International Telecommunication Union

ITU
Corporate
Annual Report 2007

International
Telecommunication
Union

ITU Corporate Annual Report 2007

Message from ITU Secretary-General, Dr Hamadoun I. Touré

The International Telecommunication Union (ITU) is a dynamic organization that has been at the forefront in helping the world communicate for over 140 years. ITU continues to take the lead in bringing the world cutting-edge communications, through its vital work establishing global standards in telecommunications and assigning radio-frequency spectrum, and with its many initiatives to expand access to information and communication technologies (ICTs).

Today, the telecommunication industry is undergoing a digital revolution, which has already transformed ICTs beyond recognition. Convergence is reshaping the way telecommunication services are delivered, as well as the ways in which we access these services. ITU's standards in telecommunications and radiocommunications underpin the functioning of the entire global communications framework, and will continue to serve as the platform for a whole new range of exciting services, some of which are only just beginning to be developed.

During the ITU Plenipotentiary Conference in 2006, I was honoured to be elected to the office of Secretary-General. The year since then has proven both eventful and productive. It witnessed the launch of several major initiatives, including high-level negotiations at the *World Radiocommunication Conference,* the mobilization of efforts at the pioneering *Connect Africa Summit* and the promising start of ITU's *Global Cybersecurity Agenda,* which seeks to develop an international framework to promote cybersecurity. ITU continues to work in close cooperation with our membership, which comprises 191 Member States and more than 700 Sector Members and Associates from both the public and private sectors.

As ITU renews its efforts to develop an enabling environment through modern regulation and policy harmonization, the Union's priorities are to meet the seven strategic goals set by Member States at the Plenipotentiary Conference 2006 (see section four of this Report). In addition to the seven strategic goals of the Union, my priorities for my term of office are to work towards bridging the digital divide and to strengthen Member States' capacity in cybersecurity and emergency telecommunications. ITU is also working to support the migration to next-generation networks (NGN) and the building of capacity, especially in developing countries. Meanwhile, the Union continues to forge ahead with all-important initiatives for reform, to make it more responsive, more efficient and a more effective force for growth.

At the close of this, my first year in office, I am highly satisfied with the progress achieved and I am convinced that we have made a strong start in a tough mission. More remains to be done – we shall continue to develop our promising initiatives to *Connect the World* and endorse a global culture to strengthen cybersecurity and uphold cyberpeace. I have every faith that ITU will continue to respond and adapt to the challenges of today's technological evolution, in order to remain at the forefront of developments in the industry. ITU remains deeply committed to ensuring widespread, secure and affordable access to communications for all. All our efforts are directed to our mission of helping the world communicate. ●

Dr Hamadoun I. Touré
Secretary-General
of the International Telecommunication Union (ITU)
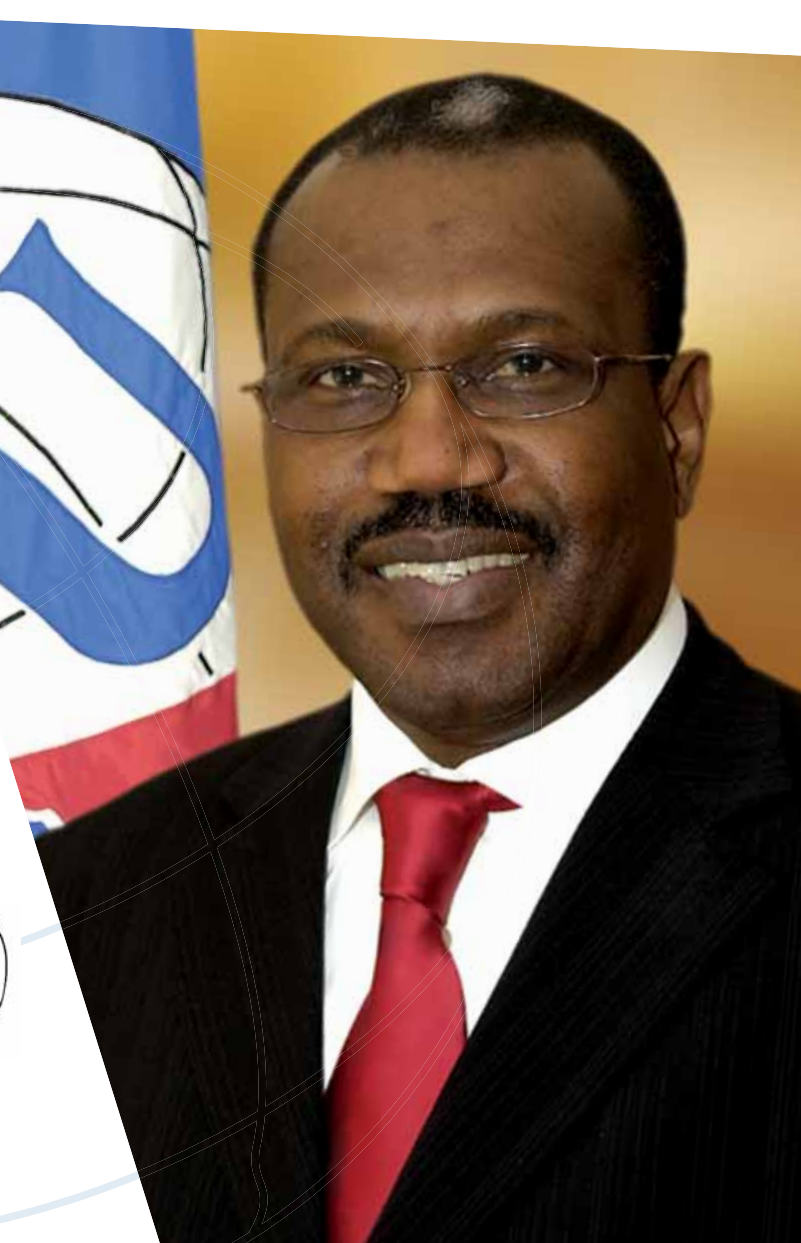
Foreword by the Chairman of ITU Council 2007, Frédéric Riehl

It was with both pride and honour that the Swiss Confederation accepted to chair the sixtieth session of the ITU Council in September 2007 – not only because Geneva is home to ITU headquarters, but because the Swiss Confederation is deeply committed to bridging the digital divide and is directly engaged in a number of projects to this end at different levels. The Swiss Government stressed the importance of its commitment towards ITU and the ITU Council by nominating me as Secretary of State for the duration of the Council 2007 session.

The role of the ITU Council is to consider broad telecommunication policy issues, so that ITU's activities respond fully to the needs of Members and dynamic developments in today's ICT sector. In addition, the Council is responsible for the vitally important task of controlling ITU's finances. The 2007 session of the ITU Council was notable for the discussion of the biennial budget until 2009, ITU's new and vibrant work programme on a range of fronts and the vigorous reforms ITU has undertaken. Various issues were also discussed with regards to greater dialogue and to making ITU more responsive to Members' needs, as well as to free access to ITU Recommendations.

I am pleased to report that this Council held in the first year of office of the new management team enjoyed unprecedented participation and representation at the highest levels. Participants worked to approve the budget in record time, which has now been linked with operational plans for all Sectors and the General Secretariat. Efficiency measures were identified to cut costs further. In terms of performance, ITU-R has fully implemented its four-year work programme and eliminated the backlog in filings of satellite and terrestrial frequency assignments. ITU-T has greatly speeded up its processes and is collaborating intensively with other standardization bodies. ITU-D has been restructured and is introducing new working methods, strengthening its planning capacity and boosting the role of the Regional Offices. At the initiative of the Secretary-General, responsible staff presented overview reports themselves directly to the Council, to provide greater insight into these reforms and their activities.

Another important innovation this year was the new "High-Level Segment" held on the opening day, which gave ministers and councillors from nine countries an opportunity to exchange views on emerging trends and on issues of strategic importance. The launch of the new High-Level Segment is proof of the great

importance ITU gives to the responsibility with which it was entrusted by WSIS. This year's High-Level Segment focused on cybersecurity and ICT infrastructure, both top priorities and strategic goals for ITU. At the World Summit on the Information Society (WSIS), ITU was asked to lead multi-stakeholder efforts in the areas of "information and communication infrastructure" and "building confidence and security in the use of ICTs". Participants agreed that the exchange of experiences was extremely valuable and that this year's High-Level Segment had proved successful. ITU's intense commitment towards WSIS follow-up deserves emphasis, as it places ITU as a key player with respect to growing discussions on Internet governance.

As Chairman of the ITU Council 2007 and based on participants' feedback, I am pleased to confirm that the outcomes and resolutions achieved during ITU Council 2007 surpassed the expectations of most participants present. They represent a sound and solid basis on which to build over the new management team's term in office. I look forward to hearing about the further achievements of the new management, in whom I have every confidence. ●

Frédéric Riehl
Chairman of ITU Council 2007
International Director, Office Fédéral de la Communication
(OFCOM) of the Swiss Confederation

Overview of 2007

ITU's mission is to enable the growth and development of telecommunications and information networks around the world, so that people everywhere can participate in the global information society. ICTs can generate economic growth, create jobs, sustain incomes, boost social and community development and build cultural identity. The ability to use ICTs is a key skill that now determines the employability and standard of living of a growing number of people. Access to ICTs is often a precursor of access to knowledge, which, in turn, determines economic success. ITU continues to work to mobilize the technical, financial and human resources needed to make the global information society a reality.

