

**ITU-D Regional Development Forum for
the EUR and CIS Region
“NGN and Broadband, Opportunities and Challenges”
Chisinau, Moldova, 24 – 26 August 2009**

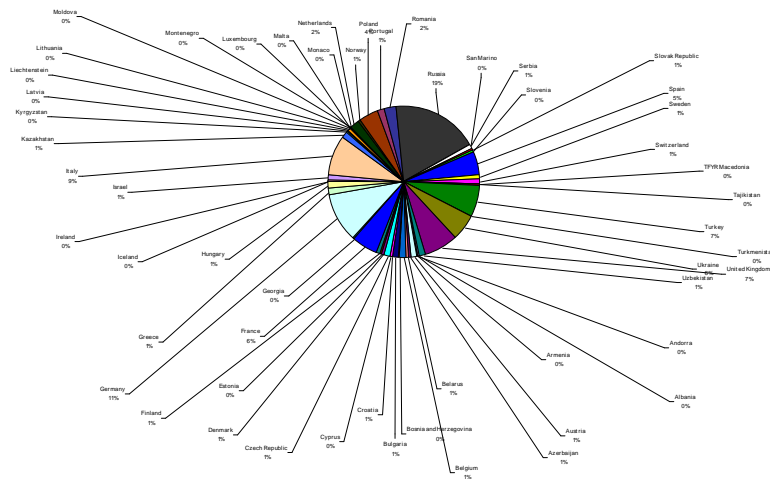
ITU-D STUDY GROUP ACTIVITIES

Riccardo Passerini

Telecommunication Development Bureau
International Telecommunication Union

**Share of mobile cellular subscriptions in CIS, CEE & Baltic Countries
(2008)**

(Source: ITU World Telecommunication/ICT Indicators Database)



CIS, CEE and Baltic Countries: Mobile Cellular Subscriptions 2008

(Source: ITU World Telecommunication/ICT Indicators Database)



		<i>CAGR</i>		<i>As % of total</i>	
		<i>(k)</i>	<i>(%)</i>	<i>Per 100</i>	<i>telephone</i>
		<i>2008</i>	<i>2003-08</i>	<i>inhabitants</i>	<i>subscribers</i>
1	Albania	3'141	23.4	99.93	90.8
2	Andorra	64	4.3	76.06	63.2
3	Armenia	1'876	101.3	61.07	34.9
4	Austria	10'816	8.3	129.73	76.4
5	Azerbaijan	6'548	44.0	75.00	83.2
6	Belarus	6'960	58.0	71.57	65.5
7	Belgium	11'822	6.6	111.63	72.6
8	Bosnia & Herz.	3'179	24.2	84.26	75.5
9	Bulgaria	10'633	24.9	140.05	82.5
10	Croatia	5'924	18.5	133.95	76.2
11	Cyprus	1'017	13.0	117.89	71.1
12	Czech Rep.	13'780	7.3	133.54	85.8
13	Denmark	6'551	6.6	120.02	72.5
14	Estonia	2'524	19.2	188.20	83.5
15	Finland	6'830	7.5	128.76	80.5
16	France	57'972	6.8	93.45	62.4
17	Georgia	2'600	38.3	59.66	82.4
18	Germany	107'245	10.6	130.37	67.6
19	Greece	13'799	9.1	123.90	69.8
20	Hungary	12'224	9.0	122.09	79.8
21	Iceland	328	4.0	106.33	63.7

CIS, CEE and Baltic Countries: Mobile Cellular Subscriptions 2008

(Source: ITU World Telecommunication/ICT Indicators Database)



		<i>CAGR</i>		<i>As % of total</i>	
		<i>(k)</i>	<i>(%)</i>	<i>Per 100</i>	<i>telephone</i>
		<i>2008</i>	<i>2003-08</i>	<i>inhabitants</i>	<i>subscribers</i>
22	Ireland	5'048	7.6	113.77	69.6
23	Israel	8'982	6.3	127.38	75.6
24	Italy	88'580	9.3	148.61	81.6
25	Kazakhstan	14'911	62.1	96.06	81.4
26	Kyrgyzstan	2'168	99.0	40.56	81.8
27	Latvia	2'217	16.1	97.72	77.5
28	Liechtenstein	32	6.4	90.58	62.1
29	Lithuania	5'023	19.0	151.24	86.5
30	Luxembourg	707	5.6	147.11	73.1
31	Malta	386	5.9	94.64	61.5
32	Moldova	2'420	38.4	66.60	63.6
33	Monaco	20	7.8	62.54	37.0
34	Montenegro	644	-	103.58	64.6
35	Netherlands	19'927	8.6	120.57	73.1
36	Norway	5'192	6.3	109.98	72.3
37	Poland	41'389	24.2	108.54	80.0
38	Portugal	14'910	8.3	139.64	78.3
39	Romania	24'467	28.03	114.54	82.9
40	Russia	187'500	39.0	132.61	78.7
41	San Marino	18	0.9	56.76	45.4
42	Serbia	9'619	-	97.76	75.7
43	Slovak Republic	5'520	8.5	102.23	83.4

