number of national IGFs;
- A multi stakeholder process that is led by the governmental and intergovernmental bodies in the region.

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