ITU has been helping the world communicate for nearly a century and a half. It represents the international forum for collaboration in allocating radio-frequency spectrum and setting communications standards. ITU's standards in telecommunications and radiocommunications provide the basis for the entire global communications framework, and will serve as the foundation for a new range of services in the migration to next-generation networks (NGN). As it redoubles its efforts to help develop an enabling environment through regulatory reforms and policy harmonization, one of the Union's top priorities is to assist in bridging the digital divide and reduce inequality in access to ICTs that will shape the future of tomorrow's knowledge economy.

In addition to its seven strategic goals, ITU's top priorities are to strengthen cybersecurity and emergency telecommunications. The transformation of the industry by the driving forces of convergence and digitization poses new challenges for governments, regulators and operators alike. ITU is engaged in

ITU Takes the Initiative in an Industry in Transition

Faster & streamlined standards-setting
process, with a fast-track approval process and free online publication of many standards and Recommendations.

Direct engagement with the private sector,
to ensure that the work of ITU is relevant to the needs of a broader client base including operators, technology vendors and software developers, in addition to ITU's more traditional constituents including governments, policy-makers and regulators.

Leading role in WSIS implementation,
with sole responsibility for implementation in two Action Lines – "Information and communication infrastructure" (Action Line C2) and "Building confidence and security in the use of ICTs" (Action Line C5).

Strong role in international regulatory affairs,
through ITU's leading analysis and research publications, regulatory workshops and symposia on key issues, online portal and focused toolkits.

Strengthening of ITU's on-the-ground network
and field capacity through the regional and area offices.

Enhancement of ITU's online presence,
with a wealth of online resources and publications, new interactive portals, blogs, webcasts and online databases. ITU's website has been further enriched by the introduction of new online collaborative working methods, including wikis, blogs, newsletters and online access to many working documents and meetings.

pioneering initiatives to ensure that its standards, policy analysis and technical assistance programmes remain relevant and respond to the needs of ITU's membership.

This year was both eventful and productive. The 2007 session of the Council conducted its business in a new spirit of cooperation, drawing on the good team spirit among elected officials, and achieved its work in record time. The session was extremely well-attended, in terms of numbers and level of representation. It was the first Council to feature a High-Level Segment attended by seven Ministers and three vice-Ministers, who presented their vision and experience of issues affecting the digital divide and cybersecurity. The Members of Council benefited from their insights. The Council Working Groups have all embarked on ambitious work programmes to fulfil their mandates. ●

2 0 0 7 In February, Dr Touré was invited to address private sector representatives and academia at the "UN meets Silicon Valley" conference, including representatives of the private sector, as well as representatives of Stanford University and the University of California, Berkeley. Dr Touré noted how innovation has transformed modern telecommunications, observing that the investment decisions taken today dictate the technologies of tomorrow.

ITU World Information Society

The *ITU World Information Society Awards 2007* were won by H.E. Dr Margarita Cedeño de Fernández, First Lady of the Dominican Republic, for her work in establishing telecentres; Ms Mitchell Baker, on behalf of Mozilla Corporation of the United States, for its work in open source software; and Professor Mark Krivocheev of the Russian Federation for his lifetime's work on television imagery.

World Telecommunication and Information Society Day proved an historic occasion and was graced by the presence of several former Secretaries-General. In keeping with the theme, *"Connecting the Young"*, the Secretary-General launched a campaign with H.E. Sheikha Al Mayassa to support 250 new scholarships and 1 000 internship opportunities for young people in ICTs by 2010. ITU is stepping up outreach efforts to solicit sponsorship over the coming months. ●
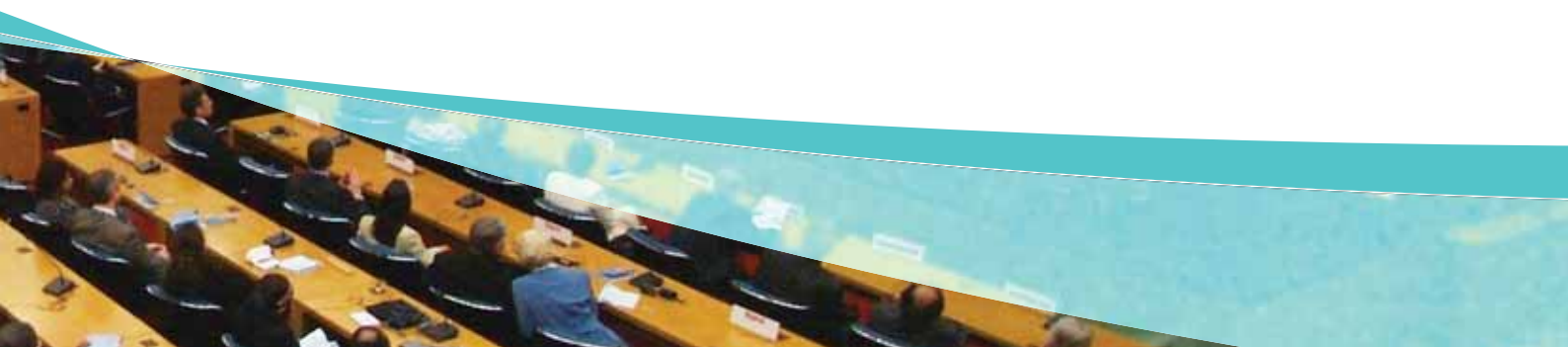
Awards 2007

Historic visit of UN
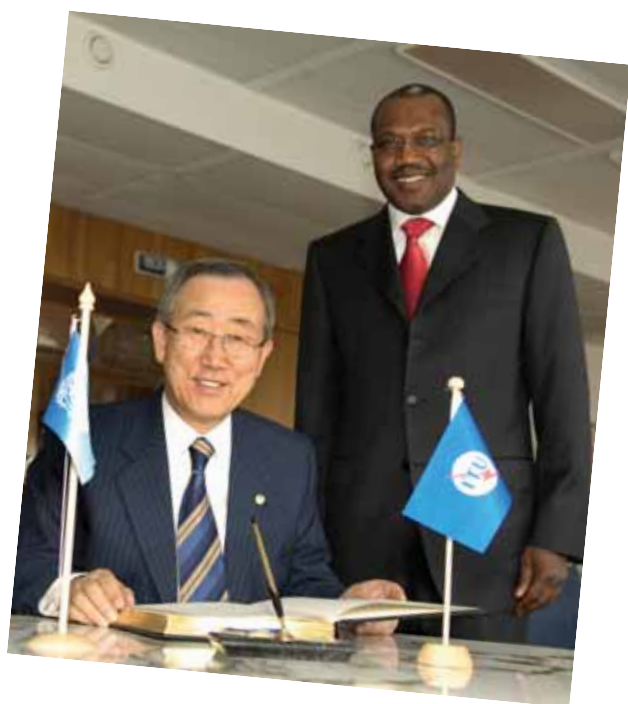
In July, ITU was honoured by a visit by the UN Secretary-General Ban Ki-moon. It was the first occasion ITU has had the honour of a visit by the UN Secretary-General. Mr Ban Ki-moon expressed his appreciation of ITU's vital work in overcoming the serious challenge of the digital divide, which, in his view, is hampering the smooth and balanced development of the international community. Mr Ban Ki-moon drew attention to the ongoing reform process underway within the UN system to make it more efficient and effective, and acknowledged that ITU is very well-advanced in terms of reforms. He emphasized the important role ITU has to play in helping achieve the MDGs and in promoting cybersecurity and disaster relief, and specifically asked that ITU play a role in the global response to climate change. In
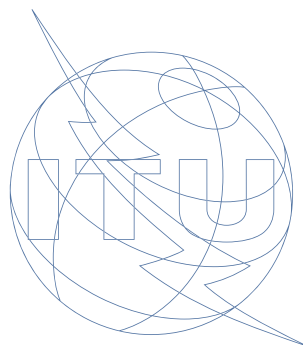
Secretary-General

response to this, ITU has initiated a project on ICTs and climate change. ITU's work and vision are being spread by the elected officials though their missions to Member States and through a sharp increase in visits to ITU by Heads of State, CEOs, ministers, ambassadors and VIPs. ●

ITU
Orientations

Strategic
and Goals

Extending International Cooperation ITU is the

United Nations specialized agency for telecommunications and ICTs and, as such, is the focal point within the UN system for initiatives and activities in relation to ICTs. One key example of ITU's leading role in international cooperation was the World Summit on the Information Society (WSIS), held in two phases in 2003 and 2005. World leaders, policy-makers and stakeholders of all backgrounds convened to discuss the opportunities and challenges associated with the growth of the global information society.

