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TITLE: Report on ITU-D Study Group 2 Activities

This report informs about the activities of ITU-D Study Group 2 for the 2010-2014 study period.

1 Introduction

The report covers the fifth study period of four years for ITU-D Study Group 2, between WTDC-10 and WTDC-14.

1.1 Mandate

Study Group 2 was set up in accordance with Resolution 2 (Rev. Hyderabad, 2010) to study Questions and issues relating to the development and management of information and communication infrastructure and technology, emergency telecommunications and climate-change adaptation.

1.2 Study Group 2 Questions and Resolution 9

Study Group 2 was entrusted by WTDC-10 with the study of the following nine Questions:

- Question 9-3/2: Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries
- Question 10-3/2: Telecommunications/ICTs for rural and remote areas
- Question 11-3/2: Examination of terrestrial digital sound and television broadcasting technologies and systems, interoperability of digital terrestrial systems with existing analogue networks, and strategies and methods of migration from analogue terrestrial techniques to digital techniques
- Question 14-3/2: Information and telecommunications/ICTs for e-Health Question 17-3/2: Progress on e-government activities and identification of areas of application of e-government for the benefit of developing countries
- Question 22-1/2: Utilization of telecommunications/ICTs for disaster preparedness, mitigation and response
- Question 24/2: ICT and climate change
- Question 25/2: Access technology for broadband telecommunications including IMT, for developing countries
- Question 26/2: Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspects

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Study Group 2, together with ITU-R Study Group 1, also deals with Resolution 9 (Rev. WTDC-10) on the "Participation of countries, particularly developing countries, in spectrum management".

The titles of the Questions with the names of the Rapporteurs, Vice-Rapporteurs and BDT Focal Points can be found in **Annex 1**. The definitions of the Questions, which include, *inter alia*, the statement of the problem, the description of the expected output, the initial work plan with the required timing for the output, etc., is available on the Study Group 2 website in document SG02/001[1] .

1.3 List of Study Group 2 Vice-Chairmen

Six Study Group 2 Vice-Chairmen were designated during WTDC-10:

- Mr Petko Kantchev (Bulgaria)
- Mr Eduardo Evertz (Dominican Republic) has stepped down and replacement is awaited.
- Mr Evgeny Bondarenko (Russian Federation)
- Mr Abdoulaye Kébé (Guinea)
- Mr Vahid Salman (Islamic Republic of Iran)
- Mr Mustafa Ahmed Ali (Sudan)

Ms Audrey Loridan-Baudrier (France), appointed ITU-D Co-Chairman for Resolution 9 (Rev. Hyderabad, 2010) was replaced by Mr Fadel Digham (Egypt) in 2012.

2 Meetings

2.1 Management Team Meetings

The Study Group 2 Chairman and Vice-Chairmen met in Hyderabad during the WTDC and went through an initial list of nominations for Rapporteurs. In addition to this initial meeting, four Study Group 2 management team meetings with Vice-Chairmen, Rapporteurs, Vice-Rapporteurs and BDT Focal Points were held on the eve of each annual Study Group 2 meeting, in order to prepare for the meeting, approve the time-management plan, review the progress of each Question under study, discuss planned and on-going activities and come up with proposals on further improvements to the functioning of the Study Groups.

2.2 Study Group 2 Meetings

During the course of the study period, Study Group 2 met four times in the month of September each year (2010, 2011, 2012 and 2013).

2.2.1 The first meeting, held in Geneva from 13 to 16 September 2010, took the following important decisions:

- confirmed all Rapporteurs and Vice-Rapporteurs who had volunteered to act prior to the first study group meeting and appointed new Rapporteurs and Vice-Rapporteurs for those Questions for which nominations had been received;
- initially agreed on the approach for developing detailed work plans for each of the Questions and for Resolution 9, and to ensure that the work plans are updated throughout the study period as necessary;
- agreed on the dates for the Rapporteur Group meetings in 2011 and reviewed the proposed dates for the Study Group and Rapporteur Group meetings for the entire study period;

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[1] http://www.itu.int/md/D10-SG02-C-0001/

The Group took note of the changes to the working methods in Resolution 1 (Rev. Hyderabad, 2010). In going over the mandate of Study Group 2 the revisions to Resolution 2 (Rev. Hyderabad, 2010) were also highlighted in that there is emphasis on the issues under each Study Group Question to be studied in their entirety and not focus narrowly on technical, regulatory, policy and legal issues in isolation. The Chairmen of the ITU-D Study Groups should therefore collaborate to ensure that this is put in place and that there is no overlap between the Questions. The role of the BDT Focal Points in ensuring that there is complementarity between the work of the Study Group Questions and the Programmes was further mentioned.

The report of this meeting is available online in document 2/REP/011, (16 November 2010) at: http://www.itu.int/md/D10-SG02-r-0011

2.2.2 The second meeting, held in Geneva from 12 to 16 September 2011, took the following actions:

- approved the Report of the last meeting;
- agreed to the appointment of a new Rapporteur for Question 11-3/2 from Japan;
- took note of those matters arising from the 2011 TDAG meeting and from the 2010 Plenipotentiary Conference (Guadalajara, 4-22 October 2010) with relevance to the work of the Study Groups;
- agreed to prepare a table listing ITU-D Study Group 2 Questions and how they relate to WTDC-10 and PP-10 Resolutions;
- agreed on the dates for the Rapporteur Group meetings in 2012, taking into account the kind offer by Japan to host four of the Study Group 2 Rapporteur Group meetings for Questions 10-3/2, 11-3/2, 22-1/2, 25/2 in conjunction with an ITU-MIC workshop on disaster communications.
- agreed on the initial dates for the meeting of the ITU-D/ITU-R Joint Group on Resolution 9 to be held back to back with the ITU-R Study Groups meetings in mid June 2012.

In discussing the dates for the annual Study Group meetings it was requested that these meeting be held towards the end of September each year going forward.

The need to find synergies between the Questions in the two Study Groups and share information on the approaches taken to move forward on the agreed work items to reach the expected results was emphasised.

The Chairman further reminded the participants to submit their contributions for the next set of Rapporteur Group meetings early to ensure that they can be translated and prepared in time for the meetings.

The report of this meeting is available online in document 2/REP/022, (14 October 2011) at: http://www.itu.int/md/D10-SG02-r-0022

2.2.3 The third meeting, held in Geneva from 17 to 20 September 2012, took the following actions:

- approved the Report of the last meeting;
- agreed to the appointment of a replacing Vice-Rapporteur for Question 11-3/2 from Japan, agreed to the appointment of a replacing Vice-Rapporteur for Question 26/2 from Türk Telekom (Turkey), and agreed to the appointment of a new Vice-Rapporteur for Question 25/2 from Egypt;
- launched a call for interested members to nominate candidates for the open position of ITU-D Co-Chairman for the joint ITU-D/ITU-R activities on Resolution 9 (Rev. Hyderabad, 2010);

- agreed on a joint format for cases studies to the work of the Groups and asked the Secretariat to put in place a Case Study Library to gather and display case studies on the different topics under study;
- took note of the input documents related to WSIS activities that could prove very useful to the Groups when developing their output reports;
- took note of relevant suggestions by TDAG during its June 2012 meeting which concern the work of the Study Groups, in particular actions to be taken to ensure closer links between the work of the Questions, Programmes, Projects and Regional Initiatives, as well as continued close collaboration with the other Sectors;
- agreed on the dates for the block of 2013 Study Group 2 Rapporteur Group meetings, the joint ITU-D/ITU-R Resolution 9 meeting and the last Study Group 2 meeting to take place from 16 to 20 September 2013.

The report of this meeting is available online in document 2/REP/032, (20 September 2012) at: http://www.itu.int/md/D10-SG02-r-0032

2.2.4 The fourth meeting and last meeting, held in Geneva from 16 to 20 September 2013, finalized and approved the Final Reports and Guidelines on the different Questions. Proposals to the texts for the Questions were discussed and one revised Study Group 2 Question was approved during the meeting and proposed to 18th session of TDAG (11-13 December 2013) for endorsement. Two Recommendations, one on "Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas" and the other on "ICT and climate change" were adopted by the Study Group 2 meeting and approval will be sought by WTDC-14. Further details on the deliverables for the study period can be found under **Section 3** of this Report.

The new Resolution 9 ITU-D Co Chairman from Egypt was appointed early in 2013 following a consultation with the membership to ensure that the Group could finalize its work during its June 2013 meeting.

A proposal for a new Question on the "Assistance to developing countries for implementing Conformance and Interoperability (C&I) Programmes" (document 2/315) was presented by the Study Group 2 Chairman for consideration in the context of Resolution 1. The Question would include the study of various issues related to conformance and interoperability, e.g. the description of the technical, legislative and regulatory framework and the economic impact. Note was taken of the proposal, and while appreciation of the importance of this topic was highlighted, it was mentioned that it would be premature for Study Group 2 to endorse such a document at this time as some changes to the text were still needed.

