



# SPU Flash

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The mission of the **ITU Strategy and Policy Unit (SPU)**, with the collaboration of the three ITU Sectors, is to assist ITU and its membership to anticipate and analyze the strategic implications and challenges of an evolving telecommunications environment. The SPU does this through a multidisciplinary approach to telecommunication policy issues that cuts across the work of the Sectors, involving research, analysis, publications and the organization of forums and workshops. The overall objective of the SPU is to adapt ITU's work programme to t-emerging technology, policy and market trends.

## ITU's upcoming activities related to cybersecurity and countering spam



For World Telecommunication Day 2006 on May 17th, the ITU Council chose the theme Promoting Global Cybersecurity to highlight

the serious challenges we face in ensuring the safety and security of networked information and communication systems.

In order to work towards strengthening global cybersecurity, SPU is involved in a number of related initiatives. These include the organization of the initial meeting on the multi-stakeholder implementation process for the WSIS Tunis Agenda Action Line C5: Building confidence and security in the use of ICTs. This meeting will take place on 15-16 May 2006 at ITU Headquarters in Geneva and is open to all WSIS stakeholders. It is being held as a part of a cluster of WSIS-related events in mid-May. See the meeting website at [www.itu.int/cybersecurity/](http://www.itu.int/cybersecurity/) for more detailed information.

The meeting has an overall focus on developing Partnerships for Global Cybersecurity. Potential partnership activities among governments, the private sector and other stakeholders will be discussed with the meeting structured around five main themes: information-sharing of national approaches, good practices and guidelines; developing warning and incident response capabilities; technical standards and industry solutions; harmonizing national legal approaches and international legal coordination; and privacy, data and promoting consumer protection.

Another initiative to strengthen ITU's cybersecurity and countering spam activities is the preparation of a global online reference source of national cybersecurity initiatives and websites worldwide. To ensure that all national agencies and organizations active in network and information security are represented in the survey, ITU's membership has been asked to provide information on their related initiatives. To provide information on cybersecurity related initiatives in your country, please complete the questionnaire at [www.itu.int/newsroom/wtd/2006/questionnaire/](http://www.itu.int/newsroom/wtd/2006/questionnaire/).

## Regulatory Development for Future Mobile Multimedia Services



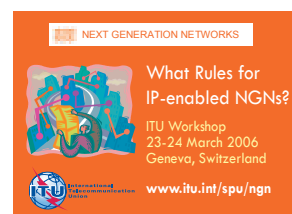
In 2001, ITU held a New Initiatives Workshop on "Licensing Policy for 3G mobile". Five years later, 3G (or IMT-2000) networks have finally begun to take off. Since then, the overall interest in new mobile services has hardly waned – indeed the number of mobile users reached 2 billion in 2005, almost a third of the world's population. In addition, new wireless broadband services are beginning to emerge

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as contenders for content delivery, e.g. WLAN, WiMAX, and enhanced 3G networks such as HSDPA. There have been calls for the re-evaluation of policy and regulation of 3G, enhanced mobile multimedia services, and wireless broadband. At this time, member states are tasked with re-evaluating the regulatory environment for such services. In this context, ITU, in collaboration with the German Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway, is staging a New Initiatives Workshop on the "Regulatory Environment for Future Mobile Multimedia Services" from 21-23 June 2006 in Mainz, Germany. This workshop will bring together experts in the field from industry, academia and government. For more information on the project and workshop, please see the website ([www.itu.int/multimobile/](http://www.itu.int/multimobile/)). For more information on the New Initiatives Programme, please visit our website at [www.itu.int/ni/](http://www.itu.int/ni/).

## What rules for IP-enabled NGNs?



Substantial investments are being made by operators and equipment manufacturers in IP-Enabled Next Generation Networks (NGNs). IP-enabled NGNs can be seen as a logical progression from separate PSTN, mobile and IP-network infrastructures towards unified

networks for future electronic communications based on IP. This technological transition is forcing a fundamental re-examination of current policy and regulatory frameworks. In this regard, the ITU's Strategy and Policy Unit organized a two-day workshop to meet the emerging needs of policy-makers, regulators and private sector stakeholders and to trigger global discussion on future regulatory policy. More than 80 high-level regulatory experts from 32 countries had the



opportunity to brainstorm on the future regulatory paradigm for IP-enabled NGNs. The main issues discussed during the event were regulatory proceedings for new and emerging markets, interconnection and interoperability issues, the open character of new IP-enabled environment and the implications of migration to the IP-enabled NGNs for the universal service.