The Summit was held under the patronage of the UN Secretary-General, with ITU taking the lead managerial role, in cooperation with other stakeholders and partners. The Geneva phase in December 2003 resulted in a Declaration of Principles and Plan of Action, setting out a vision for the future

Strategic Goal One

Maintaining and extending international cooperation among all Member States and with relevant regional organizations for the improvement and rational use of information and communication infrastructure of all kinds, taking the appropriate leading role in United Nations systems initiatives on ICTs, as called for by the relevant WSIS outcomes.

development of the information society. However, key issues in implementation and Internet governance remained unresolved. The Tunis phase in November 2005 resulted in the Tunis Commitment and Tunis Agenda for the Information Society[1] as a clear basis for implementation. As a result of the momentum built during the WSIS, ICTs have moved up the international agenda for development and are now a key priority for many governments. The integration of ICTs into the mainstream development agenda will help ensure that progress is made in achieving the Millennium Development Goals by 2015. ●

**world summit
on the information society**
Geneva 2003 - Tunis 2005
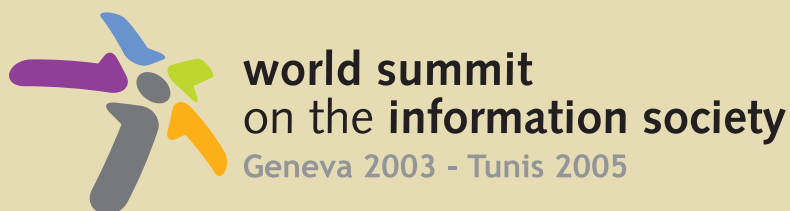
Implementation of the WSIS

Since the successful conclusion of the Summit, implementation is being carried out by the full range of stakeholders along eleven Action Lines. ITU plays a vital role as sole Facilitator of the Action Lines with which it was entrusted – namely, "Information and communication infrastructure" (Action Line C2) to help bridge the digital divide and "Building confidence and security in the use of ICTs" (Action Line C5). The two WSIS Action Lines for which ITU is sole Facilitator are closely related with ITU's work towards its strategic goals "Bridging the Digital Divide" and "Safeguarding Networks" – see Sections 4.2 and 4.4. As a leading facilitating agency together with UNESCO and UNDP, ITU also ensures overall coordination and plays a central role in the organization of the annual cluster of WSIS Action Line Facilitation meetings. As a rotating chair of the UN Group of the Information Society (UNGIS), ITU also leads the collective effort to coordinate UN implementation of the WSIS outcomes.

Outcomes

In February 2007, ITU established a WSIS Task Force under the chairmanship of the Deputy Secretary-General to ensure the effective coordination of ITU's strategies and activities in relation to WSIS. Much of ITU's work aims to assist Member States in bridging national and international digital divides in ICT through the promotion of more extensive and improved infrastructure for universal access. ITU also works to build capacity and promote an enabling environment, whilst extending access to new and promising ICT applications. ITU continues to take WSIS implementation very seriously and is fully committed to helping its Member States achieve their WSIS commitments by 2015. ●

Houlin Zhao
Deputy Secretary-General, Chairman WSIS Task Force

World Radioco

Conference

ITU's mandate for international cooperation and collaboration continues. In autumn 2007, ITU was host to the World Radiocommunication Conference (WRC-07), preceded by the ITU Radiocommunication Assembly (RA-07). Over 2 800 delegates representing 164 Member States and 101 Observers attended WRC-07 in Geneva, which culminated in the adoption of revised and updated Radio Regulations to meet the ever-growing demand for radio-frequency spectrum. This international treaty governs spectrum allocation to meet the global connectivity goals of the twenty-first century.

WRC-07 also addressed other issues in terrestrial and satellite radio services, including meteorological applications, aeronautical mobile services, digital broadcasting and emergency communications. It revised the Fixed-Satellite Service (FSS) Plan for communications, television and the Internet. The revised Plan will facilitate access to spectrum and orbit resources for FSS systems. WRC-07 also successfully reviewed international regulations relating to maritime mobile services, including distress and safety transmissions.

Another key outcome of global importance was RA-07's decision to add WiMAX-based technologies to the IMT (3G) set of wireless standards, paving the way for the deployment of voice, data and multimedia services to stationary and mobile devices at higher speeds across wider areas. Significantly, this decision opens the door to wireless networks to areas that are currently too remote or too costly for carriers to reach. "IMT-Advanced" was agreed as the name of the future generation of mobile broadband ("4G") radio technologies that could be commercially available as early as 2011, subject to market demand. ●

"2007 was a pivotal year for the Radiocommunication Sector. In addition to the traditional tasks of the Radiocommunication Bureau supporting coordination and notification procedures for space and terrestrial services, we were confronted with a very high workload from the implementation of the RRC-06 decisions on digital broadcasting and the task of preparing the two most important events in the sector, the Radiocommunication Assembly and World Radiocommunication Conference.

It is with considerable satisfaction that I may state that both events proved highly successful, as they took important decisions securing the future of wireless for many years ahead, which were supported by all the participants."

Valery Timofeev
Director of the ITU Radiocommunication Bureau

International Cooperation in Internet-related Activities

ITU's activities, policies and strategic direction are determined by its Member States and the direction of the ICT sector it serves. The transition to Internet Protocol (IP)-based technologies is reshaping ITU's work programmes in its radiocommunication, standardization and development activities.

The WSIS identified clear priority areas, in which follow-up is required. Internet-related matters, including technical and public policy aspects, were considered important and have to be addressed in a coordinated manner. Furthermore, in recognition of the convergence transforming the ICT environment, several key Plenipotentiary and Council Resolutions have requested ITU to address the challenges of convergence. ITU has been requested by several international organizations, governments and industry to play a key role in post-WSIS activities in Internet-related matters within its mandate.

ITU is contributing actively to the latest developments in the online environment, including the transition to IP-based NGN, cybersecurity, diversity and accessibility of ICTs. The private/public nature of ITU membership enables innovations developed by Sector Members to be integrated with policy frameworks developed by Member States. ITU continues to address international public policy issues, including the management of Internet resources, through open consultations on Internet-related matters. ITU's important activities in these areas include international initiatives on the management of Internet resources, playing a facilitation role in the coordination of international public policy issues pertaining to the Internet, and fostering joint activities with key relevant players. ITU will continue to be the global catalyst of such changes, and will use its position as an international forum for discussion and dialogue to shape and participate in the future evolution of the Internet. ITU works with its Member States to agree strategies to be adopted for its future activities. ●

Internet Governance Forum (IGF) ITU participated

actively in the second Internet Governance Forum (IGF) Meeting held in Rio de Janeiro, Brazil, during November 2007. ITU cooperates with relevant bodies in various Internet-related matters, in accordance with its mandate from the Plenipotentiary Conference. During the second IGF Meeting, ITU, ICANN and UNESCO organized a workshop on efforts to forge universal standards in building a multilingual cyberspace. Domain names are currently mainly limited to characters from the Latin or Roman scripts. There is growing concern that many local languages may be sidestepped, albeit unintentionally, in the rapid expansion of the Internet. However, multilingualism is vital for ensuring cultural diversity and participation by all linguistic groups in cyberspace. Internationalized domain names (IDN) are a key element promoting the multilingualization of the Internet to reflect the diverse language needs of all users. This workshop considered the key challenges to a truly multilingual Internet and explored new opportunities of collaboration to improve communication for the benefit of all the world's inhabitants. ●

ITU as an International Forum for Emergency Telecommunications

Disasters are causing increasing loss of life, homes and livelihoods around the world. No country is immune. They can wipe out whole communities, disrupt economies, destroy the environment, weaken the most vulnerable communities and reverse progress towards development and poverty reduction, especially in developing countries and small island states. When disasters strike, they leave a legacy of broken lives and destruction, especially for those living in remote and isolated areas.

Natural nor man-made hazards cannot be entirely prevented, but ICTs can help reduce their impact and limit damage. Telecommunications are critical at all stages – in prevention, preparation, response and relief efforts. Early warning systems and remote sensory systems have proven effective in disaster management, enabling the disaster management community to evaluate vulnerabilities, to be better prepared and to assess the initial extent of damage and destruction. Remote sensing data is also useful in locating response facilities/supplies and planning reconstruction efforts. Telecommunications

are critical in the immediate aftermath of a disaster, ensuring timely communications and the flow of information needed by governments and relief agencies to organize rescue operations and provide medical assistance. Reconstruction of disrupted telecommunication networks is also vital.

The area of emergency telecommunications is a top priority for ITU, which is working on international efforts to integrate ICTs into disaster forecasting, prevention, detection, monitoring and relief efforts on the ground. ITU-D is working to forge partnerships with development partners, including local communities, central government, the private sector, civil society and other international organizations, to ensure vital access to ICTs, especially by remote rural communities. Its work programme is designed to deal with a full range of disasters and promotes the use of a variety of communications for greatest flexibility in disaster response to broaden access to ICTs. Relief workers must be able to be reached and able to communicate. ITU-D has developed an ITU Framework for Cooperation in Emergencies (IFCE)[2] for the deployment of on-demand ICT applications and services, anywhere, anytime, in the immediate aftermath of a disaster. ●

Global Forum on Effective use of Telecommunications/ICT for Disaster Management
A global forum on emergency telecommunications was held in Geneva in December 2007 to unite stakeholders in disaster management and launch several initiatives to provide timely access to ICTs to relief agencies and victims of disasters. This event united key stakeholders active in developing, deploying and using telecommunications/ICT for disaster mitigation to map concrete strategies and measures prioritizing the effective use of telecommunications/ICT in all phases of disaster management i.e., early warning, preparedness, relief and response. The Global Forum debated policy and regulatory issues, technological aspects, finance and the deployment of last-mile communications systems in emergency situations.

A Workshop on Remote Sensing[3] was held within the Global Forum, in collaboration with the Group on Earth Observation Systems and the French Centre national d'études spatiales. It examined the critical role of remote sensing technologies in providing timely information facilitating the work of the disaster management community. Issues considered included access to data access, timeliness, training and international cooperation as key elements in a disaster management framework.

Remote sensing and geographic information systems allow risk assessment of multiple hazards and enable the development of scenario and contingency planning, including risk, hazard and scenario mapping. Risk analysis is vital in developing a disaster risk reduction strategy, establishing the links between risk, level of vulnerability and the ability to cope, including the availability and resilience of telecommunication networks in areas at risk of natural disaster. ●

Bridging the Digital Divide

Telecommunications are increasingly mobile and high-speed, offering greater functionality, while their growth continues unabated. It took the world 125 years to accumulate one billion fixed lines, but the first billion mobile subscribers were achieved in just 21 years, until 2002. Since then, the boom in mobile telephony has continued and, by mid-2007, there were as many as 3 billion mobile subscribers. The number of Internet users worldwide grew to 1.2 billion by the end of 2006, with around 280 million broadband Internet subscribers worldwide in 2006. However, seven-tenths (70 per cent) of these are located in high-income countries.