A proposal for a new Question on "ICTs and urban governance in developing countries" (document 2/303) was submitted by Algérie Télécom SPA (Algeria) for consideration. The areas of study would include, among others, the role of ICTs and their inclusion in the definition of sustainable development projects, the characteristics and conditions of management and governance of smart cities, the development and applications for managing and operating infrastructures for health, education and culture, etc. using telecommunications and ICT applications, and the definition of a measurement and performance benchmark for quality of life indicators in smart cities. While several participants noted the usefulness of such work as some developing countries are currently in the process of creating new cities, several comments were made on the broad scope of the proposed Question and its terms of reference.

A proposal for a new Question on "The ICT industry and telecommunication services at the service of road safety in developing countries" (document 2/304) as submitted by Algérie Télécom SPA (Algeria) for consideration. The areas of study would include, among others, the technical, economic and regulatory conditions that must be met for a country and its citizens to enjoy the benefits of telecommunication services and ICT applications in the area of road safety and best practices for the establishment of national road safety plans which incorporate telecommunications and ICT applications. Questions were raised concerning the scope of the proposed Question and whether this area of work as mentioned in the document was indeed within ITU's mandate. Due to the lack of time to discuss the two proposals from Algérie Télécom SPA in detail Study Group 2 could not approve them. While Study Group 2 did not decide on the next steps for these proposed Questions, all Member States and Sector Members can, at their convenience, submit contributions on all topics relevant to the ITU, including proposals for new Questions to the RPMs, to TDAG or directly to the WTDC. In this regard, the two new Questions from Algérie Télécom SPA have been submitted to the RPM for Africa for information and to the RPM for the Arab Region for action.

The report of this meeting is available online in document 2/REP/043, (27 September 2013) at: http://www.itu.int/md/D10-SG02-R-0043/

2.3 Rapporteur Group Meetings and Related Activities

2.3.1 Rapporteur Group meetings in the regions

In 2012 the Rapporteur Group meetings for four SG2 Questions, namely for Q11-3/2 (migration from analogue to digital), Q14-3/2 (e-Health), Q22-1/2 (emergency telecommunications), and Q25/2 (broadband access technology) were hosted by Japan in Sendai and Tokyo together with the ITU-MIC Symposium on Disaster Communication. The holding of meetings outside ITU Geneva premises allowed for new content to be gained by the Questions concerned and valuable insights by those delegates who travelled to take part in the Rapporteur Group meetings and associated events.

2.3.2 Surveys conducted during the study period

During the study period a number of SG2 Rapporteur Groups decided to send out surveys/questionnaires or make a call for experts and/or case studies to support the work carried out by the Question.

In 2011 Q11-3/2 (migration from analogue to digital) sent out a survey to the membership to collect information on the status of public policies for the transition from analogue to digital terrestrial television and to get views on items being worked on by the Group (BDT/IP/CSTG/8).

For ITU's work on climate change, in 2011 a joint survey between ITU-D SG2 Q24/2 (climate change) and SG1 Q24/2 (e-waste) and ITU-T SG 5 Q22/5 (low cost sustainable telecommunication infrastructure) and Q23/5 (using ICTs to enable countries to adapt to climate change) was distributed to gather information on existing policies, practices, technologies and standards concerning ICT and climate change (BDT/IP/CSTG/8).

In 2012 Q10-3/2 (rural communications) conducted a survey to gather information on policy and regulatory initiatives for developing telecommunications/ ICTs/ broadband in rural and remote areas (BDT/IP/CSTG/17). The input received served as a basis for the Recommendation that Q10-3/2 developed at the end of the study period.

2.3.3 Collaboration with others and involvement of experts in the work of the Groups

Throughout the study period the cooperation with Groups in the other ITU Sectors, different regional and international organizations and UN agencies, to develop the deliverables of the different Questions has been emphasized. A list of the liaisons received from other Groups can be found in **Annex 6**.

The Group working on Q22-1/2 (emergency telecommunication) early on in the study period identified the need to involve experts in its work. The Q22-1/2 final report summarizes the work completed for the study period while the three appendixes provide full publications that was only possible through the valuable work of the involved experts and collaboration and input received from from Groups in the other Sectors and specialized agencies active in this domain. Appendix 1 provides the updated Handbook on Emergency Telecommunications, Appendix 2 contains a framework for the online toolkit on Emergency Telecommunications, and Appendix 3 is the Handbook on Telecommunication Outside Plant in Areas Frequently Exposed to Natural Disasters.

Furthermore, in order to collect up-to-date and topic specific case studies, lessons learned and best practices on e-Health and e-Government Q14-3/1 (e-health) and Q17-3/2 (e-government) issued a call for experts and case studies to support the work carried out by the Questions (BDT/IP/CSTG/13). The experts, who could be from Administrations, ITU-D Sector Members, Associates, or Academia, provided useful information on country experiences which was subsequently incorporated into the final deliverables of the Questions.

2.3.4 Case Study Library

Based on case studies received mainly for consideration by Q10-3/2, Q22-1/2 and Q25/2 a joint format for the submission of case studies to the work of the Groups was developed and agreed on during the 2012 SG2 meeting. Based on the agreed format the Secretariat put in place a Case Study Library to gather and display case studies on the different topics under study.

The online Case Study Library which remains open for new input can be accessed:
http://www.itu.int/en/ITU-D/Study-Groups/2010-2014/Pages/case-study-library.aspx

2.4 Attendance in and Contributions to Study Group 2

Annex 1 presents a list with the Study Group 2 Chairman, Vice-Chairmen, Rapporteurs, Vice-Rapporteurs, Co- Chairmen of Resolution 9, and BDT Focal Points for the 2010-2014 study period.

Annex 2 presents the dates of the Study Group and the Rapporteur Groups meeting, taking into account that each Rapporteur Group also meets during the annual Study Group meeting and that a substantial amount of the work of the Rapporteur Groups is carried out electronically and by correspondence in between the face-to-face meeting by the members of the Rapporteur Group in order to progress the work and prepare proposals for consideration by the Study Group.

Annex 3 presents the participation by the membership in the activities of the Study Group.

3 Summary of the Key Results Achieved

This section presents an overview of the deliverables of each of the Study Group 2 Questions and Resolution 9. During its annual meeting in September 2013 a number of proposals for the future of the Questions under study were also discussed for consideration by the 2013 session of TDAG and WTDC-14. While details of the proposals and discussions can be found in the reports of the September 2013 Rapporteur Group meetings, below is a summary of what was presented to the Study Group 2 plenary on 20 September 2013

3.1 Question 9-3/2 – Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries

The approved report of the September 2013 Rapporteur Group meeting for Question 9-3/2 can be found in document 2/REP/33.

The Question 9-3/2 final report available in document 2/270 (Rev.2) was approved.

On the future of Question 9-3/2, the proposal submitted by Thales Communications (France) (document 2/284) presents a revision to the Question, divided into two main parts. The first part of the study to be conducted under the title: "Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries" and the second part to consist of four specific reports; wireless networks from the point of view of frequencies/technologies (XAN), Submarine optical cables; Cloud computing markets, and High-speed optical fibre networks (FTTx). The Group had suggested during its meeting that the four topics suggested in part 2 of the contribution could be part of other Questions as it would not be appropriate to include these in the mandate of the Question as the scope of the Question should not be expanded. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

7.2 Question 10-3/2 – Telecommunications/ICTs for rural and remote areas

The approved report of the September 2013 Rapporteur Group meeting for Question 10-3/2 can be found in document 2/REP/34.

The Question 10-3/2 final report and guidelines available in document 2/271 + Annex were approved.

On the future of Question 10-3/2, the proposal submitted by the Rapporteur (documents 2/319 and 2/286) was considered. The Group supported the Question while noting that some changes and additions to the text would need to be considered. The revised Question 10-3/2 addresses the digital divide not only between developed and developing countries but also between urban and rural areas within countries and to address development goals in these areas. It also takes into account the objectives set forth by WSIS and UN Millennium Development Goals. During the discussions, the representative from India noted that it is important to take poverty indicators into account when studying this Question during the next study period. It was agreed that references to related indicators used by the United Nations could be added to the revised Question. The representative from Japan noted that Japan was in favor of a continuation of the Question during the next study period. Study Group 2 considered the proposed revisions presented orally and agreed on the text for the Question (available in **Annex 6**).

The Rapporteur presented the proposed new Recommendation on "Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas" (documents 2/320 and 2/287 (Rev.1)). He noted that the content of the Recommendation was based on the responses to the survey on policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas that the Group had conducted in 2012/2013 (BDT/IP/CSTG/17). Several comments on the text in the Recommendation were received during the meeting and these were reflected in a revised version after the meeting. The Recommendation was approved by the Study Group 2 plenary. **Annex 4** presents the proposed Recommendation on "Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas".

