# INTERNATIONAL TELECOMMUNICATION UNION

**Telecommunication Development Bureau (BDT)**

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## Note by the BDT Director

## STRATEGIC APPROACH TO INTERNET FOR DEVELOPMENT

### 1.  Overview

"The Internet represents a fundamental revolution in the way the global community thinks, lives, shops, gathers information and conducts business. Since the telecommunications industry provides the infrastructure for the Internet, the two are inextricably linked. In fact, the Public Switched Telephone Network (PSTN) connects tens of millions of computers on the Internet, providing most of the physical pipes over which the Internet Protocol (IP) and related application services such as the World Wide Web are carried. In addition, the PSTN provides dial-up access to the Internet for millions of users.

The IP revolution is resulting in innovative new methods of providing services such as multimedia applications and Internet telephony. Many of these new applications require that the infrastructure for the Internet and PSTN be continuously upgraded, with support for enhanced quality of service (QoS) and demands for higher bandwidth access networks. These have a far-reaching impact on overall telecommunication networks technology and its evolution. Therefore, it is no surprise that the growth of the Internet represents an enormous impact on the ITU's role in matters relating to the telecommunications.

At the same time, support for new services resulting from convergence such as IP over cable networks or Internet telephony are introducing complex regulatory, pricing, and policy issues for many of ITU's membership. The ITU is increasingly being called upon for assistance in understanding the implications of the transition to an IP-bearer network, and for assistance in the establishment of appropriate regulatory frameworks for multimedia and converged services, including the Internet."—Source: ITU Council Document: *Activities of General Secretariat and ITU Sectors Underway with Regard to IP-Based Networks and Cooperation with Other International Organizations*

As the box above shows, the Internet and IP-based networks are having an important impact on the telecommunication industry. At the same time, more and more governments are placing the so-called 'Digital Divide'—equitable access to the Internet—at the top of their agendas. The purpose of this document is to highlight current key ITU-D Sector Internet-related activities and to identify

how it might best assist its membership through new activities on how to respond to the challenge of the Internet, access, convergence, competition, and related policy and regulatory issues.

## 2. Current ITU-D Sector Internet-related activities

### 2.1 Statistics and Analysis

The Information System Unit is involved in a number of Internet-related activities such as measuring Internet access; analysis of national Internet markets; and organizing workshops on the implications of the Internet for the telecom sector:

- Collecting, compiling and disseminating a number of annual time series related to Internet diffusion. On-going methodological work to identify the best indicators to measure Internet diffusion and using data to analyze situation and make forecasts. This is done in cooperation with other international organizations, New Economy researchers and the academic community.

- Analysis of Internet access in developing countries. This includes drafting relevant chapters in the ITU's annual Internet report *Challenges to the Network*. There is also a project to analyze the diffusion of the Internet in countries at different stages of development. The aim of the Internet Case Study project is to seek to understand the factors that accelerate or retard the development of the Internet in different environments and, through comparative analysis, to advise policy makers and regulatory agencies on appropriate courses of action. A particular focus will be on the spread of the Internet in different sectors of the economy such as health, education and commerce as well as government. In 2000, Case Studies were carried out for Bolivia, Egypt, Hungary Nepal, Singapore and Uganda.

- The African Internet and Telecom Summit was held in The Gambia in June 2000. It brought together personnel with responsibility for Internet policy and operation in their countries– ministries of communications, regulatory bodies, telecommunications operating companies and Internet service businesses from almost all Sub-Saharan African countries to focus on the key challenges and opportunities the Internet poses for telecommunication policy-makers and operators in the region. This conference was jointly organized by the Commonwealth Telecommunication Organization and the ITU.

- Assistance has also been provided to develop and host the web sites for the Uganda Communications Commission.

### 2.2 Policy

The BDT's Sector Reform Unit is responsible for implementing the Valetta Action Plan Programme on Reform, Legislation, and Regulation of Telecommunications. In that respect, the Unit provides assistance to countries in the restructuring of the telecom sector. This Unit collects and analyzes trends in sector reform.