CIS, CEE and Baltic Countries: Mobile Cellular Subscriptions 2008

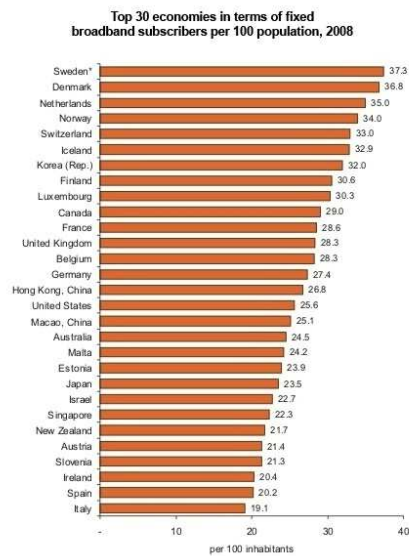
(Source: ITU World Telecommunication/ICT Indicators Database)



	(k)	CAGR (%)	Per 100 inhabitants	As % of total telephone subscribers
44 Slovenia	2'055	3.4	101.97	67.1
45 Spain	49'682	5.9	111.68	71.1
46 Sweden	10'988	4.5	119.38	67.4
47 Switzerland	8'780	7.2	116.43	64.6
48 Tajikistan	2'350	165.0	34.93	87.4
49 TFYR Macedonia	2'502	26.4	122.56	84.6
50 Turkey	65'824	18.7	89.05	79.0
51 Turkmenistan	348	148.0	6.98	43.2
52 Ukraine	55'694	53.7	121.09	80.9
53 United Kingdom	75'565	6.9	123.41	69.5
54 Uzbekistan	12'650	108.5	46.52	86.8

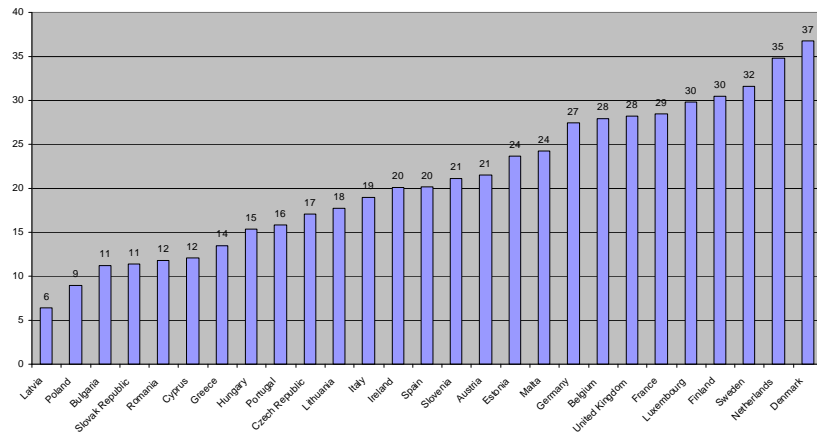
Fixed Broadband penetration by technology, top 30 economies worldwide (2008)

(Source: ITU World Telecommunication/ICT Indicators Database)



EU Fixed Broadband Penetration - 2008 (per 100 inhab. - %)

(Source: ITU World Telecommunication/ICT Indicators Database)