3.3 Question 11-3/2 – Examination of terrestrial digital sound and television broadcasting technologies and systems, interoperability of digital terrestrial systems with existing analogue

networks, and strategies and methods of migration from analogue terrestrial techniques to digital techniques

The approved report of the September 2013 Rapporteur Group meeting for Question 11-3/2 can be found in document 2/REP/35.

The Question 11-3/2 final report and guidelines available in document 2/272 +Annex were approved. The summary document which accompanied the main report assisted in presenting the report for approval.

On the future of Question 11-3/2, the proposal submitted by Thales Communications (France) (document 2/282) was noted. The proposed title of the revised Question is "Usage of terrestrial television service frequency bands by electronic communication services (digital dividends): regulatory, socioeconomic, technological and financial aspects (licenses and transfer costs)". The proposal highlights the need for more information and study on the efficient use of spectrum bands released following the transition to digital television (digital dividend) and in light of WRC-12 decision and WRC-15 expected results. The proposal was supported by the representatives from Egypt and Belarus, as well as the SG2 Chairman of the Study Group 2. It was drawn to the attention of the Group that the proposal contains some issues which are within the mandate of the Study Group 1. ITU-R is also dealing with this subject and thus further consideration of the proposal would be needed. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

3.4 Question 14-3/2 – Information and telecommunications/ICTs for e-Health

The approved report of the September 2013 Rapporteur Group meeting for Question 14-3/2 can be found in document 2/REP/36.

The Question 14-3/2 final report and guidelines available in document 2/273 +Annex were approved.

In discussing the future of the Question, it was mentioned that the development of new technology, smart phones, low energy consuming medical equipment, machine -to-machine communications , the Internet of Things , etc. are leading to the emergence of customized and innovative personal healthcare services can be considered as part of the revised Question.

During the discussions, the representative from the United States, supported by the representatives from Niger and Japan, proposed to consolidate Questions studying different ICT applications, e.g. e-government, e-health, etc. under one Question on ICT applications, has received considerable support by the meeting. In this regard administrations can follow the evolution of all topics related to applications and services under a single Question. After the discussion, which involved input from both representatives from Member States and Sector Members, there was agreement that the revised Question would consider services for personalized and innovative health care. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

3.5 Question 17-3/2 – Progress on e-government activities and identification of areas of application of e-government for the benefit of developing countries

The approved report of the September 2013 Rapporteur Group meeting for Question 17-3/2 can be found in document 2/REP/37.

The Question 17-3/2 final report and guidelines available in document 2/274 + Annex were approved. The toolkit on how to create ICT-based services using mobile communications for e-

government services, available in Annex 2 to the report was noted as a useful output of the Question.

On the future of Question 17-3/2, during the Rapporteur Group meeting in April 2013 a proposal from Bangladesh (document RGQ17-3/2/25) and from Thales Communications (France) (document RGQ17-3/2/20) were discussed. Elaborating further on these proposals a revised document was submitted by Thales Communications (France) (document 2/283) for consideration. The proposal suggests that the revised Question should address an emerging area in e-government, which the UN has summarized as "connected governance" and which encompasses every aspect of e-government and where the focus is on achieving maximum cost savings and improving service delivery. The proposed title of the revised Question is "Online administration (electronic governance) services implementation and application areas for the benefit of developing countries". As for the case of Question 14-3/2, the suggestion to consolidate all Questions which deal with ICT applications was noted. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

3.6 Question 22-1/2 – Utilization of telecommunications/ICTs for disaster preparedness, mitigation and response

The approved report of the September 2013 Rapporteur Group meeting for Question 22-1/2 can be found in document 2/REP/38.

The Question 22-1/2 final report and guidelines available in document 2/275 +Annexes were approved. The summary document which accompanied the main report assisted in presenting the report for approval. The three primary outputs of the Question; the updated Handbook on Emergency Telecommunications, a framework for the Online Toolkit for Emergency Telecommunications and the Handbook on Telecommunication Outside Plant in Areas Frequently Exposed to Natural Disasters, which were developed through close collaboration with members, experts, and Groups in the other Sectors, are annexed to the Final Report.

On the future of Question 22-1/2, the Rapporteur noted that no proposals had been received for discussion by the Group. It was however mentioned that there had already been proposals to the RPMs to continue ITU-D's work on emergency communications and in this regard the work on Q22-1/2 could continue. Thus while no agreed proposal for the revised Question was presented for consideration by Study Group 2, given the importance of telecommunications and ICTs in the management of natural disasters and their role in the planning, mitigation and facilitating the coordination of their use, the Study Group 2 does propose a continuation of the Question during the next study period.

3.7 Question 24/2 – ICT and climate change

The approved report of the September 2013 Rapporteur Group meeting for Question 24/2 can be found in document 2/REP/39.

The Question 24/2 final report and guidelines available in document 2/276 +Annex were approved.

In discussing the future of the Question, it was mentioned that the revised Question should use a more comprehensive approach to study ICTs and climate change. The following issues were mentioned as being relevant to the future study: good practices related to establishing policies for ICT and climate change, creation of a framework for inter-ministry cooperation on policy development and policy implementation, good practices related to the development of a national strategy for tacking climate change, how to use social media to drive action on the ground through various initiatives and awareness creation, how to develop capacity building programmes, and

development of a toolkit on ICT and climate change. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

The Rapporteur presented the proposed new Recommendation on "ICT and climate change" (document 2/293 (Rev.1)). Some changes were requested during the meeting and these were incorporated and shared with the members after the meeting. The Recommendation was approved by the Study Group 2 plenary. **Annex 5** presents the proposed Recommendation on "ICT and climate change"

3.8 Question 25/2 – Access technology for broadband telecommunications including IMT, for developing countries

The approved report of the September 2013 Rapporteur Group meeting for Question 25/2 can be found in document 2/REP/40.

The Question 25/2 final report and guidelines available in document 2/277 + Annex were approved with reservations noted by Argentina. The section in the report which discusses new material on dynamic access to spectrum is considered too premature to be included in the report. It was agreed that the representative from Argentina work with the Rapporteur on that section to find text which is agreeable to all. This issue was resolved following the meeting.

On the future of Question 25/2, the proposal submitted by the Rapporteur (document 2/316) was considered. The proposed new title of the Question is: "Broadband access technologies, including International Mobile Telecommunications (IMT) in developing countries. The meeting discussed the possibility of merging SG1 and 2 Questions which deal with broadband. During the discussions, it was further noted that the work on broadband would continue in one way or another, pending WTDC-14 decisions on revised/new Questions and the revision of Resolutions relating to the topics under study. The Rapporteur also presented a proposed a revision to Resolution 43 on "Assistance for implementing IMT" (2/324). It was noted that proposed amendments to Resolutions would be submitted directly to the WTDC by the members. The representative from the United States expressed the country's commitment to facilitate the implementation of broadband in developing countries. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

3.9 Question 26/2 – Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspects

The approved report of the September 2013 Rapporteur Group meeting for Question 26/2 can be found in document 2/REP/41.

The Question 26/2 final report and guidelines available in document 2/278 + Annex were approved.

On the future of the Question two proposals were considered: one from the Rapporteur keeping the title of the Question the same (document 2/317), and one from the representative from Belarus focusing on IPv6 with the proposed Question title: "Assistance in the coordinated transition to IPv6 in developing countries using ITU experience" (document 2/311). Concerning future study on IPv6 it was noted that this could be conducted under SG1 Q19-2/1 on "Implementation of IP telecommunication services in developing countries". It was also noted that submarine optical cables and high-speed optical fibre networks (FTTx) may also be included to scope of the Question. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

3.10 Resolution 9 (Rev. Hyderabad, 2010) - Participation of countries, particularly developing countries, in spectrum management

The approved report of the September 2013 Rapporteur Group meeting for Resolution 9 can be found in document 2/REP/42.

The final report and guidelines available in document 2/279 + Annex were approved.

In discussing the future of Resolution 9, the ITU-D Co-Chairman mentioned some additional items that could be considered, these included: spectrum management trends, spectrum monitoring practices, best practices in utilization of the digital dividend, and spectrum management training programmes. The Chairman of SG2, proposed some other subjects like interconnectivity, frequency questions of the digital broadcasting transition (digital dividend), spectrum management tools and how to make them available for developing countries, spectrum utilization techniques, and financial aspects. Wireless networks from the point of view of frequency/technologies (XAN) were also suggested. This mainly in association to the methodology used for wireless networks considered in terms of networks, frequencies, technologies and applications will provide the various stakeholders (organizations, manufacturers, operators, investors, users) with a global view of the technologies that may be used in setting up a dedicated wireless network, as it will take into account all relevant regulatory, technical, financial and economic aspects (details in document 2/284 from Thales Communications (France)). It was also suggested that the Group check the final report for ITU-D SG1 Q23/1 for possible additional items and cooperation among the three Sectors on subjects related to electromagnetic fields (EMF). The representative from Guinea proposed to keep the current title of Resolution 9, while noting the importance of assistance to the developing countries. In discussing the content of the work to be studied under Resolution 9, the importance of avoiding overlap with ITU-R activities, and rather use its results, was highlighted. No agreed proposal for the revised Question was presented for consideration by Study Group 2.