More information about the workshop, including webcast, three background papers, presentations, abstracts, as well as NGN policy and resource page may be found at: [www.itu.int/osg/spu/ngn/event-march-2006.phtml](http://www.itu.int/osg/spu/ngn/event-march-2006.phtml). For more ITU activities on NGN, please see [www.itu.int/spu/ngn](http://www.itu.int/spu/ngn).

## Networked RFID: Systems and Services

The ITU Standardization Sector (ITU-T) in collaboration with the Strategy and Policy Unit (SPU), held a workshop on "Networked RFID: Systems and Services", from 14-15 February 2006 in Geneva. The workshop addressed challenges for standardization in the area of Radio-Frequency Identification (RFID), and in particular systems that are interconnected with telecommunication networks. At the moment, the standards landscape for RFID is fragmented and much work needs to be done on global standards for data formats, compatibility, interoperability, interference and authentication, among others. There was general consensus at the workshop that standardization in this field is essential in order to roll out the technology on a global scale, and that in order to achieve this, there needs to be close coordination between different regional bodies. New work areas have been identified for ITU as a result of the workshop, giving further momentum to contributions already on the table in some ITU study groups.

Materials from the workshop can be found at [www.itu.int/ITU-T/worksem/rfid/](http://www.itu.int/ITU-T/worksem/rfid/). An ITU background paper on RFID can be found at [www.itu.int/osg/spu/ni/ubiquitous/Papers/RFID%20background%20paper.pdf](http://www.itu.int/osg/spu/ni/ubiquitous/Papers/RFID%20background%20paper.pdf).

## Tomorrow's Network Today



In recent years, major advances in ICTs, combined with the rapid growth of global networks such as the Internet, have transformed businesses and markets. Learning and knowledge-sharing have empowered individuals and communities with new means of communication, and generated

greater wealth and economic growth in many countries. This revolution also means that there is no longer any need to be physically located near urban areas where most information and production is generated. Constraints of time and distance have been eliminated. The trend is towards the realization of a ubiquitous network society where people can access and exchange information freely, at any time, from anywhere, and from any appliance. This could be through personal broadband and mobile access, as well as more recent developments of intelligent home appliances and RFID tags to access networks.

An international workshop was held in Saint-Vincent (Aosta) in Italy from 7 to 8 October 2005 to encourage further the development of Tomorrow's Networks. The "Tomorrow's Network Today" Workshop discussed specific measures to overcome potential challenges, investigated how such a new paradigm could be realized and, at the same time, evaluating future actions. A significant outcome of the workshop was an agreement on future collaboration between the Strategy and Policy Unit and the Ugo Bordoni Foundation on the development of the **Shaping Tomorrow's Networks Programme**.

More information about the workshop, the chairman's report and related activities can be found at: [www.itu.int/tnt](http://www.itu.int/tnt). For more information about Shaping Tomorrow's Networks Programme, please visit our website at [www.itu.int/stn](http://www.itu.int/stn).

## Internet Report 2005: The Internet of Things



The Internet of Things ([www.itu.int/internetofthings/](http://www.itu.int/internetofthings/)) is the seventh in the series of "ITU Internet Reports" and was launched at the World Summit on the Information Society in Tunis in November 2005. The report takes a look at the next step in "always on" communications, in which new technologies such as RFID, sensors, and smart computing promise a world of networked and interconnected devices that provide relevant content

and information, whatever the location of the user.