The transformation of the industry with more mobile and higher-speed forms of access brings a new dimension to ITU's efforts to assist in bridging the digital divide and promote easy and affordable access to ICTs for all. The ability to communicate freely is vital for a more equitable, prosperous and peaceful

Strategic Goal Two

Assisting in bridging the national and international digital divides in ICTs, by facilitating interoperability, interconnection and global connectivity of networks and services, and by playing a leading role, within its mandate, in the multi-stakeholder process for the follow-up and implementation of the relevant WSIS goals and objectives.

world. ICTs are also vital tools for development, and promise the most immediate means of boosting progress to achieve the UN Millennium Development Goals (MDGs) by 2015. However, the uptake of new technologies is uneven among countries, resulting in new forms of digital exclusion. ITU is working to mobilize the technical, financial and human resources needed to bridge the national and international digital divide in ICTs. ●

"ICTs are a major force for development in the modern economy, but many people still remain unconnected. ITU-D is working in partnership with Member States, Sector Members and other committed stakeholders to empower as many people as possible through wider access to ICTs in all regions of the world."

Sami Al Basheer Al Morshid
Director of the ITU Telecommunication Development Bureau
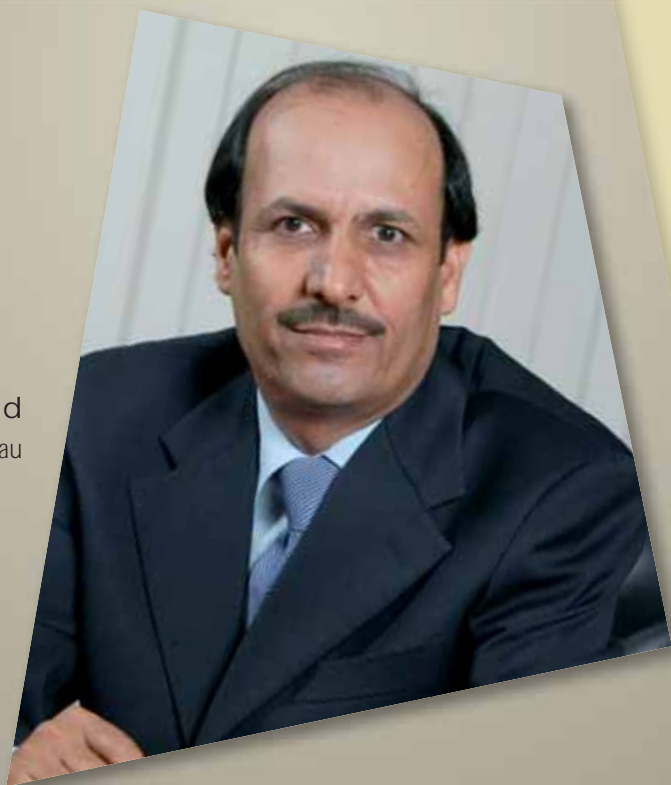
Connect Africa

In 2007, a key initiative was launched by ITU to bridge the digital divide, in the *Connect Africa Summit*[4].

In line with its role as WSIS Action Line C2 facilitator ("information and communication infrastructure"),

ITU brought together governments, industry, development banks and international organizations, in

Kigali, Rwanda, on 29 and 30 October 2007 in an effort to mobilize the human, financial and

technical resources needed to expand access to ICT infrastructure across the continent. The

Summit united more than one thousand participants from 54 countries, including

six Heads of State and Government. Forty-three African countries were

represented. It was organized by ITU, the African Union, the World

Bank Group and the United Nations Global Alliance for ICT

Summit

and Development, in partnership with the African Development Bank, the African Telecommunications Union (ATU), the United Nations Economic Commission for Africa and the Global Digital Solidarity Fund. At the Summit, planned spending and expected investments totalling some USD 55 billion were announced, which will help accelerate the implementation of WSIS connectivity goals and the UN Millennium Development Goals (MDGs). The Summit examined issues related to broadband ICT networks, rural connectivity, capacity-building, applications and services and an enabling environment[5]. ITU is now working closely with its partners to achieve key objectives which emerged from the Summit in Kigali, interconnecting all African capitals and major cities by 2012. Based on the success of this new model in Africa, the *Connect the World* initiative will be extended to other regions. ●

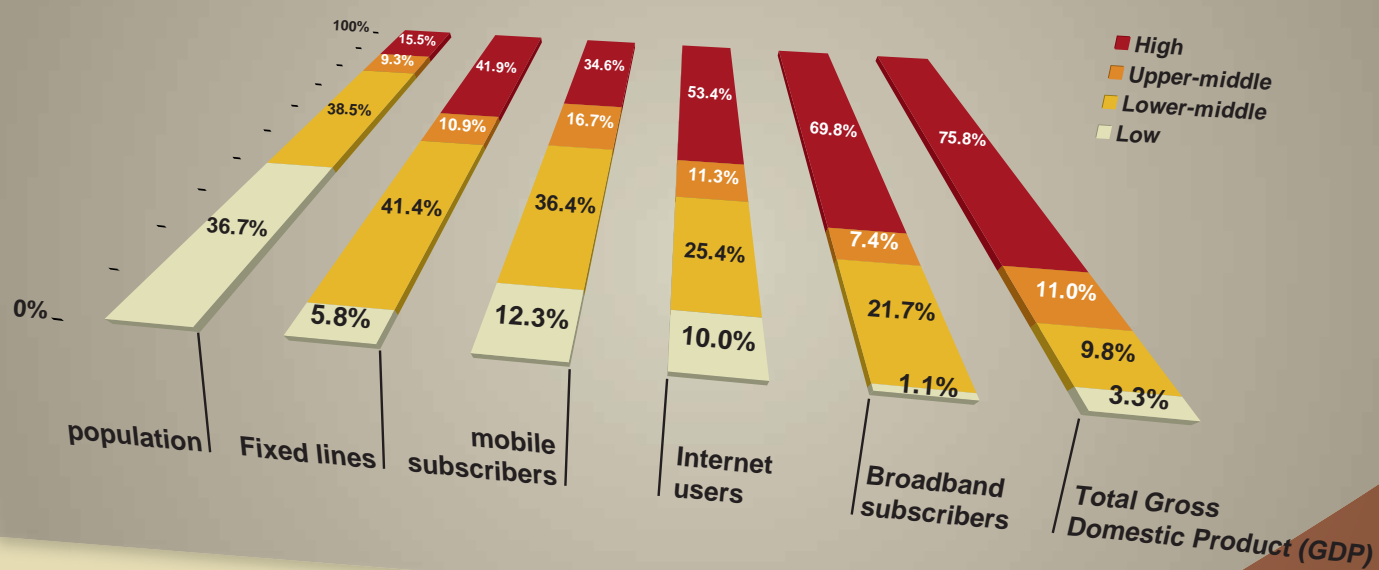"We are … fully aware that the benefits of the information technology revolution are today unevenly distributed between the developed and developing countries and within societies. We are fully committed to turning this digital divide into a digital opportunity for all, particularly for those who risk being left behind and being further marginalized".
WSIS Geneva Declaration of Principles, Paragraph 10.

In order to be able to monitor the progress of efforts to bridge the digital divide, it is vital to be able to track the digital divide. ITU's Market Information and Statistics (STAT) Division maintains the global *World Telecommunication Indicators Database,* recognized as the main source of worldwide and internationally comparable ICT/telecommunication statistics. ITU conducts extensive research and analysis based on its data to monitor progress and WSIS implementation in bridging the international digital divide (Figure 1).

Disparities in the ability of developing countries, relative to developed countries, to access, implement, contribute to and determine international standards in ICTs are known as the "standardization gap". The topic "Bridging the standardization gap between developed and developing countries" was introduced with Resolution 123 at the Marrakesh Plenipotentiary Conference, 2002, although concerns over the issue date from much earlier. The standardization gap contributes to the persistence of the wider digital divide in ICTs, because one of the underlying causes of the digital divide is unequal access to technology and uneven ability and knowledge to implement and use that technology. ITU will be developing implementation guidelines, tutorials, and capacity-building programmes to ensure sustainability in the development of ICTs.

**Distribution of major ICTs
by income group, 2006**

Legend:
- High
- Upper-middle
- Lower-middle
- Low

100% —

population
- 36.7%

Fixed lines
- 15.5%
- 9.3%
- 38.5%
- 5.8%

mobile subscribers
- 41.9%
- 10.9%
- 41.4%
- 12.3%

Internet users
- 34.6%
- 16.7%
- 36.4%

Internet users column:
- 53.4%
- 11.3%
- 25.4%
- 10.0%

Broadband subscribers
- 69.8%
- 7.4%
- 21.7%
- 1.1%

Total Gross Domestic Product (GDP)
- 75.8%
- 11.0%
- 9.8%
- 3.3%

0% —

Figure 1: Tracking the digital divide
Trends in the distribution of population, major ICTs
and Gross Domestic Product (GDP) by income
classification of countries, 2006.