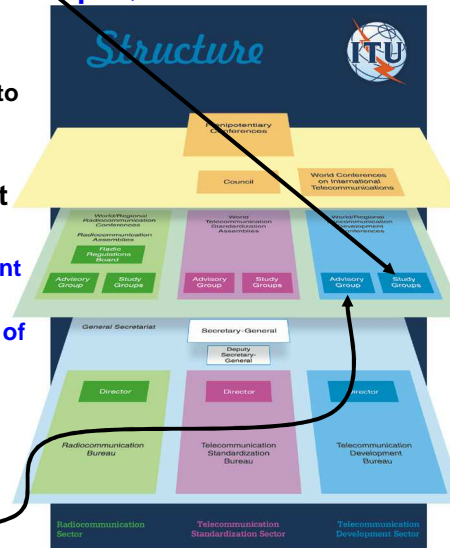
ITU-D Study Groups

The History

- The ITU-D Study Groups were established in order to deal with specific telecommunication questions of general interest to developing countries, according to [Resolution 2 of WTDC-94](#) that was held in Buenos Aires, 21-29 March 1994
- The terms of reference, the procedures to be applied by the Study Groups, the Questions under Study have been amended through the successive WTDCs: [WTDC-98 \(Valletta 23 March-1 April 1998\)](#), [WTDC-2002 \(Istanbul 18-27 March 2002\)](#), [WTDC-06 \(Doha 7-15 March 2006\)](#)

ITU-D: Study Groups, TDAG

- ITU-D:
 - Purpose: devise innovative solutions to specific problem areas per WTDC
 - No technical standards
 - SGs focus: telecoms development strategies
 - SG 1 - Telecommunication development strategies and policies
 - SG 2 - Development and management of telecommunication services and networks and ICT applications
- http://www.itu.int/ITU-D/study_groups/index.html
- TDAG: Advisory Group



ITU-D STUDY GROUPS

- **SG 1: Telecommunication development strategies and policies**
National telecommunication policies and regulatory strategies which best enable countries to benefit from the impetus of telecommunications as an engine of economic, social and cultural development.
Finance and economics, including World Trade Organization (WTO) issues, tariff policies, case studies, application of accounting principles as developed by ITU-T Study Group 3, private-sector development and partnership.
- **SG 2: Development and management of telecommunication services and networks and ICT applications**
Methods, techniques and approaches that are the most suitable and successful for service provision in planning, developing, implementing, operating, maintaining and sustaining telecommunication services which optimize their value to users. This work will include specific emphasis on telecommunication network security, mobile communication and communications for rural and remote areas, with particular focus and emphasis on applications supported by telecommunications
The implementation and technical application of information and communication technology, using studies by the others Sectors, taking into account the special requirements of the developing countries

http://www.itu.int/ITU-D/study_groups/index.html

Structure of ITU-D SGs



- **Chairmen:** Chairmen and vice-chairmen appointed by WTDC primarily based upon proven competence (technical and management skill)
- **Vice chairmen:** Assist the chairman in matters relating to the management of the study group, including substitution for the chairman at official ITU-D meetings or replacement of the chairman. Vice-chairmen may be selected as chairmen of working parties or as rapporteurs.
- **Rapporteurs for each questions:** Rapporteurs are appointed by a study group in order to progress the study of a Question and to develop new and revised reports, opinions and recommendations. Rapporteurs may have responsibility for only one Question or topic.
- **Study Groups management team:** (chairman, the vice-chairmen of the study group, the chairmen and vice-chairmen of working parties, the rapporteurs and vice-rapporteurs). It should meet prior to the meeting of the study group, in order to properly organize the coming meeting, including the establishment of a time-management plan.
- **Joint SGs management team:** (Chaired by the Director of BDT, composed of the ITU-D study group management teams) to coordinate issues common to study groups; to prepare joint proposals to TDAG, to finalize the dates of the study group meetings, to deal with any other issue that may arise.

MEETINGS



- The study groups and their subordinate groups *shall normally meet at ITU headquarters.*
- The meetings of the study groups and their subordinate groups studying Questions should take place, to the extent possible, *in the ITU-D regions*, when invited by Member States or Sector Members, in order to facilitate the attendance of developing countries
- **Participation in meetings**
 - Member States, Sector Members, Associates and other entities duly authorized to participate in ITU-D activities shall be represented in the study groups and other groups in whose work they wish to take part by participants registered by name and chosen by them as representatives to make an effective contribution to the study of the Questions entrusted to those study groups. Chairmen of meetings may invite individual experts, as appropriate, to present their specific point of view, without taking part in the decision-making process.
- **Frequency of meetings**
 - The study groups shall in principle meet at least once a year during the interval between two WTDCs. However, additional meetings may take place with the approval of the Director of BDT, having regard to the priorities laid down by the preceding WTDC and the resources of ITU-D.