The Internet, as we know, it is set to transform radically. From an academic network for the chosen few, the Internet is now being accessed by almost a billion people worldwide, using personal computers and increasingly mobile devices. Yet this is only the beginning – in the future, the Internet will evolve to become a fully pervasive, interactive and intelligent system. Tomorrow's global network will not only consist of humans and electronic devices, but all sorts of inanimate things as well. These things will be able to communicate with other things, e.g. fridges with grocery stores, laundry machines with clothing, implanted tags with medical equipment, and vehicles with stationary and moving objects. Science fiction is slowly turning to science fact, with an Internet of Things based on ubiquitous network connectivity.

The report looks at four key enabling technologies for the Internet of Things – RFID, sensors, smart technologies (e.g. those enabling smart homes and intelligent vehicles), and nanotechnology – their development, applications and implications for business, government and consumers alike. It explores how the new technological ubiquity will drive the future communication landscape, the opportunities it offers and the threats it poses. The report also includes comprehensive statistical tables for over 200 economies.

For more information about the report and how to get your copy, please see the website at: [www.itu.int/internetofthings/](http://www.itu.int/internetofthings/).

## ITU/Korea Digital Opportunity Platform

Inspired by the WSIS Declaration of Principles whereby governments committed to transform the digital divide into a digital opportunity based on inclusion and as a result of their successful collaboration in the **Building Digital Bridges** Project in February, the Ministry of Information and Communication (MIC) of the



Republic of Korea and ITU signed a new Memorandum of Understanding for the development of a "**Digital Opportunity Platform**". The Platform establishes a non-exclusive partnership, open to all WSIS stakeholders, that aims to further develop the **Digital Opportunity Index (DOI)** ([www.itu.int/osg/spu/statistics/DOI/index.phtml](http://www.itu.int/osg/spu/statistics/DOI/index.phtml)) as a tool for better measuring the digital divide (see the in-depth article on p.4), and to provide guidelines for the evaluation and development of ICT policies worldwide. The first activity organized under the Platform will be the conference, "**Digital Transformations in the Information Society**", organized in collaboration with the London Business School on 1-2 June 2006 that will include a session on the use of composite indices for measuring digital opportunity. Other activities envisioned in the Digital Opportunity Platform include the publication of the DOI as part of the inaugural "World Information Society Report" on WSIS implementation and a workshop in the Republic of Korea on the ways in which the DOI can inform ICT policy development, organized in collaboration with the Korea Agency for Digital Opportunity and Promotion (KADO).

For more information about the conference "Digital Transformations in the Information Society" and the Digital Opportunity Index (DOI), please visit [www.itu.int/osg/spu/statistics/DOI/index.phtml](http://www.itu.int/osg/spu/statistics/DOI/index.phtml).

## ICT Success Stories Portal officially launched



On 31 March 2006, ITU launched its new portal, "ICT Success Stories" ([www.itu.int/ict\\_stories](http://www.itu.int/ict_stories)) with a "hands-on" demonstration at its Headquarters in Geneva, within its mandate under paragraph 28e of the WSIS Plan of Action ([www.itu.int/wsis/outcome](http://www.itu.int/wsis/outcome)). Opening

remarks were made by the WSIS Executive Director, Mr. Charles Geiger, and a presentation of the WSIS Stocktaking tool was given by Dr Tim Kelly, Head of the Strategy and Policy Unit of ITU, which administers the portal. A presentation on the portal's content and functionality, web archive from the launch and other materials are available on the main page of the portal.

The portal serves to exchange fresh ideas and learning experiences about creative uses of ICTs in different cultural contexts to improve health, education, governance and income, while empowering communities and promoting peace and human values and freedoms. It allows users to search ITU's extensive database of many ICT success stories and experiences by theme, criterion, country or stakeholder to exchange ideas, insights and experience. The key message is that there is no "one size fits all" approach to using new technologies to promote development with a human face: rather, in the trial-and-error process of learning to use ICTs effectively in the local context, the insights of projects and development activities gained from stakeholders' experience can be extremely valuable.

For more information, please visit [www.itu.int/ict\\_stories](http://www.itu.int/ict_stories).