- The Unit carries out an annual survey on telecommunication regulation. This year's survey contains a section devoted to the Internet and IP-based networks and includes questions asking each country to indicate the year in which email and World Wide Web access were made commercially available, the number of operational Internet Service Providers and whether there are any limitations on the use of the public Internet and IP-based networks for the provision of voice and fax services. The survey information will be analyzed and reported in the third edition of *Trends in Telecommunication Reform: 2000 (TTR 2000).*

- The Unit is also responsible for the development and updating of the <u>Telecommunication Regulation</u> web site (T-Reg on-line). This web site serves as the BDT's regulatory information service for the telecommunication community and provides essential information relating to regulation and sector reform. The web site includes an electronic reference library, which contains documents on Internet and convergence.

- The Unit organizes regional seminars on telecommunication reform and regulation.  These meetings address subjects that are identified by the regions themselves including Internet.

## 2.3     Capacity Building

The BDT is making extensive use of the Internet to deliver online training and support. For example see the ITU Virtual Training Center (http://www.itu.int/VTC/) and Global Telecommunications University (http://www.itu.int/ITU-D-HRD/gtugtti/Default.html).

Example of activities include:

- A series of courses delivered via the Internet, teaching how to use the Internet for distance learning.

- A variety of electronic forums on subjects such as Fixed Wireless Access, Marketing of Telecom Services, Distance Education, Total Quality Management.

- Online training via the Internet is soon to be provided to several thousand students in ITU member organizations in developing countries, on a wide variety of subjects including IP networks.

- IP Networking workshops for developing countries planned - in collaboration with private Sector Members.

## 2.4     Access

Valetta Action Plan Programme 3 is responsible for promoting Universal Access to Information Communication Technologies (ICTs). There are a number of ongoing activities aimed at bringing Internet connectivity to developing countries particularly in underserved or rural areas. Major activities include:

- Implementation of Community Telecentre Pilot Projects - currently under way in Mali, Benin, Tanzania, Uganda, Mozambique, Bhutan, Viet Nam, India, Honduras and Suriname.

- Full-scale implementation of Telecentres is taking place in Argentina, under the project "Argentine Internet for All".  This project, jointly financed by the Secretariat of Communications of Argentina and the BDT, will bring Internet access to isolated and underserved areas.  The project aims to install 950 "Community Technology Centres" (CTCs).

## 2.5     ITU-D Study Groups

There is a Study Group on Promotion of Infrastructure and use of Internet in Developing Countries (Question 13/1). There is also a Focus Group on Study of Various Mechanisms by which to Promote the Development of New Telecommunication Technologies for Rural Applications (7).

**2.6      Electronic Commerce for Developing Countries EC-DC**

The need to develop innovative technological applications that can be integrated into the existing telecommunication network is highlighted in the Valletta Action Plan Programme 2. In that respect, BDT launched a special development initiative called Electronic Commerce for Developing Countries (EC-DC).  EC-DC is a global project with the following objectives:

*Enable developing and least developed countries to use existing infrastructures and services to participate in electronic commerce by:*

- Co-ordinating the design, development and implementation of electronic commerce systems (EC-DC centers).

- Providing cost-effective solutions to integrate electronic commerce with existing infrastructures and services.

*Facilitate the transfer of electronic commerce technology and increase public awareness* by:

- Providing answers to questions relating to the choice of technology and assisting in the definition of electronic commerce policies and strategies.

- Organizing training seminars and workshops to build local capacity to ensure active participation of local staff in electronic commerce activities.

*Stimulate the planning and deployment of the telecommunication infrastructure* by:

- Demonstrating the value of Internet-connected telecommunications to broaden markets through applications like electronic commerce.

- Providing value added services to the information and communication technology infrastructure that will encourage growth and investments in the telecommunication infrastructure.