ITU-D Study Group 1

Telecommunication development strategies and policies

http://www.itu.int/ITU-D/study_groups/index.html

SG1: QUESTIONS UNDER STUDY

- Q 6-2/1: Regulatory impact of **next-generation networks** on interconnection
- Q 7-2/1: Regulatory policies on **universal access** to broadband services
- Q 10-2/1: Regulation for **licensing** and authorization of converging services
- Q 12-2/1: **Tariff policies, tariff models** and methods of determining the costs of services on national telecommunication networks, including next-generation networks
- Q 18-1/1: Domestic enforcement of **telecommunication laws**, rules and regulations by national telecommunications regulatory authorities
- Q 19-1/1: Implementation of **IP telephony** in developing countries
- Q 20/1: Access to telecommunication services for **people with disabilities**
- Q 21/1: Impact of telecommunication development on the **creation of employment**
- Q 22/1: Securing information and communication networks: Best practices for developing a culture of **cybersecurity**

6-2/1 Regulatory impact of next generation networks on interconnection

ISSUES FOR STUDY

- *Studies of various issues related to Regulatory impact of next-generation networks on interconnection*

OUTPUT

- *Description of the legislative and regulatory framework that would be needed to implement appropriate interconnection arrangements for new generations networks*
- *Report: Issues on NGN Network Architecture Interface and Points of Interconnections (PoI)*
- *Under discussion: signalling mandated by the regulator or left to the market to determine (ITU-T Q.3401 might be appropriate for regulator to use)*

7-2/1 Regulatory policies on universal access to broadband services

ISSUES FOR STUDY

- *Regulatory policy aspects linked to broadband services and technologies, in particular a summary of the experience acquired by telecom regulators in implementing universal access to broadband services in their countries;*
- *Specific universal access aspects with regard to management of access and interconnection agreements and methods of financing universal service;*
- *Aspects to keep up the technological neutrality principles inserting broadband access services to the universal services package;*
- *Aspects relating to best practices in seeking funding sources and developing innovative financing mechanisms for accelerating universal access/service development in rural communities;*

OUTPUT

- *Questionnaire and Report on best **regulatory** practices from developing and developed countries on how they have promoted Universal service through broadband development, their successes and obstacles*

12-2/1: Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks

ISSUES FOR STUDY

- *Business-plan models used in developed countries, and adapt them to conditions in developing countries;*
- *Financial and tariff implications of site sharing for terrestrial mobile services;*
- *Economics of NGN investment projects of telecommunication operators and cost models used in setting tariffs for new services offered on NGNs.*

OUTPUT

- *a business strategy document for making the transition from existing service offerings in developing countries to service offerings that combine voice and data, together with a business plan to assure the stability of operators' current revenues in developing countries;*
- *a set of guidelines for promoting growth in data communications in developing countries.*
- *Questionnaires on tariffs and policies and on financial and tariff implications of site sharing for terrestrial mobile services*
- *Case studies on tariff policies, tariff models and methods of determining the cost of services on NGN: experiences of network operators/service providers in implementing new services offering based on IP networks combining voice and data*

ITU-D STUDY GROUP 2

Development and management of telecommunication services and networks and ICT applications

http://www.itu.int/ITU-D/study_groups/index.html

SG2: QUESTIONS UNDER STUDY



- **Q 9-2/2:** Identification of study topics in **the ITU-T and ITU-R study** groups that are of particular interest to developing countries
- **Q 10-2/2:** Telecommunications for **rural and remote areas**
- **Q 11-2/2:** Examination of terrestrial digital sound and television **broadcasting technologies** and systems, including cost-benefit analyses, interoperability of digital terrestrial systems with existing analogue networks and methods of migration from analogue terrestrial techniques to digital techniques
- **Q 14-2/2:** Telecommunications for **e-health**
- **Q 17-2/2:** Progress on activities for **e-services/applications** in the world
- **Q 18-1/2:** Implementation aspects of IMT-2000 and information-sharing on systems beyond **IMT-2000 for developing countries**
- **Q 19-1/2:** Strategy for migration from existing networks to **next-generation networks** for developing countries
- **Q 20-2/2:** Examination of access technologies for **broadband telecommunications**
- **Q 22/2:** Utilization of ICT for **disaster management** and active and passive space-based sensing systems as they apply to disaster prediction, detection and mitigation
- **Q 23/2:** The unique telecommunication/ICT needs of **small island developing states (SIDS)**
- **Resolution 9 (Rev. Doha, 2006):** Participation of countries, particularly developing countries, in **spectrum management**

18-1/2 Implementation aspects of IMT-2000 and information-sharing on systems beyond IMT-2000 for developing countries