A special effort is under way through ITU-T's "Technology Watch" function to research new and emerging technologies in terms of the impact that they are likely to have on developing countries and their standardization needs. A new series of "Technology Watch Briefing Reports" have been published, with the first studies reviewing intelligent transport systems, ICTs and climate change and "telepresence" or high-performance video-conferencing. Research is also being carried out into collaboration tools to allow "being there without going there", which will help in the remote participation of experts from all regions in ITU events. ITU-T is fully committed to organizing regional Forums to contribute to reducing the standardization gap and thus the digital divide. ●

Regional Offices and Direct Country Assistance

ITU is promoting the role of its Regional Offices and emphasizing close working relationships with other regional and sub-regional organizations. Through its regional offices, ITU provides developing countries with direct support on issues ranging from policies and regulation to telecommunication/ICT-related master plans, emergency telecommunications and the roll-out of infrastructure. Such support is provided mainly through expert missions, but has also included provision of equipment in certain cases. ITU is engaged in initiatives to establish multipurpose community telecenters and develop rural ICT applications to help bridge the digital divide. Numerous seminars and workshops have been held with regional organizations to strengthen on-the-ground partnerships. ●

Widening Membership

ITU attaches great importance to its Members and Associate organizations, which represent the true strength of any collaborative institution. Uniquely among UN specialized agencies, ITU's membership comprises Member States (represented by government administrations) and Sector Members, including private and public sector entities (such as operators, manufacturers, regulators and research and training institutes). At the end of December 2007, the Union enjoyed the support of 191 Member States, 609 Sector Members and 139 Associates.

The Union is undertaking various initiatives to broaden its membership base and ensure that its work remains relevant to a wider group of stakeholders. In response, the numbers of Sector Members and Associates have risen steadily over time (see Figure 2; Associate status was introduced in 2000). After a long period of steady growth reflecting the growth in the telecommunication sector, Sector Membership has declined slightly since 2002, due to fall-out, mergers and consolidation within the industry following the burst of the Internet bubble. As the sector recovers, however, membership is expected to grow again. Interest and participation by the private sector continues to strengthen, following ITU's engagement in a growing number of multi-stakeholder partnerships and the introduction of new, collaborative working methods.

ITU is engaged in a number of initiatives to widen its membership and attract new stakeholders. A regular magazine, *ITU News,* gives an overview of activities in all the Union's sectors, as well as in the ICT industry. Published both in hard copy and online, it highlights recent topical issues and features in-depth research and analysis, with interviews of leading industry figures.
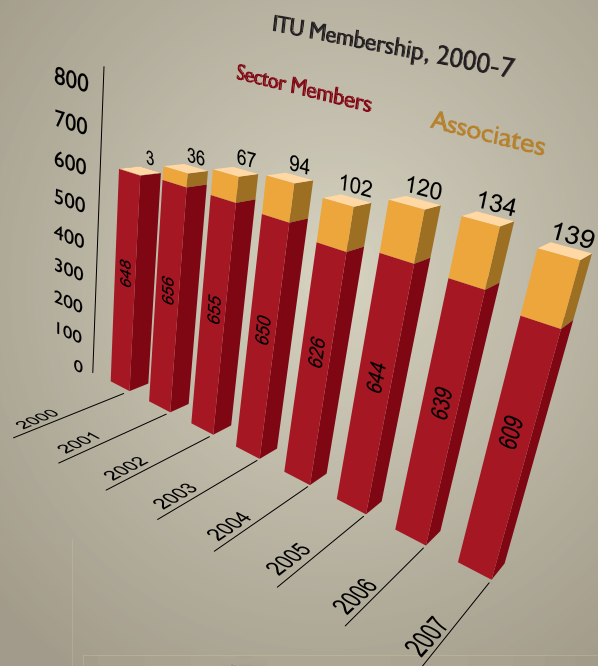
Strategic Goal Three

Widening the Union's membership, extending participation and facilitating cooperation of an increasing number of administrations and organizations, as well as new actors, such as relevant WSIS stakeholders.
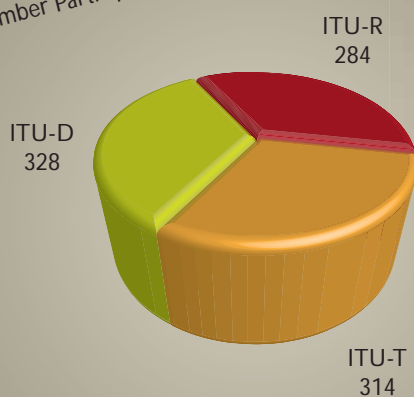
Figure 2: ITU Membership

Trends in ITU membership, 2000-2007 (top chart); and Sector Member participation by Sector, December 2007 (bottom chart).

ITU Membership, 2000-7

Sector Members

Associates

Year	Sector Members	Associates
2000	648	3
2001	656	36
2002	655	67
2003	650	94
2004	626	102
2005	644	120
2006	639	134
2007	609	139

Sector Member Participation

ITU-R 284

ITU-D 328

ITU-T 314

Note: Data refer to year end (top chart). Sector Members can belong to one or more Sectors, which explains why Sector Member participation adds up to more than 609 (bottom chart).

Source: ITU. Further information is available at: www.itu.int/members/index.html.

ITU News boasts a high-quality readership of over 17 000 from among the ITU membership, including senior government officials, presidents and CEOs of telecommunication companies, senior executives from the broadcasting and information technology industries, technical experts, regulatory and legal specialists, consultants and academics around the world.

ITU has also initiated outreach programmes to collaborate with new partners. Examples include ITU-T's consultation meetings with universities and research centres and the *Kaleidoscope* academic conference to be held in May 2008 to boost awareness and knowledge of ITU among the next generation of tomorrow's telecommunication and radiocommunication engineers. These initiatives will help ensure that ITU's work remains targeted to the needs of its membership, in a fast-changing ICT environment.

Safeguarding Networks As a result of the WSIS, ITU was appointed sole facilitator of Action Line C5, "Building confidence and security in the use of ICTs". The rapid growth of ICT networks has created new opportunities for criminals to exploit online vulnerabilities and attack countries' critical infrastructure. The future growth and potential of the online information society are in danger from growing cyberthreats. Furthermore, cyberspace is borderless: cyberattacks can inflict immeasurable damage in different countries in a matter of minutes.

Governments, firms and individuals are now more reliant on the information stored and transmitted over advanced communication networks. The costs associated with cyberattacks are significant – in lost revenue, loss of sensitive data, damage to equipment, denial-of-service attacks and network outages. Analysts have estimated that the total cost of online fraud will amount to some USD 105 billion in 2007, outstripping illegal drug sales worldwide for the first time[6].

ITU is working hard to address the emerging challenges associated with the information society. ITU's standardization work directly addresses security vulnerabilities in networks and transmission capabilities. Standards guarantee established levels of performance and security in technologies, systems and products, boosting confidence among providers and end users. ITU's security standards cover a broad range of areas, including security principles for IMT (3G) networks[7], IP multimedia systems[8], NGN, network security

Strategic Goal Four

Developing tools, based on contributions from the membership, to promote end-user confidence, and to safeguard the efficiency, security, integrity and interoperability of networks.[*]

[*] Information and communication network efficiency and security cover threats including, *inter alia,* spam, cybercrime, viruses, worms and denial-of-service attacks.

requirements, network attacks, theft and denial of service, theft of identity, eavesdropping, telebiometrics for authentication and security of emergency telecommunications.

One key example is X.509, an ITU-developed Recommendation for electronic authentication over public networks and one of the most important security standards in use today. The elements defined in X.509 are used in public-key certificates for securing connections between web-browsers and servers, agreeing encryption keys and providing digital signatures. ITU's work on electronic authentication has enabled jurisdictions around the world to recognize e-mail as legal documents and to accord electronic signatures legal status.

ITU's Standardization Sector (ITU-T) is uniquely positioned to bring together the private sector and governments to coordinate work in the harmonization of security policy and security standards worldwide. ITU works closely with other standards development organizations (SDOs) in setting standards for security and monitoring security work and hosts a regular joint security workshop coordinating work between other SDOs. In conjunction with the European Network and Information Security Agency and the Network and Information Security Steering Group, ITU publishes an ICT Security Standards Roadmap[9] highlighting existing standards, current work and future standards among key SDOs to inform users about standards that are available and under development.

"Standardization is a key building block in constructing a global culture of cybersecurity. We *can* and *will* win the war against cyberthreats. We will do so by building on the work of the thousands of dedicated individuals – from governments, the private sector and civil society – who come together, in organizations like ITU, to develop security standards and guidelines for best practices."

Malcolm Johnson
Director of the ITU Telecommunication Standardization Bureau

ITU study groups are engaged in many security-related activities and reviewing security questions is a key part of their work. Study Group 17 is the lead study group on Communications System Security and has approved over one hundred Recommendations on security for communications, mainly in the X series of Recommendations (by itself or jointly with ISO/IEC). It regularly publishes a Security Manual on "Security in telecommunications and information technology" as an overview of security issues and ITU-T Recommendations for secure telecommunications (the third manual was issued in August 2006), as well as a Security Compendium containing a catalogue of approved ITU-T Recommendations related to telecommunication security.