## The Golden Book officially released



The WSIS Golden Book was officially launched on 24 February 2006 during the consultation meeting of WSIS Action Line Facilitators/Moderators in Geneva. Following the Swiss initiative announced at WSIS PrepCom-3, it has been published by the ITU as a permanent record of the new commitments and resources announced by stakeholders during the Tunis Phase of the World Summit on the

Information Society. All WSIS stakeholders at the Summit were invited to submit an online questionnaire with details of their activities announced during the Tunis Phase. These activities had been planned or were already being undertaken to implement the WSIS Plan of Action. The Golden Book also serves as a tool helping to coordinate the action taken to implement the 11 Action lines and avoid duplication.

For more information, see [www.itu.int/wsis/goldenbook](http://www.itu.int/wsis/goldenbook).

## WSIS Stocktaking exercise



The Summit noted with appreciation the importance of the WSIS Stocktaking exercise during the Tunis Phase and encouraged ITU to continue its activities in this field. The ITU is extending this exercise, maintaining and improving the web-based Stocktaking Database, encouraging all WSIS stakeholders to submit descriptions of projects and establishing the necessary links with

Action Line moderators/facilitators to share and exchange information efficiently. Since the Tunis Summit, the database has received many new entries. On 20 March 2006, there were more than three thousand project descriptions available in the Stocktaking system.

Further information is available from the website at [www.itu.int/wsis/stocktaking](http://www.itu.int/wsis/stocktaking).

## FORTHCOMING EVENTS

Date, Venue	Organizing Entity
9-11 May 2006, Geneva, Switzerland	ITU and UNESCO
Global Symposium on Promoting the Multilingual Internet <a href="http://www.itu.int/ITU-T/worksem/multilingual/">www.itu.int/ITU-T/worksem/multilingual/</a>	
15-19 May 2006 Geneva, Switzerland	
Information Society Week <a href="http://www.itu.int/wsis">www.itu.int/wsis</a>	
15-16 May Hanoi, Vietnam	ITU
Next Generation Networks <a href="http://www.itu.int/ITU-T/worksem/ngn/200605/">www.itu.int/ITU-T/worksem/ngn/200605/</a>	
15-16 May 2006, Geneva, Switzerland	ITU
Action Line C5 Facilitation Meeting, "Partnerships for Global Cybersecurity" <a href="http://www.itu.int/spu/cybersecurity/index.phtml">www.itu.int/spu/cybersecurity/index.phtml</a>	
17 May 2006 Geneva, Switzerland	ITU
World Telecommunication Day 2006: "Promoting Global Cybersecurity" <a href="http://www.itu.int/newsroom/wtd/2006/index.html">www.itu.int/newsroom/wtd/2006/index.html</a>	
1-2 June 2006 Geneva, Switzerland	SPU/LBS (1)
Conference on Digital Transformations in the Information Society	
21-23 June 2006 Mainz, Germany	SPU/BNetzA (2)
Regulatory Environment for Future Mobile Multimedia Services <a href="http://www.itu.int/osg/spu/ni/multimobile/index.html">www.itu.int/osg/spu/ni/multimobile/index.html</a>	

- (1) London Business School  
(2) Federal Network Agency, Germany

For more detailed information about these and other SPU activities, please visit [www.itu.int/spu](http://www.itu.int/spu).



## IN-DEPTH ARTICLE

## DIGITAL OPPORTUNITY INDEX

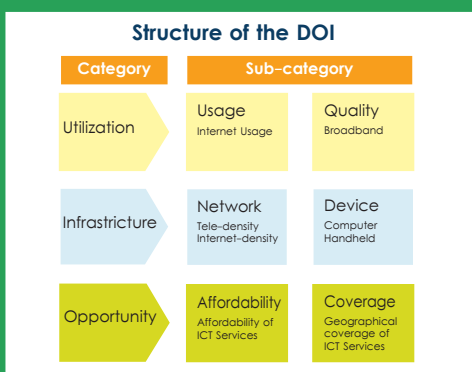
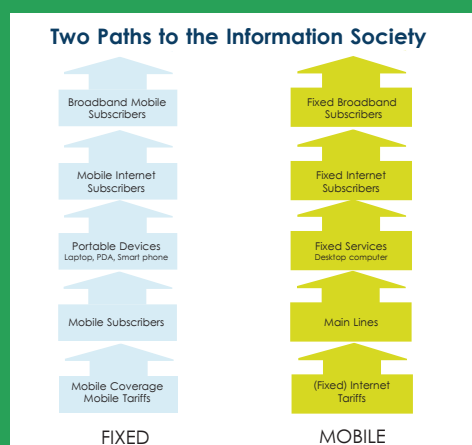
### ITU/Korea Digital Opportunity Platform