ISSUES FOR STUDY

- a) Identify ways of implementing IMT-2000, using satellites, as appropriate, for some countries and regions,*
- b) Identify the key elements to be studied in order to provide efficient and cost effective implementation of IMT-2000 and its evolution in developing countries.*
- c) Propose useful content for the development of training modules by ITU-D for users of IMT-2000 services and applications,*
- d) Provide information on the specific impact of the implementation of IMT-2000 on women, youth, indigenous people and people with disabilities,*
- e) Provide information on systems beyond IMT-2000.*

OUTPUT

Last Rapporteur's Group Meeting: Geneva 23-24 March 2009

- **DRAFT OF FINAL REPORT OF Q18 2/2 (INCLUDING GUIDELINES WHERE PERTINENT)** <http://www.itu.int/md/D06-RGQ18.1.2-C-0041/en>
- *Q.18-1/2 has agreed to revise the Guidelines on the Smooth Transition of Existing Mobile Networks to IMT-2000 for Developing Countries (GST)* www.itu.int/publ/d-stg-sg02.18-1-2006/en. Contributions are sought for this work item as well

19-1/2 Strategy for migration from existing networks to next-generation networks for developing countries



ISSUES FOR STUDY

- Trends of telecommunication networks towards NGN.
- Examination of NGN technologies (network management, transport networks, access networks, interworking with existing networks, etc.).
- Methodologies for planning, with taking into account the behavior of different existing networks.
- Migration solutions to NGN (ITU-T SG13 works on NGN)

OUTPUT

- **Last Rapporteur's Group Meeting: Geneva 27 March 2009**
- **Draft "guidelines for developing countries on migration towards NGN": The objective of these guidelines is to offer guidance for developing countries on the technical issues for consideration when envisaging a migration of their existing PSTN/ISDN networks to NGN.**
<http://www.itu.int/md/D06-SG02-C-0190/en>

20-2/2 Examination of access technologies for broadband telecommunications



ISSUES FOR STUDY

- Identify the technical, economic and development factors influencing the effective deployment of broadband wired and wireless access technologies and their applications, with a focus on technologies and/or standards recognized or under study by the other two ITU Sectors.

OUTPUT

- Analysis of the economic, technical, regulatory and development factors influencing the effective deployment of broadband access technologies. This will also include an assessment of the demand for these technologies and applications in developing countries.
- A matrix of different broadband access technologies, both wired and wireless, terrestrial high-altitude systems, including stratospheric-based and satellite. Yearly updating of the technology matrices will be necessary, including an update of the output report of the last study period by the year 2009.
- **Last Rapporteur's Group Meeting: Geneva 24 March 2009**
- **BROADBAND ACCESS TECHNOLOGIES MATRIX**
<http://www.itu.int/md/D06-RGQ20.2.2-C-0029/en>
- **Currently Being Developed: Best Practice Guidelines for the Broadband Access in Developing Countries**
<http://www.itu.int/md/D06-RGQ20.2.2-C-0028/en>

THANK YOU FOR YOUR ATTENTION!

Riccardo Passerini
Telecommunication Development Bureau
International Telecommunication Union
Tel.: +41 22 730 5720
Fax: +41 22 730 5484
Email: riccardo.passerini@itu.int
www.itu.int/ITU-D/

Additional Information

Structure of ITU-D SGs



- **Study Groups may set up *Rapporteur's groups* and *Joint Rapporteur's groups* to deal with specific Questions or parts of thereof.**
- **Where appropriate, *regional groups* may be set up to study Questions or problems, the specific nature of which makes it desirable that they be studied within the framework of one or more regions of the Union.**
 - **The establishment of regional groups should *not give rise to duplication of work* being carried out at the global level by the corresponding study group, its subordinate groups or any other groups**
- ***Joint rapporteur's groups (JRG)* may be established for the study of those Questions requiring the participation of experts from more than one study group.**
 - ***Joint Group on Resolution 9 (Rev. Doha, 2006): Participation of countries, particularly developing countries, in spectrum management***

Regional and Sub-Regional meetings



- ***Regional and subregional meetings offer a valuable opportunity for information exchange and for the development of management and technical experience and expertise.***
 - ***Every opportunity should be taken to provide additional opportunities for experts from developing countries to gain experience by participating in regional and subregional meetings which deal with study group work.***

Establishment of work plans and preparation of meetings

- *The implementation of the work plan will, however, depend to a large extent on the contributions received from Member States, Sector Members and Associates, duly authorized entities or organizations, and BDT, as well as on the opinions expressed by participants in the meetings*