ITU is also engaged in direct technical assistance to build capacity in Member States, particularly developing countries, to coordinate national strategies and protect network infrastructures from threats. National frameworks and strategies are needed that allow stakeholders to use all the technical, legal and regulatory tools available in promoting a culture of cybersecurity. While some countries are advanced in national cybersecurity and Critical Information Infrastructure Protection (CIIP) strategies, others are only
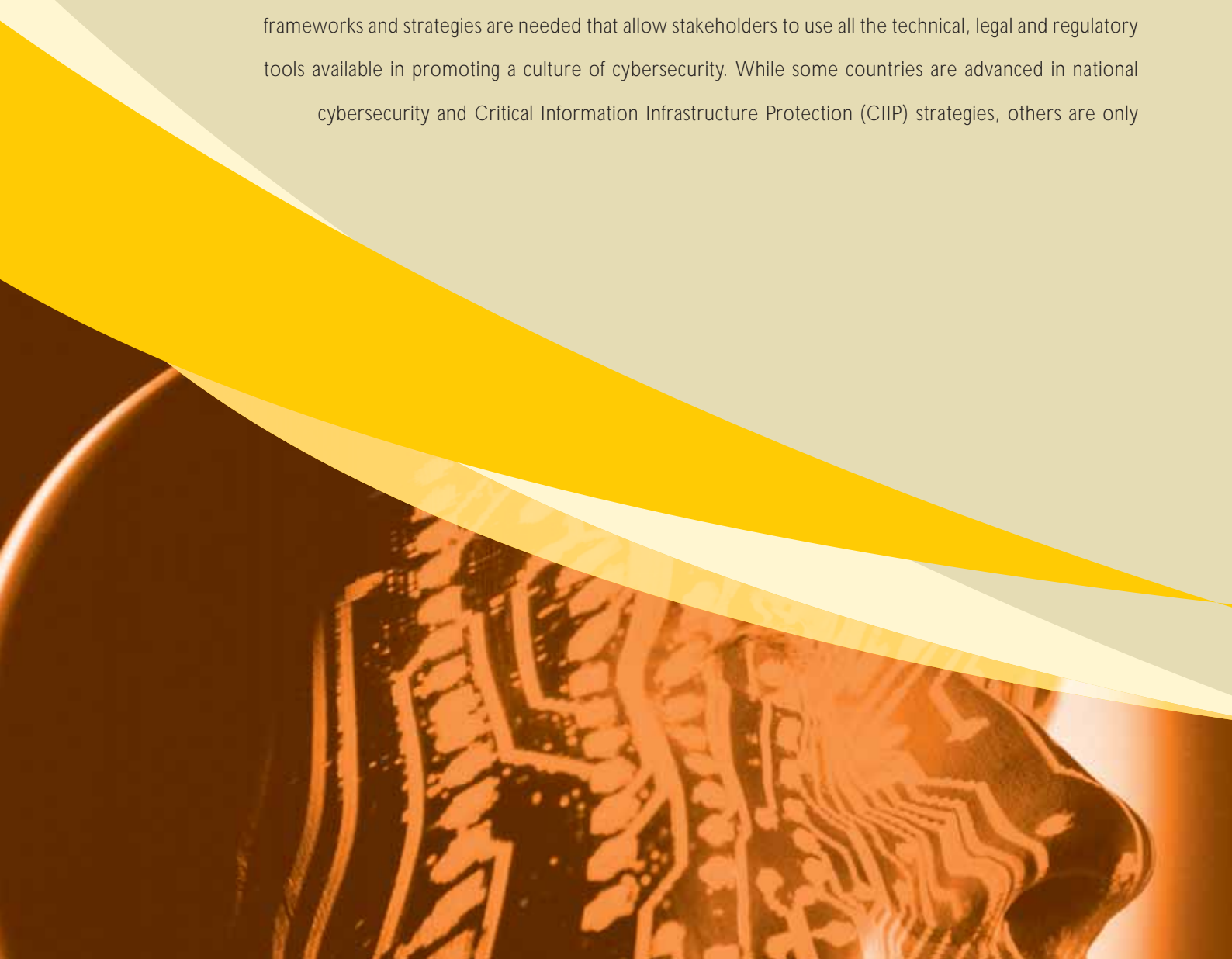
just beginning to consider the necessary measures to undertake. ITU-D is working on a *Framework for*
Organizing a National Approach to Cybersecurity that identifies the main policy objectives of national
strategies for cybersecurity in:

1) Developing a national cybersecurity strategy;

2) Establishing national government-industry collaboration;

3) Creating a national incident management capability;

4) Deterring cybercrime; and

5) Promoting a national culture of cybersecurity.

ITU is working with many partners from the public and private sectors on specific cybersecurity/
CIIP development initiatives to assist developing countries in awareness and self-assessment, building
capacity and expanding watch, warning and incident response capabilities. ITU promotes the sharing of
experience between and amongst developing and developed countries through its online platforms, an
active workshop programme and toolkits. ●
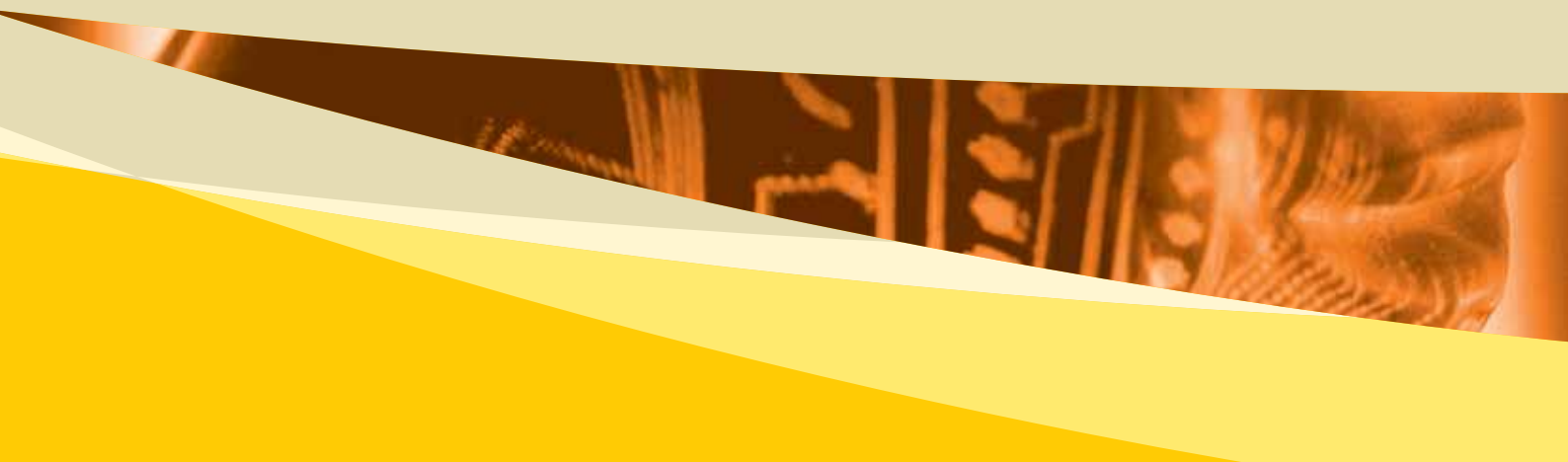
Global Cyber

Agenda

FIGURE 3: GLOBAL CYBERSECURITY AGENDA

A FIVE-PART PLATFORM

ITU Secretary-General

HLEG

INTERNATIONAL COOPERATION

LEGAL MEASURES

Goals include: Strategies for the development of a model cybercrime legislation that is interoperable and applicable globally

CAPACITY BUILDING

Goals include: Global strategies to facilitate human and institutional capacity building in 1, 2 and 3

TECHNICAL AND PROCEDURAL MEASURES

Goals include: Proposals for a framework for international dialogue, cooperation and coordination

1

Goals include: Strategies for the development of a global framework for security protocols, standards, software and hardware accreditation schemes

ORGANIZATIONAL STRUCTURES

Goals include: Global strategies for the creation of organizational structures and policies on cybercrime, watch, warning and incident response, generic and universal digital identity system

2

3

4

5

ITU is working to establish an international framework to promote cybersecurity – *the Global Cybersecurity Agenda* (www.itu.int/gca/). An expert panel has been appointed to advise the ITU Secretary-General on the complex issues surrounding cybersecurity. The High-Level Experts Group consists of world-renowned specialists in cybersecurity from a broad range of backgrounds in policy-making, government, academia and the private sector. This group will formulate proposals to the ITU Secretary-General on long-term strategies to promote cybersecurity in five key work areas (Figure 3).

The work area on "Legal measures" is developing advice on how to deal with criminal activities committed over ICT networks through legislation in an internationally compatible manner. "Technical and procedural measures" focuses on key measures for addressing vulnerabilities in software products, including accreditation schemes, protocols and standards. "Organizational structures" is developing a framework and response strategies for the prevention, detection, response to and crisis management of cyberattacks, including the protection of critical information infrastructure systems. "Capacity building" focuses on elaborating strategies for capacity-building mechanisms to raise awareness, transfer know-how and boost cybersecurity on the national policy agenda. Finally, "International cooperation" is developing a strategy for international cooperation, dialogue and coordination in dealing with cyberthreats. ●

Improving Efficiency and Effectiveness

ITU is engaged in various important initiatives for reform to make it more efficient and more effective, as well as more responsive to the needs of Member States for transparency and clarity of accounts. These initiatives include the reform of ITU's internal systems, business processes and procedures, as well as financial and budgetary reforms.

ITU's strategic, financial and operational planning processes have been integrated and interlinked to ensure that the allocation of resources is tied directly to performance and achievement of the Union's strategic objectives. A simplified set of measurable strategic performance indicators has been established, as a first step towards the introduction of a corporate performance management system. Performance will be monitored against objectives and expected results, including evaluation and reporting.

Further enhancements are foreseen in order to achieve more consistent and coherent planning. Service level agreements (SLA) were introduced for many of the activities of the General Secretariat from mid-2007 as an initial trial. The SLA mechanism should be further enhanced and developed over the course of the 2008-2009 biannual period to become an important tool of planning and control in ITU.