A question about the lack of availability of the Resolution 9 appointed Regional Coordinators was brought to the attention of the Group. It was noted that Regional Coordinators will again be assigned for the next study period.

Annex 1:

List of Study Group 2 Chairman, Vice-Chairmen, Rapporteurs, Vice-Rapporteurs, and BDT Focal Points

Fifth study period (2010-2014)

Study Group 2 Chairman and Vice-Chairmen

Role	Name/Country
Chairman	**Mokrane Akli (Algeria)**
Vice-Chairman	Petko Kantchev (Bulgaria)
Vice-Chairman	Eduardo Evertz (Dominican Republic) has stepped down and replacement is awaited.
Vice-Chairman	Evgeny Bondarenko (Russian Federation)
Vice-Chairman	Abdoulaye Kébé (Guinea)
Vice-Chairman	Vahid Salman (Islamic Republic of Iran)
Vice-Chairman	Mustafa Ahmed Ali (Sudan)

Study Group 2 Rapporteurs, Vice-Rapporteurs, and BDT Focal Points

Question	Title of the Question/Role	Name/Country/Organization	Focal Point
Q9-3/2	**Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries**		**Mr R. Shaw**
	Rapporteur	**Mr N. Al Marzouqi (United Arab Emirates)**	
	Vice-Rapporteur	Ms G. Aka (Côte d'Ivoire)	
	Vice-Rapporteur	Mr Ph. Mège (THALES Communications, France)	
	Vice-Rapporteur	Mr Y. Avanesov (Russian Federation)	
	Vice-Rapporteur	Mr A. Dalkiliç (Türk Telekom Group, Turkey)	
Q10-3/2	**Telecommunications/ICTs for rural and remote areas**		**Mr T. Sugimoto**
	Rapporteur	**Mr Y. Kawasumi (Japan)**	
	Vice-Rapporteur	Mr R. Anago (Burkina Faso)	
	Vice-Rapporteur	Mr R. Alabatena (Cameroon)	
	Vice-Rapporteur	Mr N. Njekoundade (Chad)	
	Vice-Rapporteur	Mr X. Si (People's Republic of China)	
	Vice-Rapporteur	Ms R.F. Assoumou-Bessou (Côte d'Ivoire)	
	Vice-Rapporteur	Mr A. Khanal (Nepal)	

Question	Title of the Question/Role	Name/Country/Organization	Focal Point
	Vice-Rapporteur	Mr Y. S. Avanesov (Russian Federation)	
	Vice-Rapporteur	Mr N. Albi Pastor (Aggaros, Spain)	
	Vice-Rapporteur	Ms S. Yildirim (Türk Telekom Group, Turkey)	
Q11-3/2	**Examination of terrestrial digital sound and television broadcasting technologies and systems, interoperability of digital terrestrial systems with existing analogue networks, and strategies and methods of migration from analogue terrestrial techniques to digital techniques**		**Mr I. Bozsoki**
	Rapporteur	**Mr P. Kantchev (Bulgaria)**	
	Vice-Rapporteur	Mr R. Mitsuake Hirayama (Brazil)	
	Vice-Rapporteur	Mr A. Kesse (Côte d'Ivoire)	
	Vice-Rapporteur	Mr Ph. Mège (THALES Communications, France)	
	Vice-Rapporteur	Mr H. Tall (Guinea)	
	Vice-Rapporteur	Mr Y. Takahashi (Japan)	
	Vice-Rapporteur	Mr S. B. Wagle (Nepal)	
Q14-3/2	**Information and Telecommunications for e-Health**		**Mr H. Eskandar**
	Rapporteur	**Mr L. Androuchko (Dominic Foundation, Switzerland)**	
	Vice-Rapporteur	Ms M. Jordanova (Bulgaria)	
	Vice-Rapporteur	Ms T. Logbo Allomo (Côte d'Ivoire)	
	Vice-Rapporteur	Mr A. Kébé (Guinea)	
	Vice-Rapporteur	Mr I. Nakajima (Japan)	
	Vice-Rapporteur	Dr M. Natenzon (Russian Federation)	
	Vice-Rapporteur	Mr A. Dalkiliç (Türk Telekom Group, Turkey)	
	Vice-Rapporteur	Mr T. Muluk (Intel Corporation,	

Question	Title of the Question/Role	Name/Country/Organization	Focal Point
		United States of America)	
Q17-3/2	**Progress on e-government activities and identification of areas of application of e-government for the benefit of developing countries**		**Mr H. Eskandar**
	Rapporteur	**Mr K.-H. Jeong (Korea Information Society Development Institute (KISDI), (Republic of Korea)**	
	Vice-Rapporteur	Mr E. Bondarenko (Intervale, Russian Federation)	
	Vice-Rapporteur	Mr K. D. Bagolibe (Togo)	
Q22-1/2	**Utilization of telecommunications/ ICTs for disaster preparedness, mitigation and response**		**Ms M. Delgado Solarte**
	Rapporteur	**Ms K. O'Keefe (United States of America)**	
	Vice-Rapporteur	Mr Z. Shamasuzzoha (Bangladesh)	
	Vice-Rapporteur	Mr M. Ayissi (Cameroon)	
	Vice-Rapporteur	Mr N. Payanfou (Chad)	
	Vice-Rapporteur	Mr N. Motte (THALES Communications, France)	
	Vice-Rapporteur	Mr P. Trung Kien (Viet Nam)	
Q24/2	**ICT and Climate Change**		**Mr O. Osmani**
	Rapporteur	**Mr J. Pla (France)**	
	Vice-Rapporteur	Mr M. Ayissi (Côte d'Ivoire)	
	Vice-Rapporteur	Mr N. Fuke (KDDI Corporation, Japan)	
	Vice-Rapporteur	Mr M. Nasih (Maldives)	
	Vice-Rapporteur	Mr R. Kelley (United States of America)	
Q25/2	**Access technology for broadband telecommunications including IMT, for developing countries**		**Mr R. Passerini Mr D. Karyabwite**
	Rapporteur	**Ms A. Sanders (United States of America)**	
	Vice-Rapporteur	Ms L. Feng (China)	
	Vice-Rapporteur	Mr A.A.E.A. Gad (Egypt)	

Question	Title of the Question/Role	Name/Country/Organization	Focal Point
	Vice-Rapporteur	Mr Y. Umezawa (KDDI Corporation, Japan)	
	Vice-Rapporteur	Mr M. Ghazal (Lebanon)	
	Vice-Rapporteur	Ms T.H.N. Nga (Viet Nam)	
	Vice-Rapporteur	Ms H. Kyeyune (Uganda)	
	Vice-Rapporteur	Ms L. Patnaik (United States of America)	
	Vice-Rapporteur	Mr T. Muluk (Intel Corporation, United States of America)	
Q26/2	**Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspects**		**Mr. V. Daigele**
	Rapporteur	**Mr A. Kumar (India)**	
	Vice-Rapporteur	Mr F. A. Djoumessi Dontsa (Cameroon)	
	Vice-Rapporteur	Mr N. Njekoundade (Chad)	
	Vice-Rapporteur	Mr A. Yayé (Niger)	
	Vice-Rapporteur	Mr H. Makki (Switzerland)	
	Vice-Rapporteur	Ms B. Sengün (Türk Telekom Group, Turkey)	
	Vice-Rapporteur	Mr N. Al Marzouqi (United Arab Emirates)	
	Vice-Rapporteur	Mr T. Muluk (Intel Corporation, United States of America)	
Joint Group on Resolution 9 (Rev. Hyderabad, 2010)	**Participation of countries, particularly developing countries, in spectrum management**	**Co-Chairmen/Regional Coordinators**	**Mr I. Bozsoki (BDT) Mr Ph. Aubineau (BR)**
	ITU-D Co-Chairman	Mr F. Digham (Egypt)	
	ITU-R Co-Chairman	Mr S. Koffi (Côte d'Ivoire) has stepped down	
	ITU-R Co-Chairman	Mr S. Pastukh (Russian Federation)	
	Regional Coordinator for Africa	Mr S. Koffi (Côte d'Ivoire)	
	Regional Coordinator for	Mr. R. Haines	

Question	Title of the Question/Role	Name/Country/Organization	Focal Point
	Americas	(United States of America)	
	Regional Coordinator for Arab States	Mr N. Al Rashedi (United Arab Emirates)	
	Regional Coordinator for Asia-Pacific	Mr K. Arasteh (Iran, Islamic Rep. of)	
	Regional Coordinator for CIS	Mr A. Nalbandian (Armenia)	
	Regional Coordinator for Europe	To be appointed	

ITU-D Study Group Secretariat, Technical and Administrative Support

Role	Staff
Study Group Secretariat	
	Ms Christine Sund
	Ms Maite Comas Barnes
	Ms Catherine Stoudmann
Registration	
	Ms Mercy Nortey
	Ms Saida Najeh
	Ms Laura Puyana
	Ms Na Demoulin
Technical Support	
	Mr Paulo Cabral
	Mr Christian Gerlier
	Mr Gael Jaboulay
	Mr Efrem Yousef
	Mr Mohammad Althaher
	Ms Marta Garcia Aliaga
	Mr Thomas Tsang

Concerning the availability of the Vice-Chairmen appointed by WTDC-10, Study Group 2 noted the absence of the representatives from the Dominican Republic and the Islamic Republic of Iran for the duration of the 2010-2014 study period.