Preparation of reports

- a) **Progress reports:** status of work with reference to the work plan, including baseline document, if available; guidelines or recommendations, or reference to source documents containing the recommendations; draft liaison statements in response to or requesting action by other study groups or organizations; major issues remaining for resolution and draft agenda of future approved meetings, if any; etc. **Progress reports by rapporteurs shall be submitted to the study group for approval.***
- b) **Meeting reports:** shall contain a synopsis of the outcome of the work and emerging trends. It must also indicate items which require further study at the next meeting. The report should also refer to contributions and/or documents issued during a meeting, main results (including recommendations and guidelines), directives for future work*
- c) **Output reports:** Such reports represent the expected deliverable, i.e. the principal results of a study. The items to be covered are indicated in the expected output of the Question concerned.*
- d) **Study group reports to WTDC.** The final report of each study group to WTDC shall be the responsibility of the chairman of the study group concerned (results achieved by the study group, reference to any text of new/revised recommendations submitted to WTDC for approval; list of any new or revised Questions proposed for study during the next study period; list of Questions proposed for deletion.*

CONTRIBUTIONS



- **Submission of contributions:** Member States, Sector Members, Associates, duly authorized entities and organizations, and the chairmen and vice-chairmen of study groups or other groups should submit their contributions to current studies to the Director of BDT.
- **Processing of contributions:** Contributions requiring action from the meeting under the terms of its agenda should be received in due time in order to be published and distributed in time for the said meeting.
- **Electronic access:** all input and output documents (e.g. contributions, draft recommendations, liaison statements and reports) as soon as electronic versions of these documents are available. Contributions for action shall be relevant, clear, concise and comprehensive.
- **Presentation of contributions:** A cover page shall be prepared indicating the relevant Question(s), agenda item, date, source (originating country and/or organization, address, telephone number, fax number, and possible e-mail address of the author or contact person), as well as the title of the contribution. Indication should also be made as to whether the document is for action or for information
- **Proposals for new questions:** an ITU-D study group may also propose new or revised Questions at the initiative of a member of that study group if there is sufficient consensus on the subject. These proposals shall be submitted to TDAG for consideration

10-2/1 Regulation for licensing and authorization of converging services



ISSUES FOR STUDY

- New legislation which takes into account technical and market trends towards converging services. These measures are mainly based on the principle of technological neutrality
- The combination of convergence and increased competition in markets brings a new set of complex challenges for policy makers and regulators. In order to be able to regulate in markets, it is necessary to have an understanding of the whole market and dynamics of competition within it.

OUTPUT

- Overview of different legislative frameworks, with a major focus on licensing and/or authorization procedures
- Evaluation of the experiences of both telecom and competition regulators, in particular with regard to changes in the authorization and licensing regimes.
- Preparation of guidelines and/or recommendations for those countries which are planning to introduce new legislation aimed at supporting the development of converging services.
- Questionnaire on Regulation for licensing and authorization of converging services
- Collection of best practices of the different legislative and regulatory framework worldwide as useful inputs for the final Report

18-1/1 Domestic enforcement of telecommunication laws, rules, and regulations by national telecommunications regulatory authorities



ISSUES FOR STUDY

- *To describe the organizational methods and successful practices employed by NRAs as they enforce their domestic laws, rules and regulations (interconnection issues, competition issues, spectrum issues, internet issues, consumer issues, site sharing, quality of service and network security issues)*

OUTPUT

- *A report to the membership presenting guidelines to assist Member States in their efforts to address a number of issues that represent common challenges for an NRA.*
- *The report will reflect best practice guidelines for regulatory authorities with respect to enforcement of laws, rules, and regulations relating to telecommunication issues that represent common challenges for the NRAs.*

19-1/1 Implementation of IP telephony in developing countries



ISSUES FOR STUDY

- 1) *How can a nation and its citizens, current telephone operators, cable television operators and other ISPs and new entrants benefit from the introduction of IP telephony and broadband access? How can national telecom policy increase the benefits of the introduction of IP-based technologies?*
- 2) *What are the potential challenges that developing countries experience in attempting to evolve to or implement IP-based networks including IP telephony and broadband access capabilities, and what are possible approaches for overcoming these challenges?*

OUTPUT

- *1) Annual progress report(s) indicating status of the study of Questions and issues being addressed (e.g. interoperability, quality of service, security, tariff, etc.).*
- *2) Report with issues raised by each Question as well as lessons learned/success story/findings/conclusions.*