Since the launching of the EC-DC pilot at the WTDC Malta and its approval in September 1998 as a BDT project financed by the TELECOM Surplus Funds Programme, there are EC-DC projects in Venezuela, Egypt and Morocco with requests from several other countries to participate in EC-DC. Partnership agreements are being discussed to provide financial and other assistance for EC-DC in other countries.

**3.   Future strategy**

Table 1 proposes strategies the ITU-D Sector might adopt for future Internet-related activities.

**Table 1: Draft Recommendations for developing a BDT Internet Strategy 2000**

| Strategy | Activities |
|---|---|
| Promote Universal Access to Internet | • Develop guidelines for public access facilities and policies<br>• Cooperate on projects for promoting sustainable mass access (e.g., franchised telecentres) |
| Attract Internet and other relevant ICT players to become ITU-D Sector Members | • Encourage participation of Internet Service Providers (ISPs), network equipment manufacturers, venture capitalists and other New Economy companies. Use relevant events including ITU seminars.<br>• Compile prospects database and conduct targeted mailing campaign.<br>• Actively recruit through personal contacts<br>• This should be done in cooperation with ITU-D Sector Member recruitment strategy. |
| Identify key Internet experts | • Attend important Internet meetings such as annual Internet Society conference to network and make new contacts<br>• Share contacts within BDT Internet group<br>• Create Internet experts roster |
| Make operational plan reflect coherent BDT Internet strategy | • Flag Internet-related items for easy reporting<br>• Inform Internet focal point of all Internet related activities<br>• Develop cross divisional teams for implementation |
| Raise awareness in developing countries of BDT Internet activities | Make effective use of :<br>• TDAG, ITU-D Study Group Meetings, Telecom events<br>• BDT seminars, BDT Web Site<br>• Develop monthly BDT Internet Newsletter: highlight upcoming Internet related events, interesting papers, solicit input from developing countries<br>• Create BDT Internet template presentation, customize according to focus of event<br>• Include a section on Internet in presentations and speeches to be given by Director and other officials |
| Collect, compile, analyze and disseminate Internet diffusion studies | • Continue collecting Internet related statistics and policy information<br>• Continue national Internet case studies<br>• Enlist help of BDT colleagues to collect data at each meeting |
| Highlight EC-DC activities and encourage participation of | Use conferences and seminars, write up projects, develop EC-DC web site |

| Strategy | Activities |
|---|---|
| public and private sectors | |
| Create BDT Internet Toolkits | • BDT Regulators Internet Toolkit (Outline issues and possible strategies for regulators)<br><br>• BDT Telecom Operators Internet Toolkit (Potential business strategies for Telecom operators)<br><br>• BDT ISP Toolkit (How to become an Internet Service Provider)<br><br>• BDT Electronic Commerce Toolkit (Setting up Electronic Commerce in your country) |
| Use strategic events to poll developing countries as to their ICT strategic needs | Interview developing country decision makers at BDT Seminars, Telecom events, Workshops, TDAG, ITU-D Study-Groups |
| Hold regular BDT Internet brainstorming meetings | • debrief after each mission, share contacts and CVs, share experiences<br><br>• create common contacts database<br><br>• discuss and refine strategy |
| Make contributions to ITU-D Study Groups | Q. 13/1 Internet infrastructure for Developing Countries |
| Provide regulatory assistance on Internet/convergence issues | • Roundtables, seminars, on-going discussions<br><br>• Electronic library of reference information<br><br>• Technical assistance |
| Create strong Internet Component in Centers of Excellence | Create training materials and conduct workshops for Regulators, Telecom Operators (i.e. Voice over IP, New Business Models), Electronic Commerce |
| BDT Internet site | • Create web pages giving links to all relevant Internet related information, highlight BDT Internet activities and Internet strategy<br><br>• Help develop, and if necessary, host regulators web sites (i.e. PATU, Uganda Communications Commission); |
| Liaise with other organizations and ITU Sectors to keep abreast of Internet related activities | • ITU-T and ITU-R Study Groups, Strategic Planning Unit<br><br>• UN Agencies<br><br>• Create intersectoral working groups |