With regards to the joint ITU-D/ITU-R work on Resolution 9, Study Group 2 also noted the absence of the appointed Regional Coordinators in terms of participation in the preparation of the Resolution 9 deliverables and the meetings organized jointly with ITU-R.

These findings are submitted for consideration in view of ensuing better regional representation in work of the ITU-D study groups and as this relates to the WTDC Resolutions and Recommendations.

Annex 2:

ITU-D Study Group 2: List of Study Group and Rapporteur Group Meetings (2010-2014)

Study Group/ Rapporteur Group meeting	Date and location
Study Group 2 meetings	
Fourth Meeting of ITU-D Study Group 2	16-20 September 2013, Switzerland [Geneva]
Third Meeting of ITU-D Study Group 2	17-21 September 2012, Switzerland [Geneva]
Second Meeting of ITU-D Study Group 2	12-16 September 2011, Switzerland [Geneva]
First Meeting of ITU-D Study Group 2	13-16 September 2010, Switzerland [Geneva]
Rapporteur Group meetings	
ITU-D/ITU-R Joint Rapporteur Group Meeting for Resolution 9	13 June 2013, Switzerland [Geneva]
ITU-D/ITU-R Joint Rapporteur Group Meeting for Resolution 9	21 September 2012, Switzerland [Geneva]
ITU-D/ITU-R Joint Rapporteur Group Meeting for Resolution 9	6-7 June 2011, Switzerland [Geneva]
Rapporteur Group Meetings for Study Group 2 Questions 9-3/2, 10-3/2, 11-3/2, 14-3/2, 17-3/2 22-1/2, 24/2, 25/2, 26/2,	2-12 April 2013, Switzerland [Geneva]
Rapporteur Group Meetings for Questions 9-3/2, 14-3/2, 17-3/2, 24/2, 26/2	7 May-11 May 2012, Switzerland [Geneva]
Rapporteur Group Meetings for Questions 10-3/2, 11-3/2, 22-1/2, 25/2	15 March-21 March 2012, Japan [Sendai and Tokyo]
First block of Rapporteur Group Meetings	21 March-1 April 2011, Switzerland [Geneva]

Annex 3:

Details on the participation by the membership in the activities of ITU-D Study Group 2 (2010-2014)

Participation and written contributions

In total for the study period, 423 delegates have participated in at least one Study Group 2 meeting (**Graph 1**). Many, if not most of these delegates regularly attend Study Group and associated Rapporteur Group activities, either in person or remotely, from year to year. In this context, the BDT has hosted and accommodated a total of 1516 delegates to date **(Graph 2)**. The highest number of participants came from Africa, followed by Asia/Australasia, then Western Europe, the Americas, and Eastern Europe/Northern Asia (**Graph 2**).

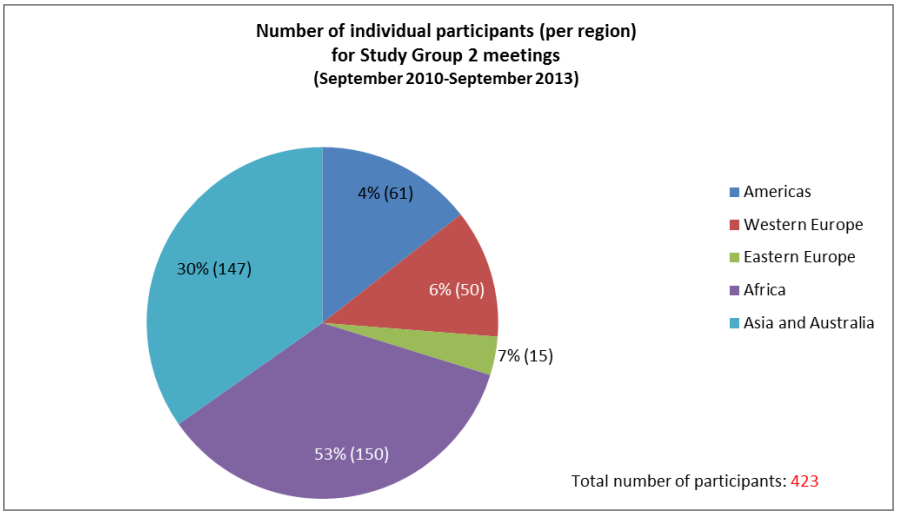
Study Group 2 has received a total of 575 contributions (**Graph 3**). Contributions from regional and international organizations, ITU and the management team are also included in this count. The number does not include administrative documents, meeting reports, or liaison statements received for consideration by the Groups. The majority of the contributions have come from Asia/Australasia, then Western Europe followed by Africa, the Americas, and Eastern Europe/Northern Asia.

As illustrated in **Table 1**, each Question has received a satisfactory number of written contributions to complete its deliverables for the study period. The three Questions receiving the highest number are Question 10-3/2 on ICTs for rural areas, followed by Question 25/2 on broadband access technologies, then Question 14-3/2 on e-Health (**Graph 4**). A number of contributions have been addressed to all SG2 Questions and these are also included. It is to be noted that incoming liaison statements have been included in the count in **Table 1** and **Graph 4** as this kind of document is highly representative of the relevance and existing interest in a particular Question.

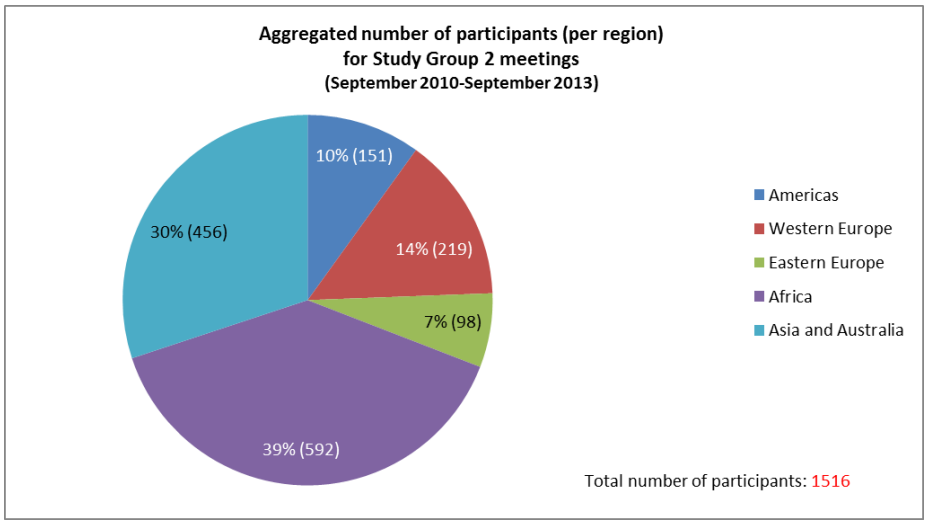
In addition, several of the Rapporteur Groups have utilized questionnaires, collected case studies and used the results of other ongoing ITU work to support their analysis.

With regards to the contributions and presentations received from specialized organizations and agencies, industry, academia and universities, Study Group 2 has noted with great satisfaction the interest shown for the work of the relevant Questions and topics under study throughout the study period.