20/1 Access to telecommunication services for people with disabilities



ISSUES FOR STUDY

- **Analyse policies and strategies to promote, develop and implement the most advanced technological solutions to enable equal access to telecommunication services for persons with disabilities to that enjoyed by the rest of the population.**

OUTPUT

- *Report that will enable Member States, especially developing and least developed countries (LDC), to design policies and execute strategies for promoting and implementing services and solutions which provide access to telecom services for persons with disabilities. The report will help Member States and Sector Members identify commercial best practices that telecom service providers should apply in relation to persons with disabilities.*
- *Questionnaire on access to telecommunication services for people with disabilities (legislation to assist PwD)*



21/1 Impact of telecommunication development on the creation of employment



ISSUES FOR STUDY

- **Contribution that can be made to job creation, from the specific standpoint of the world telecommunication sector, through its inclusion as a subject for study and research for developing countries and LDCs.**

OUTPUT

- *Report will contain a qualitative and quantitative evaluation of direct and indirect jobs created by telecommunication development in national labour markets, distinguishing in principle between four subsectors: marketing and sale of services and equipment, network installation, manufacturing of network and terminal equipment, and technology research and development.*
- *The report would be useful both for various entities in the Member States and for various public and private institutions that manage job creation and R&D programmes and policies.*

22/1 Securing information and communication



networks: Best practices for developing a culture of cybersecurity

ISSUES FOR STUDY

- a) *To survey, catalogue, describe and raise awareness of:*
- the principal issues faced by national policy-makers in working with all stakeholders to build a culture of cybersecurity;*
 - the principal sources of information and assistance related to building a culture of cyber security;*
 - successful best practices employed by national policy-makers in working with all stakeholders to organize for cybersecurity and develop a culture of security;*
 - the unique challenges faced by developing countries in addressing the security of networks and the best practices for addressing these challenges.*
- b) *To examine best practices for the establishment and operation of watch, warning and incident response and recovery capabilities that may be used by Member States to establish their own national capabilities.*

Output

- Report (s) on the issues for study reflecting that secure information and communication networks are integral to building of the information society and to the economic and social development of all nations.*

9-2/2: Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries



ISSUES FOR STUDY

- Identification on a continuing basis of those study group topics in the ITU-T and ITU-R which are of particular interest to developing countries are based on an agreed set of guidelines, including the preparation of some technical reports.*

OUTPUT

- Agreed guidelines to the identification process of such topics.*
- Annual progress reports indicating status of the selected topics and, where completed, an indication of how the outputs can be obtained.*
- Technical Reports on particular topics (called technical arrays in the past)*

10-2/2 Telecommunications for rural and remote areas

ISSUES FOR STUDY

- **Range and scope of techniques and solutions that are expected to play a significant role in the provision of telecommunications for rural and remote areas.**
 - **Step 1 – Identification of the full range of potential techniques and solutions that can significantly impact on the provision of telecommunication services in rural and remote areas,**
 - **Step 2 – Investigate and report on how the techniques identified above can be used to best deliver the range of services and applications**
 - **Step 3 – Make an assessment of the likely commercial viability or sustainability of the techniques and solutions identified in the above steps.**
 - **Step 4 – Report on a range of case studies**

OUTPUT

- **Draft Analysis Report of the Case Studies (Case Library for Rural Communications)**

11-2/2 Examination of terrestrial digital sound and television broadcasting technologies and systems, including cost/benefit analyses, interoperability of digital terrestrial systems with existing analogue networks, and methods of migration from analogue terrestrial techniques to digital techniques

ISSUES FOR STUDY

- **Appropriate ways of introducing digital technology for terrestrial sound and television broadcasting in developing countries**
- **Impact of the convergence of terrestrial sound and television broadcasting with other terrestrial telecommunication services on developing countries**
- **Cost/benefit analysis of gradual transition to digital terrestrial sound and television broadcasting, including: a) business models; b) evaluation of risk factors; c) matters relating to digital receiving terminals; d) some practical examples on the basis of relevant case studies as a part of the preparation for the transition period.**
- **Analysis of technical and cost/benefit issues which foster an enabling environment.**

OUTPUT

- **A report on the costs of various digital terrestrial sound and television broadcasting systems with analysis of various migration techniques/strategies and analysis of the impact of convergence of broadcasting, fixed and mobile on existing services in developing countries is under preparation. Decision and Results of the Radio Assembly 2007 and World Radiocommunication Conference 2007 will be therewith included**