The 2006-2007 budget was implemented over the course of 2007 with a view to ensuring the most effective and economical use of the Union's resources. This exercise proved successful and a significant level of unused appropriations remained unused by the end of the biennium, strengthening ITU's Reserve

Strategic Goal Five

Continuing to improve the efficiency and effectiveness of ITU's structures and services and their relevance to the requirements of the membership and the wider global community.

Account. Key efficiency gains and cost-saving measures were implemented, including the restructuring of the General Secretariat and a reduction in the documentation workload. Results-Based Management (RBM) and Results-Based Budgeting (RBB) have been introduced since 2006-2007 to promote accountability and transparency in ITU's internal control procedures (in accordance with Resolutions 1216 and 1243). Efforts to implement an RBM framework within ITU will continue.

A Time Tracking System was introduced in 2005 to track the allocation of staff-time and outputs. This has resulted in cost transparency, not only for activities performed under cost recovery, but for all ITU's work. The cost-accounting process is now based on an appropriate methodology to reflect the genuine cost of individual activities and outputs to the organization (Decision 535, Council 2005). Implementation of Resolution 1243 has continued in the travel management and HR mobility projects, and in the migration of payroll from IBM HR Access to SAP software. The procurement project was completed and a new supplier relationship management application delivered. Additional projects are planned to further rationalize business processes and strengthen internal controls.

Disseminating Information and Know-how

ITU is a leading source of authoritative research and statistics for the telecommunication sector for Member States and territories around the world. It has anticipated, identified and explored developments in telecommunications over recent decades and its publications remain key works of reference for the industry as a whole. ITU maintains an active workshop programme disseminating information and a strong network of contacts among the leading experts in the field, helping ensure that it remains at the forefront of trends in the industry. ITU also organizes regular seminars on radiocommunication matters to improve knowledge and familiarity with the application of the Radio Regulations.

ITU's website has also been enhanced with a wealth of online resources and publications, interactive portals and online databases. New online collaborative working methods have been introduced, including wikis, blogs, webcasts, RSS feeds, e-mail newsletters and online access to many working documents, conferences and meetings, to improve the participation of the membership in ITU's activities. The overall web visibility of ITU content has increased significantly over the last two years.

Strategic Goal Six

Disseminating information and know-how to provide the membership and the wider community, particularly developing countries, with capabilities to leverage the benefits of, *inter alia,* private-sector participation, competition, globalization, network security and efficiency and technological change in their ICT sector, and enhancing the capacity of ITU Member States, in particular developing countries, for innovation in ICTs.

Online Recommendations

In 2007, for the first time, ITU-T published its Recommendations online free of charge. Pre-published ITU-T Recommendations are now available on the web immediately after approval. The process of approval of Recommendations has been reduced from up to four years in the 1980s to just nine weeks, thanks to the adoption of the Alternative Approval Process in ITU-T. In addition, the use of Focus Groups means that it is possible to develop draft text for Recommendations much more quickly than ever before.

Key Publications[10]

ITU's *World Telecommunication Development Report* series, first published in 1994, examines trends in ICT development. Themes have included mobile communications, universal access and trade in telecommunications. The *Internet Report* series has been published every year since 1997 focusing on specific trends in the online environment, including broadband, the portable Internet and digitalization. ITU's *World Information Society Report* series was published in conjunction with the United Nations Conference on Trade and Development (UNCTAD) to benchmark the growth of the information society worldwide and examine progress in WSIS implementation. ITU's *Trends in Telecommunication Reform* series is a flagship series examining key market and regulatory trends and emerging regulatory and policy issues. The series focuses on different themes every year from convergence, universal access, broadband and unbundling to the growth of NGN. The annual *ITU Yearbook of Statistics* provides the latest information about the evolution of the public telecommunications sector around the world. Each report presents the most recent data and analysis of the growth of the information society.

Surveys, Statistics and Online Portals

The Telecommunication Development Bureau conducts annual surveys to monitor the growth of telecommunications and trends in regulatory practices around the world. ITU maintains several key databases, including the *World Telecommunication Indicators Database* and *World Telecommunication Regulatory Database.* Key information from these databases is disseminated for free through the *ICT Eye,* an online one-stop statistical portal providing ICT information including national tariff policies, operator data, regulatory information and links to the WSIS Stocktaking database. ITU is a founding partner of the Partnership on Measuring ICT for Development, launched in 2004 to promote the measurement and collection of ICT indicators at

national, regional and international levels. Its members include ITU, OECD, UNCTAD, UNESCO, four UN Regional Commissions, the UN ICT Task Force and World Bank, as well as some National Statistical Offices (NSOs). The Partnership aims to develop a core set of common ICT indicators in a global database and to enhance the capacity of NSOs in methodologies, survey programmes and other functions.

The Global Regulators' Exchange (G-REX) is ITU's password-protected online forum for national regulatory authorities and policy-makers, providing assistance to countries and facilitating the exchange of regulatory best practices. The number of exchanges and number of members are growing steadily. ITU's TREG website provides access to a wealth of online resources, including events, publications, reports, case studies and a regulatory newslog tracking the latest regulatory news and developments.

Training Programmes The Global Capacity-Building Initiative (GCBI) is a

joint initiative by ITU, infoDev and the World Bank to build the capacity of policy-makers and regulators

from developing countries to address the challenges of an enabling regulatory environment. The

initiative aims to create a client-oriented framework facilitating the development and transfer

of knowledge for regulatory reform. The first training event of the GCBI was held in

Addis Ababa, Ethiopia, from 6 to 9 November 2007. The programme will

now be extended to partner with universities and training institutes to offer training on key regulatory principles and develop regulatory expertise in developing countries.

ITU continues to work with external partners to help build ICT capacity across all regions, through efforts such as the ITU Centres of Excellence (CoE) and the Internet Training Centres Initiative (ICTI). Over the course of 2007, the CoE conducted 89 workshops and trained 2 557 managers in the telecommunications/ ICT sector. The ICTI programme trained 592 students and 40 trainers, while training continued through other partner organizations. In 2007, five Nodes under the Asia Pacific Centre of Excellence Network were established dealing with the themes of spectrum management, policy & regulation, rural ICT development, technology awareness and business management.

Online Toolkits Information-sharing in cybersecurity is promoted through the ITU

Cybersecurity Gateway (www.itu.int/cybersecurity/). ITU is developing a range of online toolkits, workshops and training seminars to inform and help developing countries deal with the basic issues associated with cybersecurity and CIIP, including the new ITU Toolkit to Assess National Cybersecurity/CIIP Readiness and the ITU Botnet Mitigation Toolkit. These initiatives disseminate information and know-how to increase basic awareness of the issues in cybersecurity.
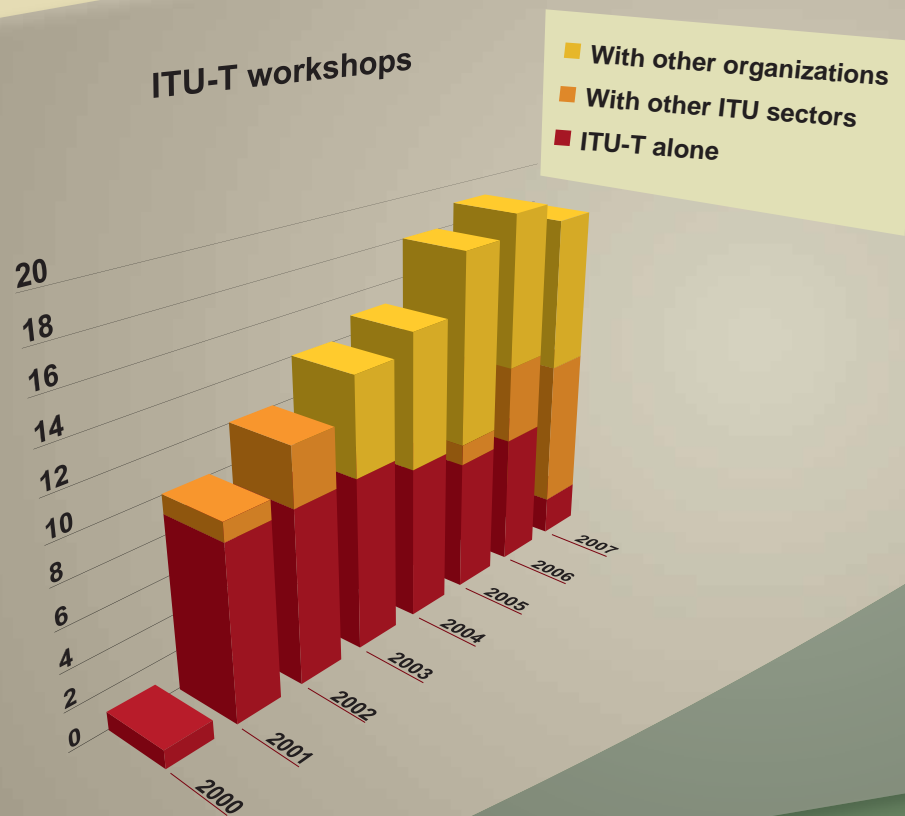
Workshops

ITU maintains an active workshop programme to disseminate information and know-how, often in collaboration with partner organizations. The *New Initiatives Programme* and *Shaping Tomorrow's Networks Programme* have conducted workshops on key issues including IP telephony, the promotion of broadband, regulation of IP-enabled NGN, spectrum management and the future of voice. Most ITU meetings are open to participation by external participants and interested stakeholders. A growing number of ITU-T workshops are held with other organizations (Figure 4). ITU-T has a longstanding cooperation with standards development organizations through the *Global Standards Collaboration.* ITU continues to forge partnerships with forums, consortia and other organizations relevant to its work. ITU will hold an international symposium on ICTs and Climate Change in April 2008.