Graph 1: Number of individual participants (per region) for Study Group 2 meetings (September 2010 – September 2013)



Graph 2: Aggregate number of participants (per region) for Study Group 2 meetings (September 2010 – September 2013)



Graph 3: Number of contributions received from the membership for consideration during Study Group 2 meetings (per region)

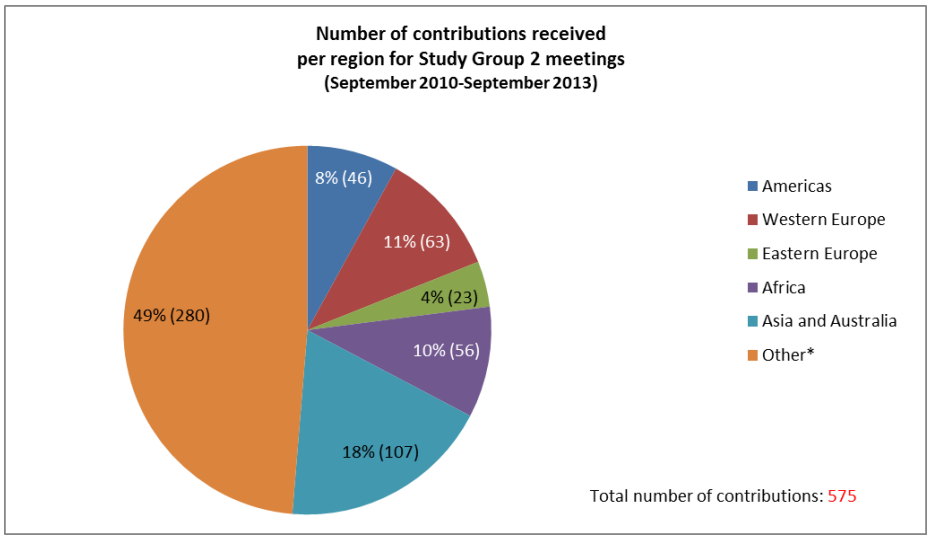
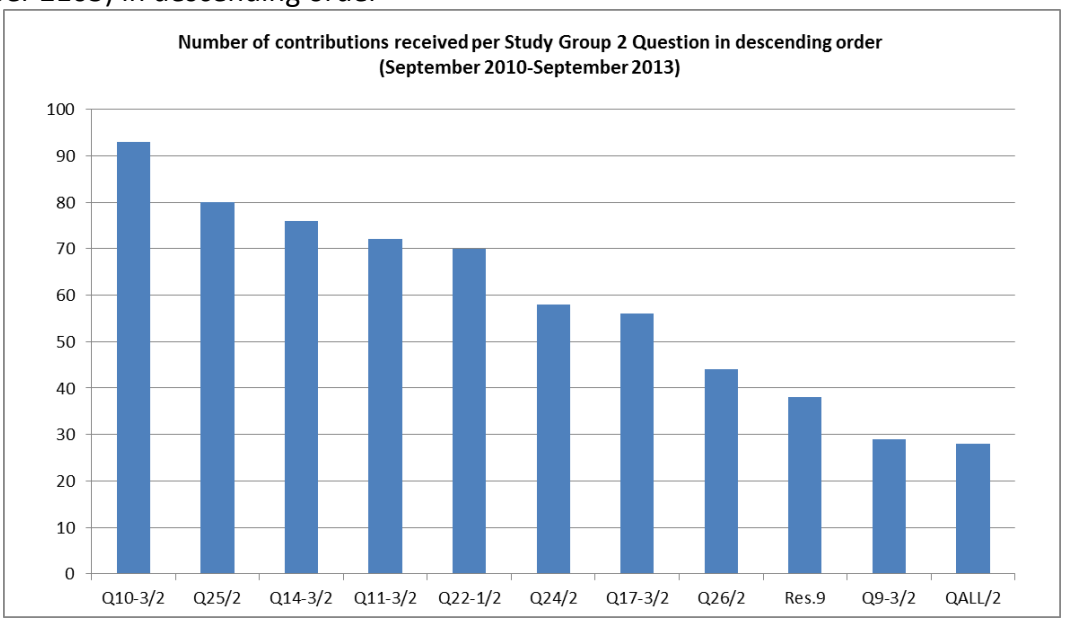


Table 1: Number of contributions received per Study Group 2 Question (September 2010 – September 2103)

	Number of contributions received from the Membership for each Study Group 2 Question from September 2010 to September 2013							
STG 2 Question	**STG meeting in 2010**	**RGQ meetings in 2011**	**STG meeting in 2011**	**RGQ meetings in 2012**	**STG meeting in 2012**	**RGQ meetings in 2013**	**STG meeting in 2013**	**Total from 2010 to 2013**
Q9-3/2	3	5	5	4	5	5	2	29
Q10-3/2	9	5	16	13	16	19	15	93
Q11-3/2	2	10	10	12	9	19	10	72
Q14-3/2	4	28	9	12	11	6	6	76
Q17-3/2	3	6	8	13	13	9	4	56
Q22-1/2	9	7	13	15	8	5	13	70
Q24/2	4	7	12	12	7	12	4	58
Q25/2	9	14	11	12	8	10	16	80
Q26/2	6	3	9	8	6	9	3	44
Res.9	4	8	8	6	0	7	5	38
QALL/2	8	0	5	0	13	0	2	28

Graph 4: Number of contributions received per Study Group 2 Question (September 2010 – September 2103) in descending order



Annex 4:

Recommendation ITU-D

Policy and regulatory initiatives for developing telecommunications/ICTs/broadband in rural and remote areas

ITU-D Study Group 2,

considering

a) that the significant role of telecommunications/ICTs/broadband in providing services, particularly e-applications in rural and remote areas of developed, countries in transition, developing and least developed countries for the empowerment of its people, promotion of culture, improvement of the quality of life of the rural community, development of economy, etc.;

b) that ITU-D Study Groups 1 and 2 continued their study activities to address the challenges faced by the rural and remote areas of the world in general and those areas of the LDCs and developing countries in particular on various issues including but not limited to the range of techniques and solutions to provide services and e-applications based on the inputs by the membership;

c) that ITU-D Recommendation 19 (Hyderabad, 2010) compiled the past recommendations and consolidated into recommendation based on the result of the studies of the techniques and solutions for the development of telecommunications/ICTs/broadband for rural and remote areas since the establishment of the dedicated study Question during WTDC-94 (Buenos Aires);

recognizing

a) that BDT, under the activities of the ITU-D Study Group 2 Question 10-3/2 conducted a survey to gather detailed information on policy and regulatory measures that have been taken by the governments around the world and economic and business models for telecommunications/ICTs/broadband growth in rural and remote areas;

b) that the survey also sought to collect information on possible impact and analysis of such interventions and initiatives;

c) that the inputs received through the survey were useful for the study of ITU-D Study Group 1 and 2 Questions for 2010-2014 study period to assist countries in strengthening the capacity to address challenges for the development of telecommunications/ICTs/broadband in rural and remote areas,

taking into account

a) the results of analysis of the survey submitted by BDT to ITU-D Study Group 2;

b) the analysis of case studies submitted to ITU-D Study Group 2 during 2010-2014 study period;

c) the final report of ITU-D Study Group 2 Question 10-3/2 dedicated to ”Telecommunications/ICTs for rural and remote areas” (2014);

d) the report of Broadband Commission (2012) submitted to ITU-D Study Group 2;

e) the report of ITU on measuring the information society (2012);

f) the fact that in contrast to the large percentage of the global population that subscribe to basic mobile phone services, internet connectivity in developing and least developed countries is still limited, in particular in their rural and remote areas;

g) that many governments have initiated the development of a specific National Broadband Network Plan that would also cater the needs of the rural and remote areas;

h) that active and passive infrastructure sharing along with the sharing of spectrum resources are already included by some countries in their national telecommunication/ICT policy,

i) that new licensees with the support of universal service fund and sharing of active, passive network elements based on reference offers along with spectrum resources can service rural and remote areas with incremental addition of their own network infrastructure elements, billing systems and customer services and independent tariff plans,

noting

a) that the following major interventions/initiatives are observed in the analysis of survey input;

b) that the definition of "rural and remote areas" is based on the sparse population and harsh geographical conditions and some countries have license obligations to cover a certain percentage of population in such areas;

c) that the majority of the countries that responded to the survey have specific government policies in place for the development of telecommunications/ICTs/broadband in rural and remote areas, including the instruments, such as universal service provisions, universal access funds, license obligations, and targets of broadband coverage, penetration rate and data speed, defined in the telecommunication law and regulation;

d) that funds are collected by the government ministry or telecommunication regulator of the country as a percent of annual gross revenue or other scheme in proportion with their income/annual net revenue/turnover and also managed and disbursed by the relevant ministry or regulator;

e) that the development and adoption of appropriate economic model and business model is critical for the development and sustainability of telecommunications/ICTs/broadband networks and service provisioning in rural and remote areas. It has been found that various kinds of economic and business models have been adopted by Member States based on specific country situations and requirements;

f) that sharing of backbone network infrastructure in rural and remote areas among operators, in contrast to building network infrastructure using government special budget and through USO fund, is one possible option;

g) that special policy, legal and/or regulatory frameworks for infrastructure sharing in rural and remote areas, for example by using optical fiber cables and BTS/microwave towers and related support infrastructures, is an option worth considering in developing and least developed countries.

convinced

a) that the development of telecommunications/ICTs/broadband services is essential for overall socio-economic and cultural development as well as for the promotion of other sectors;

b) that the development of ICT infrastructure is an important measures to suppress the migration of population to urban areas;

c) that telecommunication/ICT infrastructure is an important tool to measure factors related to the protection of the environment.

recommends

1) that governments and regulators around the world in general and in the developing and least developed countries in particular should take regulatory and policy measures to accelerate the development of telecommunications/ICTs/broadband in their rural and remote areas through specific policy and regulatory interventions/initiatives and included in their national development plans;

2) that operators and service providers should implement universal service of telecommunication/ICTs in rural and remote areas;

3) that sector members, associates and academia should take actions to increase studies on economic, energy efficient and clean equipment suitable for ICT infrastructure development in rural and remote areas;

4) that the state of the art cost effective techniques and technologies for broadband infrastructure development most suited for the geographical and economic conditions of rural and remote areas are put in place to enable them to access various e-applications, specially those which integrate them into national streams like e-governance, e-health, e-education, e-agriculture, etc. for vitalizing rural community through policy and regulatory interventions/initiatives;

5) that country/area specific poverty indices published by United Nations/World Bank may be taken into due consideration in the implementation of universal service of telecommunication/ICT in rural and remote areas.

invites the Director of BDT

1. to continue organizing symposiums, seminars, workshops and related activities on the subject.