The Digital Opportunity Index (DOI) is a composite index that measures "digital opportunity" or the possibility for people to benefit from access to information that is "universal, ubiquitous, equitable and affordable" (WSIS Tunis Commitment, para 10). As such, it is a measure of each countries' performance and prospects for progress in building an Information Society.

Building on its previous experience, and in direct response to WSIS (1), the ITU in collaboration with the Ministry of Information and Communications of the Republic of Korea created the DOI to measure digital opportunity (2). The aim is to encourage and directly involve governments and other stakeholders in the monitoring of WSIS implementation and follow-up, and its impact on the digital divide.

**Figure 1: The Structure of the DOI**

The structure of the DOI, with its different categories and sub-Indexes of Use, Infrastructure and Opportunity, and by its fixed and mobile components.



Source: left chart: Adapted from C. M. Cho; right chart: ITU/KADO Digital Bridges Project.

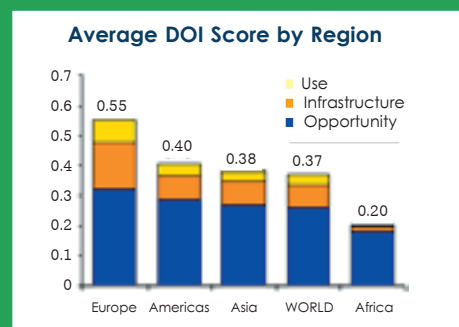
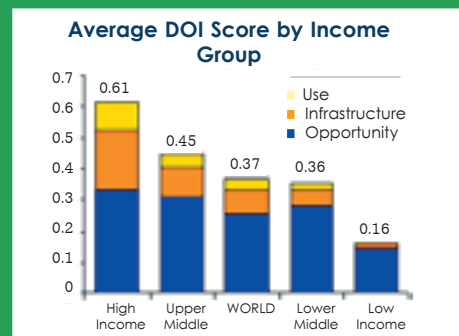
The DOI monitors countries' digital opportunity and use of ICTs over time for 180 economies for 2003/2004. It uses tariff data (for mobile telephony and Internet access), network indicators (mainline and cellular penetration, as well as households with computers and Internet access), broadband subscribers (for both mobile broadband and ADSL broadband) and mobile network coverage (as a key measure of access to telecommunications) to measure countries' digital opportunity. The result is a radical new index that can be split into its fixed

and mobile components to track the transformation of the telecommunication sector in many countries (Figure 1). This is an important insight, as it enables developing countries, where the mobile sector is often the most buoyant, to be assessed on their true strengths and capabilities.

The DOI is also relevant to developing countries, as it uses household measures of access to ICTs to show true access to telecommunications, rather than the per capita penetrations favoured by most other e-indices. Household penetration figures are generally higher than per capita penetrations in most developing countries due to their large average household size. Using per capita penetration figures tends to penalize developing countries, relative to industrialized economies. The DOI can also be used to analyse the digital divide, at the international level, as well as within a country, to assess the gender divide. Examples of these applications will be highlighted in the forthcoming World Information Society Report, due to be published by the ITU in June 2006. It is hoped that the DOI will prove a useful tool for governments and policy-makers as they monitor and take action to eliminate the digital divide.

**Figure 2: Average DOI Scores worldwide**

The different make-up of the DOI worldwide, by income grouping and region, with world average included



Source: ITU

- 1 Paragraph 28 of the Geneva Plan of Action calls for realistic international performance evaluation and benchmarking (both qualitative and quantitative), while paragraph 113 of Tunis Agenda for the Information Society commits countries to review progress in bridging the digital divide, using appropriate indicators and benchmarking.
- 2 For further information, see [www.itu.int/osg/spu/statistics/DOI/index.phtml](http://www.itu.int/osg/spu/statistics/DOI/index.phtml).