A Report on NGN & Broadband for the Arab Region_2010

For three days, a distinguished group of national, regional, and international experts have met for the Regional Development Forum 2010 on NGN and Broadband for the Arab Region titled, "NGN and Broadband, Opportunities and Challenges", Cairo, Egypt, 13 to 15 December 2010. The event was under the patronage of HE. Dr. Tarek Kamel, Minister of Information and Telecommunication Technology, Government of Egypt. The event was organized by ITU-D and was hosted by National Telecommunication Regulatory Authority of Egypt.

Forty two presentations were submitted by 25 experts in the fields of NGN and broadband. These presentations have covered the different topics starting from policies to planning to technologies to market to regulation. These were covered from the national, regional and global perspectives and highlighted the mechanisms of availing the required infrastructures and the services, as there is a universal acceptance that the second decade of the twenty first century is the decade of broadband, as the first decade was the decade of the mobile, where the number of subscriptions have reached five billions.

The experts have collectively agreed that the broadband services are prerequisite for development in the fields of education, health, transportation and energy, via decreasing cost and improving performance and quality. This results in increasing national productivity, and employment as studies at the international level have shown that a 10% increase in the rate of using broadband results in a 1.3% increase of gross domestic production and decrease of unemployment by 0.3%.

The NGN and broadband aims to increase the minimum level of connectivity from 2 Mb/s to 1 Gb/s depending on the connection type and services offered. The relevant technologies depend on a mixture of fibre optics deployment, better use of spectrum for data transmission, and exchanges which allows a mixture of different technologies either in fixed or mobile communication. The importance of national internet exchange points (IXPs) for routing traffic efficiently is recognized. This will also result in increasing levels of security, lowering the dependency on international submarine cables, and lowering the cost of operation. All these technologies interact to reduce investment and running costs compared to traditional technologies resulting in improving quality while decreasing cost, and accordingly the pricing while keeping a reasonable margins to enable further investment. This will also direct further investment for content digitization, and preparation of digital content while hosting of such content in national data center.

It is also noticeable that these networks deal efficiently with IPv6 which allows much more unique users, as the IPv4 allows about 4 Billion addresses as it supports; 2^{32} (4,294,967,296)

addresses, while IPv6 uses 128-bit addresses, so the new address space supports 2^{128} (approximately 340 undecillion (or 3.4×10^{38}) addresses, i.e. 340 billion billion billion billion.

The tremendous increase of the number of users is multiplied by the switching of content from voice to data to images to video and live transmission; resulting in a fundamental shift in the ICT services; this is further impacted by the cloud computing technologies which allows remote cooperative implementation of either of the ICT functions by several entities.

Given that many technologies and services constitute the integrated framework and elements of the broadband and next generation network, accordingly governments in developed countries by developing national multi-sectorial plans to achieve the required service level for its citizens and organizations.

The most important recommendations of the forum is that national plans for Arab countries need to be developed incorporating the relevant sectors especially education, transportation, health, and energy. The plan is to identify specific service level for large cities, small cities, villages, and compounds; while let governmental support for areas which there is no economic return/feasibility , thus considering broadband services as a universal service which needs to be provided to all sectors of the society. This should benefit from international experiences both at the technical, economic, and regulatory aspects for whole of the Arabic societies.