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Annex 5:

Recommendation ITU-D

ICT and climate change

ITU-D Study Group 2,

considering

a) that climate change is now an undeniable reality, and global action to reduce greenhouse gas emissions is urgent in order to avoid devastating impacts on our societies;

b) that the World Telecommunication Development Conference 2010 (WTDC-10) stated that Telecommunications/ICTs can make a substantial contribution to monitoring, mitigating and adapting to the adverse effects of climate change;

c) that the World Radiocommunication Conference 2012 (WRC-12) revised Resolution 673 (Rev. Geneva, 2012) on the importance of earth observation radiocommunication applications;

d) that the Plenipotentiary Conference 2010 (PP-10) adopted Resolution 182 on "The role of telecommunications/ information and communication technologies in regard to climate change and the protection of the environment";

e) that Resolution 66 (Hyderabad, 2010) of the World Telecommunication Development Conference, on information and communication technology and climate change, states that radio-based remote sensing applications on board satellites are the main global observation tools employed by the Global Climate Observation Systems for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change;

f) that the economic costs imposed by extreme climates and disasters on humans, societies, and ecosystems are growing;

g) that climate modelling indicates that, in future, continued increases in greenhouse gas concentrations may drive more extreme weather events;

h) that, according to Resolution 30 (Rev. Guadalajara) of the Plenipotentiary Conference, countries, particularly small island developing states, least developed countries (LDCs), landlocked developing countries (LLDCs) and low-lying coastal countries are vulnerable to global climate change and rising sea levels;

i) that the process established by the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the on-going negotiations of its Intergovernmental Negotiating Committee are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts and assisting all ITU Member States, especially LDCs, in adapting to its adverse consequences.

noting

a) that ICTs can facilitate faster development of various social and economic sectors in any country and that they lead to equal opportunities for all mankind, especially perceptible;

b) improvement for the most vulnerable parts of society in rural and remote areas, contributing to their inclusive growth of society;

c) that providing assistance to developing countries in formulating national and regional strategies and measures on the use of ICTs can to help mitigate and respond to the devastating effects of climate change;

d) that it is necessary to have an updated map of the potential upheavals that may occur in the long term due to the consequences of the warming of the climate;

e) that mapping areas vulnerable to natural disasters and developing computer-based information systems covering the results of surveys, assessments and observations, as part of the development of adequate response strategies, adaptation policies and measures can minimize the impact of climate change and climate variability;

f) that assisting developing countries in the use of data from active and passive satellite-based remote sensing systems for climate monitoring, disaster prediction, detection and mitigation of the negative effects of climate change is a key issue to understand the climate long term evolution ;

g) that facilitating Member States' participation in bilateral, regional and global research, assessments, monitoring and mapping of climate impacts can help in the development of response strategies;

h) that we can take benefit of the experience of some countries, suffering from extreme weather events, which have already integrated in their strategy against climate change a list of concrete principles and actions;

i) that the world summit of information society decided to launch projects to promote ICTs in the fields of environment, natural resources, green ICT Sector and natural disasters.

recognizing

a) that emissions of global warming gases continue to rise as the world burns ever more coal, oil and gas for energy;

b) that the year 2012 was the 10th warmest year since records began in 1880. The annually averaged temperature across global land and ocean surfaces was 0.57°C above the 1950s average, and around 0.8°C above the 1880 estimated average;

c) that there are changes in rainfall patterns and wetter regions of the world (mid to high latitudes in the northern hemisphere and tropical regions) are generally getting increasing rainfall, and drier regions less rainfall;

d) that significant temperature increases have been observed over the last 50 years in the Atlantic, Pacific and Indian Ocean basins and that these increases cannot be attributed to changes in solar activity, volcanic eruptions or other natural variations;

e) that due to the operation of ground instruments since 1880 and the operation of remote sensing satellites, the constant increase of the mean sea level is a scientific fact that cannot be challenged;

f) that the increase of the mean sea level is threatening small islands and cities along the coast;

recognizing further

a) that telecommunications/ICT are of critical importance to overall economic, social and cultural development;

b) that countries believe it is essential to develop Internet access, to encourage training in ICT as part of adaptation to climate change, as insufficient data is gathered at local level and sent for analysis;

c) that some countries want to learn more on the reduction of energy consumption and about greenhouse gas emissions, and also to learn about ICTs that could operate at lower energy consumption that would require less maintenance and what is the corresponding quantified benefit for climatic change;

d) that some countries would like to learn more about the negative effects or impact of not using "green" ICT and how can they contribute to help reduce the global warming.

recommends

1. that countries elaborate guidelines, best practices, implement national policies and related measures to facilitate the use of ICT to combat climate change challenges;
2. that support is provided to help countries invest more in meteorology monitoring services in order to prevent extreme events that could be devastating as better prediction would costs relatively little and helps reduce the carnage caused by floods, droughts and tropical cyclones;
3. that in order to help countries invest in the technologies they need to know more about the climate change in general, and have better access to and understanding of meteorological data (satellite and terrestrial) that is supplied;
4. that countries elaborate training programs for a better usage of all the monitoring data;
5. that a program is developed based on real figures showing the effect of reduced energy consumption and the benefit of ICT;
6. that it is necessary to adopt innovative ICT-enabled strategies to tackle climate change adaptation and mitigation on the long-term;
7. that, as ICTs may need to operate in difficult meteorological conditions (hot weather, high humidity…), it becomes urgent to help countries develop more affordable green ICTs, as well as more robust and reliable;
8. that better cooperation between countries is to be established in areas related to the monitoring of meteorological data and for mitigating climate change using ICTs;

recommends further

1. that appropriate steps be taken for the creation of an enabling environment at the national, regional, and international levels to encourage development and investment in the ICT sector, in meteorology and in prediction of extreme events by ITU Members;
2. that work on further developing the field of ICTs and climate change is continued and treated by countries as a priority and urgent task;

invites the Director of BDT

1. to continue to actively contribute to enhancing activities related to climate change mitigation and adaptation;
2. to continue jointly organizing events with other sectors of ITU in order to reduce duplication and to enhance sharing of information across the sectors and member states;

_____

Annex 6:

Revised Question 10-3/2 as agreed during the September 2013 Study Group 2 meeting

Title: Telecommunications/ICTs for rural and remote areas

1. Statement of the situation

Digital divide exists not only between the developed and developing countries but also between the rural and urban areas of within the countries. The divide also exists between the individuals and families with based on their economic status and literacy. This exists between young and old people, between normal persons and persons with disability. The economic, literacy, age group and ability issues are more prominent in the rural and remote areas than urban areas.

Migration of the population from rural and remote areas to urban areas is a general trend observed in most of the least developed and developing countries causing socio-economic problems such as acceleration of poverty in urban cities resulting from the lack of job opportunities, high cost of urban life, and housing problem, etc. Similar migration has been observed from the LDCs and developing countries to the developed countries as the migrant workers. Global urban population is said to surpass the rural population in 2014 according to the UN's statistics. The potential use of the resources in the rural and remotes areas for the development of such areas have not been explored because of the lack of potential human resources in such areas due to migration and apparent lack of opportunities. Whether telecommunications/ICTs could be an effective measure to minimize the trends of urbanization by improving the life of dwellers in rural and remote communities needs to be seriously considered as feasible challenge under the study of this question. Variety of multimedia services, i.e. e-applications and e-services will be made available over the rapidly developing fixed or mobile broadband communications infrastructure. However, the penetration of broadband infrastructure in the rural and remote areas of developing or least developing countries is not as fast as developed countries according to the ITU's ICT indicators. The goals of WSIS and UN Millennium development goals for improving connectivity are still under the challenging stage in the most of developing and least developing countries to achieve. ITU's goal "connecting the unconnected" remains a challenge when we consider both Internet and broadband in the rural and remote areas.