14-2/2 Telecommunications for e-health



ISSUES FOR STUDY

- 1) further steps to assist in raising the awareness of decision-makers, regulators, telecommunication operators, donors and customers about the role of telecommunication and information technologies in supporting healthcare and a healthy life in developing countries.
- 2) collaboration and commitment between the telecommunication sector and the health sector in developing countries, in order to maximize the utilization of limited resources on both sides for implementing e-health-care applications.
- 3) Dissemination experiences and best practices with the use of telecommunications in e-health in developing countries.
- 4) Cooperation among developing countries in the field of telecommunications for e-health.
- 5) Promotion development of telecommunication standards for e-health applications in conjunction with ITU-T and ITU-R in particular.

OUTPUT

- Report on how hospitals and other health-care institutions can benefit from the broadband telecommunication access infrastructure to be used for e-health solutions.
- Report and guidelines with regard to the use of mobile telecommunications for e-health solutions in developing countries is under finalization

17-2/2 Progress on activities for e-services/applications in the world



- Annual progress reports containing any guidelines and any lessons learned on e-services/applications in developing countries, with special attention to promotion of women's engagement in these applications.
- Based on Programme 3 Activities, no Rapporteur Group, priority given to E-government
- Reference materials and guidelines on e-services/ICT applications for developing countries are available on the web (<http://www.itu.int/ITU-D/cyb/>)

22/2 Utilization of ICT for disaster management, resources, and active and passive space-based sensing systems as they apply to disaster and emergency relief situations



ISSUES FOR STUDY

- Examination of the role that administrations and relevant disaster mitigation organizations have in addressing disasters management and their effective use of ICT.
- Examination of how ICTs can be utilized to develop disaster management plans for use in disaster and/or emergency situations.

OUTPUT

- provide administrations with information on the establishment or modernization of national or regional disaster management systems and plans.
- Collaborating with ITU-T, provide a report on guidelines for a "Content Standard". Working with the WGET, develop proposed suggestions/recommendations on implementation of the Tampere Convention.
- Guidelines for using a content standard for Alert and Notification in disasters and emergency situations (first version finalised)

23/2: The unique telecommunication/ICT needs of small island developing states (SIDS)



ISSUES FOR STUDY

- To identify cost-effective telecommunication/ICT technologies that can bridge the digital divide and bring digital opportunities for all, particularly small island developing states (SIDS) facing unique challenges such as isolation, distance, and lack of resources: provide a variety of solutions and best practices for the development and use of telecommunications/ICTs

OUTPUT

- The output will be a yearly progress report and a final report on the results of the work conducted

RESOLUTION 9 (REV.DOHA, 2006)

**Participation of countries,
particularly developing countries,
in spectrum management**

Background

- Successful cooperation between ITU-R and ITU-D in the previous studies (Stage 1: 29.7-960 MHz, Stage 2: 960 – 3000 MHz)
- Successful development of the "Spectrum Fees Database" (SF Database)
- Revised Resolution 9 (Doha, 2006)
 - prepare the next (Stage 3) report on the review of national spectrum management and use of the spectrum within this study period for the frequency band 3-30 GHz;
 - continue the development of the SF Database and provide additional guidelines and case studies, based on practical experiences of administrations
 - encourage and facilitate the active participation of developing countries, in particular LDCs to continue to provide ITU-R and ITU-D with practical experiences.

Specific needs of the developing countries in spectrum management



- Assistance in raising the awareness of national policy-makers as to the importance of effective spectrum management for a country's economic and social development
- Training and dissemination of available ITU documentation
- Assistance in developing methodologies for establishing national Tables of frequency allocations
- Assistance in setting up computerized frequency management and monitoring systems
- Economic and financial aspects of spectrum management
- Assistance with preparations for world radiocommunication conferences (WRC) and with follow-up on WRC decisions
- Assistance with participation in the work of ITU-R study groups and their working parties

Results of the Stage 3



- Draft report which contains 3 parts:
 - Part I: Frequency allocations in 3 – 30 GHz frequency band
 - Part II: National spectrum management related information
 - Part III: Spectrum fee (under preparation)
- Guideline on setting spectrum fee
- Case studies on spectrum fee
- Proposals for revision of the Resolution 9 (under preparation)
- Web-site:
http://www.itu.int/ITU-D/study_groups/SGP_2006-2010/JGRes9/index.html