In 2007, ITU organized a highly successful Regional Radiocommunication Seminar in Abu Dhabi, UAE, with over 100 participants from 19 countries. Experts from the Radiocommunication Bureau examined the complex provisions of the Radio Regulations (RR) and related Rules of Procedures for the benefit of attendees, and trained participants in the use of software tools for the efficient application of the RR. ●

Figure 4: ITU-T workshops

ITU-T workshops

- With other organizations
- With other ITU sectors
- ITU-T alone

20
18
16
14
12
10
8
6
4
2
0

2000
2001
2002
2003
2004
2005
2006
2007

Promoting an Enabling Environment "Programme 1:

Regulatory Reform" of the WTDC Doha Action Plan aims to assist Member States in developing an enabling environment that fosters a supportive policy and regulatory framework providing incentives for investment and promoting universal access to ICTs. It has developed tools for effective regulation to help regulators keep up to date with the latest issues in the regulation of ICT's markets. It also aims to raise awareness and exchange experience and know-how, so countries can make the transition to the new telecommunication environment more easily. Information about Programme 1 is available at www.itu.int/ITU-D/treg/.

ICT Regulation Toolkit In order to respond to developing countries'

need for guidance in the changing telecommunication environment, ITU and its partner infoDev have developed an ICT Regulation Toolkit (www.ictregulationtoolkit.org). The Toolkit assists regulators in the design of effective and enabling regulatory frameworks by sharing analysis and information on key regula-

Strategic Goal Seven

Promoting the development of an enabling environment
that assists governments in fostering supportive,
transparent, pro-competitive, harmonized and predictable
policies, as well as legal and regulatory frameworks that
provide appropriate incentives for investment in, and
development of, the information society.

tory issues and best practices. It can be accessed online free of charge by policy-makers, regulators and stakeholders. The Toolkit is continuously updated and includes modules on:

- Regulating the Telecommunication Sector Overview;

- Authorization of ICT services (including licensing);

- Spectrum Management;

- Pricing, Competition and Interconnection;

- Legal and Institutional Aspects of Regulation;

- New Technologies; and

- Universal Access (available 2008).

Each module provides an overview of the topic and a wealth of online resources and reference documents (over 850 in the entire Toolkit), drawing on experience from around the globe.

Capacity-Building, Training and Seminars

In conjunction with the European Commission, ITU launched an initiative[11] to support an integrated ICT market in West Africa, resulting in the adoption on 19 January 2007 of "Supplementary Acts on the harmonization of policies and regulatory framework for the ICT sector" by the Economic Community of West African States (ECOWAS) Heads of State. West African States are transposing these Acts into national law. ITU-EC announced an agreement to harmonize ICT frameworks and build capacity in December 2007, aimed at:

- Developing and promoting ICT market policies and guidelines;
- Supporting regional organizations to develop and promote the use of harmonized ICT market policies and regulations;
- Building human and institutional capacity in ICTs, through a range of training, education and knowledge-sharing measures.

The eighth ITU Forum on Telecommunications/ICT Regulation in Africa[12] (FTRA-07) was held in Kenya in June 2007 on the regulatory challenges associated with infrastructure-sharing. A WTDC regional initiative on regulatory issues was held at kick-off meeting for the Arab Region Regulatory Harmonization Initiative[13], held in Bahrain in October 2007[14]. An inaugural "Executive Training Programme on Enabling Frameworks for ICT Development" was organized by ITU and the regulator in Singapore in mid-2007.

Global Symposium for Regulators (GSR)

The GSR is ITU-D's flagship initiative to promote an enabling environment by fostering dialogue between regulators and ICT stakeholders. It provides a unique venue for regulators and policy-makers from around the world to exchange views and experiences. At the GSR over the last four years, the community of telecommunication regulators endorsed a set of best practice guidelines for an enabling environment, which are used by countries to promote effective regulation. ITU-D holds regular regional Forums on Telecommunications and ICT Regulation.

Climate change ITU contributed to the UN Conference on

Climate Change in Bali, Indonesia, emphasizing the role played by ICTs as both a cause and a potential cure for climate change. An international symposium will be organized in Kyoto in April 2008 as part of ITU's Technology Watch function to raise awareness of the role that ICTs play in climate change and identify new areas in which standardization work is acknowledged to be vital, with a follow-up event planned in London.

ITU
International
Telecommunication
Union

8th Global
Symposium
for Regulators
11-13 March 2008
P a t t a y a
T H A I L A N D

Towards the Telecommunications of Tomorrow

The expansion and evolution of telecommunications brings new opportunities, as well as new challenges. Convergence and the move towards networks based on IP or NGN are redefining the industry and business strategies. New services and applications, such as VoIP, are disrupting business models and calling regulatory frameworks into question. Faced with this transition, governments, regulators, operators and manufacturers are struggling to anticipate and adapt to tomorrow's emerging issues. Throughout this transition, ITU remains committed through its range of activities to helping ensure that communications over public telecommunication networks remain reliable, secure, interoperable and user-friendly.

The coming years, 2008 and 2009, promise to be as fully-charged as ever. Among the key events in ITU's calendar, ITU looks forward to Telecom Africa 2008 in Cairo, Egypt, and Telecom Asia 2008 in Bangkok, Thailand, which will unite CEOs, Ministers, regulators and policy-makers from across these regions to shape the future of the ICT industry. Telecom World will be held in Geneva in 2009. The Forums at these events explore the very latest technologies and solutions in deployment, the prospects for growth, the impact of liberalization, business strategies that have succeeded and much more. Telecom Exhibitions provide a wealth of opportunities for networking and forging business partnerships to promote trade and investment in telecommunications.

The eighth annual Global Symposium for Regulators (GSR) will be held in Pattaya, Thailand, in March 2008, in collaboration with the Ministry of Information and Communication Technology and the National Telecommunications Commission of Thailand, on the theme of "Innovative infrastructure-sharing and open access strategies to promote affordable access for all". The Symposium unites regulators from developed and developing countries to share their experiences on the latest developments in regulation.

ITU is also preparing for the World Telecommunication Standardization Assembly (WTSA-08), which will take place in October 2008 in Johannesburg at the kind invitation of the Government of the Republic of South Africa. WTSA-08 defines the overall policy, working methods and procedures for ITU-T, including the structure and participants of study groups and the Telecommunication Standardization Advisory Group (TSAG). For the first time ever, WTSA will be preceded by a Global Standardization Symposium in the same venue. In 2009, ITU will hold the fourth World Telecommunication Policy Forum in Switzerland on the subject of convergence and its relevance to the changing telecommunication environment.

ITU is working hard to adapt to the evolution and newly emerging challenges of the information society and the changing needs of its membership. ITU continues to improve its standardization and spectrum allocation activities, to make them more efficient and effective and responsive to membership's needs. ITU is designing new and tailored work programmes for technical assistance to developing countries, adapted to their requirements. ICTs, as well as the broader information society, continue to evolve, but the management team of ITU has every confidence that, united, we can work together to make the information society more inclusive, safer, more secure and as widely accessible to as many people as possible. ITU looks forward to continuing to work closely with its membership to fulfill this mandate.

List of Abbreviations

ATU	African Telecommunications Union
CIIP	Critical Information Infrastructure Protection
DDOS	Distributed Denial of Service
FSS	Fixed-Satellite Service
GCA	Global Cybersecurity Agenda
ICTs	Information and Communication Technologies
IDN	Internationalized Domain Names
IGF	Internet Governance Forum
IFCE	ITU Framework for Cooperation in Emergencies
IMT	International Mobile Telecommunications
ITU	International Telecommunication Union
LDCs	Least Developed Countries
MAAWG	Message Anti-Abuse Working Group
MDGs	Millennium Development Goals
NGN	Next-Generation Networks
NSOs	National Statistical Offices
PKI	Public Key Infrastructure
QoS	Quality of Service
SAP	Systems, Applications and Products for Data Processing
SDOs	Standards Development Organizations
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
WRC	World Radiocommunication Conference
WSIS	World Summit on the Information Society
WTDC	World Telecommunication Development Conference
WTISD	World Telecommunication and Information Society Day
WTSA	World Telecommunication Standardization Assembly

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[1] The four outcome documents of the WSIS are available at www.itu.int/wsis/outcome

[2] www.itu.int/ITU-D/emergencytelecoms/events/global_forum/itu-ifce.pdf

[3] www.itu.int/ITU-D/emergencytelecoms/events/global_forum/remotesensing.html

[4] www.itu.int/ITU-D/connect/africa/2007/

[5] www.itu.int/ITU-D/connect/africa/2007/summit/programme.html

[6] Internet Business Law Services (IBLS) www.ibls.com/internet_law_news_portal_view_prn aspx?s=latestnews&id=1882

[7] www.itu.int/rec/R-REC-M.1078-0-199409-I/en

[8] www.itu.int/ITU-T/asn1/database/itu-t/h/h235/2003-amd1/index.html

[9] www.itu.int/ITU-T/studygroups/com17/ict/index.html

[10] www.itu.int/publications/default.aspx

[11] For more information, see www.itu.int/ITU-D/treg/projects/itu-ec/index.html

[12] www.itu.int/ITU-D/afr/events/FTRA/Nairobi-2007/index.html

[13] www.itu.int/ITU-D/treg/Events/Seminars/2007/Bahrain_21-22_Oct/index.html

[14] Information on the workshop is at www.itu.int/ITU-D/treg/Events/Seminars/2007/Bahrain/index.html