The important aspect related to installation of cost effective and sustainable basic broadband infrastructure for various multimedia services and applications in rural and remote areas needs further studies and specific outcome needs to be made available for the vendor community to develop a suitable solution to meet the specific challenges in the rural and remote areas. The existing network systems are most of the time primarily defined for urban areas where necessary support infrastructure (adequate power, building/shelter, accessibility, skilled manpower to operate etc.) for setting up a telecommunication network is assumed to exist. Hence the current systems need to meet more adequately the rural specific requirements in order to be mass deployed.

Some of the known challenges and according to the analysis of recent survey by ITU-D, that developing countries planning to spread ICT to rural and isolated areas must be tackled are the following ones:

1) Shortage of power-particularly when national grid is not available
2) Exorbitant cost of maintaining power backup usually diesel generator and its associated environmental hazards
3) Difficult terrain

4) Difficult access and transportation
5) Lack of trained and skilled human resources
6) Installation and maintenance of networks
7) Very high operating cost
8) Low potential ARPU
9) Sparsely populated and scattered population cluster.

More detailed study on challenges of deploying cost effective and sustainable ICT infrastructure in rural and remote areas is expected to be taken up within ITU-D study group taking into account the global perspective.

In many rural and remote areas of the LDCs and developing countries providing shared access through the operation of Multipurpose Community Telecentres (MCT), Public Call Office (PCO), Community Access Centres (CAC), E-posts are still valid for cost effectiveness for sharing infrastructure and facilities by the community residents leading to the goal of provision of individual telecommunication access.

Therefore, it is proposed to deal with the challenges and system requirements of fixed and mobile networks capable of providing broadband services for rural deployments in developing nations.

2. Question for study

There are a variety of several new and old issues that members will be interested in addressing within the four coming years of this Question. It is proposed that the main new key issue for study is the range and scope of emerging technologies, techniques and solutions that are expected to play a significant role in the provision of multi-media and e-application services for rural and remote areas. Since a market driven approach is not going to be effective to bridge the digital divide between the urban and rural areas, policy and regulatory interventions are critical. This study will also look into the details of such possible interventions and their associated economic and business models for sustainable provision of telecommunications/ICTs/broadband services. It is further proposed that the study should progress in stages to cover a four-year cycle in the following manner:

Step 1 - to continue identification of the full range of potential emerging technologies, techniques and solutions that can significantly impact on the provision of telecommunications/ICTs/broadband services and applications in rural and remote areas,

Step 2 - to continue to investigate and report on how the techniques identified above can be used to best deliver the range of services, and applications required by rural and remote communities and adapted to the needs of their users.

Step 3 - to identify, assess and consolidate the challenges faced by developing countries in setting up a low cost sustainable telecommunication infrastructure in rural areas of developing nations.

Step 4 - to describe the evolution of system requirements for rural network system specifically addressing such identified challenges of rural deployment.

Step 5 - to continue to consider the sustainability of the techniques and solutions identified in the above-mentioned steps.

Step 6 - to identify the policy and regulatory initiatives and interventions made of the member states for providing telecommunications/ICTs/broadband services in the rural and remotes areas

Step 7 - to identify the business models for sustainable deployment of networks and services in the rural and remote areas.

Step 8 - to augment the report on the range of case studies that clearly demonstrate how a range of techniques, based on new technology aimed at providing reduced capital and operating cost solutions, reducing (GHG) emissions and enhancing community participation, can maximize the benefits of broadband telecommunications/ICTs/broadband infrastructure in rural and remote areas.

In dealing with the above studies, the work under way in response to other Questions being dealt with in ITU-D, and close coordination with relevant activities of the Questions, [in particular Questions 14-4/2, 17-2/2, 22-2/2, 25-2/2, 26-2/2 and also Questions 7-3/1 and 12-2/1 , are highly relevant]. In the same way, the studies shall take into account cases related to indigenous communities, isolated and poorly served areas of LDCs, and small island developing states (SIDS) and landlocked developing countries (LLDCs), and highlight their particular needs and other particular situations which need to be considered in developing telecommunications/ICTs/broadband facilities for these areas.

3. Expected output

The output will be a report on the results of the work conducted for each step above, together with one or more recommendations at appropriate times, either during the course of or at the conclusion of the cycle.

4. Timing

The output will be generated on a yearly basis. The output from the first year will be analysed and assessed in order to update the work plan for the next year, and so on.

5. Proposers

The Question was originally approved by WTDC-94, revised by WTDC-98, WTDC-02, WTDC-06, WTDC-10 and WTDC-14.

6. Sources of input

Contributions are expected from Member States, Sector Members and Associates, as well as inputs from relevant BDT programmes, particularly those that have successfully implemented telecommunications/ICTs/broadband projects in rural and remote areas. These contributions will enable those responsible for work on this Question to develop the most appropriate conclusions, recommendations and outputs. The intensive use of case study library, correspondence and on line exchange of information and experiences is encouraged for additional sources of inputs.

7. Target audience

Target audience	Developed countries	Developing countries[1]
Relevant policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Rural authorities	Yes	Yes
Service providers/operators	Yes	Yes
Manufacturers including software developers	Yes	Yes
Vendors	Yes	Yes

[1] This includes least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs) and countries with economies in transition.

a) Target audience

Depending on the nature of the output, upper- to middle-level managers among operators and regulators in developing countries including relevant rural authorities are the predominant users of the output. Such study outcome will ensure adequate attention of vendors to focus on their development efforts to meet the needs of developing countries.

b) Proposed methods for the implementation of the results

To be decided during the study period.

8. Proposed methods of handling the Question

Within Study Group 2.

9. Coordination

The ITU-D study group dealing with this Question will need to coordinate with:

- Focal points of the relevant Questions in BDT.
- Coordinators of relevant project and programme activities in BDT.
- Regional and scientific organizations with mandates covering the subject matter of this Question.
- Other relevant stakeholders as may become apparent within the life of this Question.

Annex 7:
List of incoming liaison statements received for consideration by SG2

QALL

Web	Received	Source	Title	Question
[2/330]	2013-09-02	ITU-T Focus Group on Innovation	Liaison Statement from the ITU-T Focus Group on Innovation to ITU-D SG1 and SG 2 on Collaboration on document successful cases of ICT Innovations in emerging economies	QALL
[2/291]	2013-06-29	Telecommunication Standardization Advisory Group	Liaison statement from TSAG for BDT on WTSA-12 Action Plan	QALL
[2/253]	2013-05-23	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Study Groups 1 and 2 on Nomination of JCA-AHF representatives [to ITU-D Study Groups]	QALL
[2/156]	2012-06-29	ITU-T Focus Group on DR & NRR	Request for information on organizations and bodies related to disaster relief	QALL
[2/148]	2012-04-22	ITU-R Study Group 5	ITU-R Study Group 5 Questions to be brought to the attention of ITU-D SG 2	QALL
[2/145]	2012-06-05	ITU-R Study Groups - Working Party 5A	Liaison Statement from ITU-R WP 5A: Technical characteristics of wireless aids for hearing impaired people operating in the VHF and UHF frequency range	QALL
[2/144]	2012-02-14	ITU-T Focus Group on AVA	Liaison Statement from ITU-T FG AVA to ITU-D Study Groups 1 and 2: Technical characteristics of wireless aids for hearing impaired people operating in the VHF and UHF frequency range	QALL
[2/117]	2011-09-13	ITU-R Study Groups - Working Party 5D	Liaison statement to ITU-D SG 2, ITU-T SG 13 and ITU-R Working Party 4B	QALL
[2/95]	2011-07-19	Telecommunication Standardization Bureau	Liaison Statement on the first meeting of ITU-T Focus Group on Audiovisual Media Accessibility (FG AVA)	QALL

Q9-3/2

Web	Received	Source	Title	Question
[2/306]	2013-07-22	ITU-R Study Groups - Working Party 5D	Liaison Statement from ITU-R WP5D to ITU-D Study Group 2 on the use of spectrum and radio technology low cost sustainable telecommunication infrastructure for rural communications in developing countries	RES.9, Q10-3/2, Q09-3/2

Q10-3/2

Web	Received	Source	Title	Question
[2/306]	2013-07-22	ITU-R Study Groups - Working Party 5D	Liaison Statement from ITU-R WP5D to ITU-D Study Group 2 on the use of spectrum and radio technology low cost sustainable telecommunication infrastructure for rural communications in developing countries	RES.9, Q10-3/2, Q09-3/2
[2/267]	2013-06-05	ITU-R Study Groups - Working Party 5A	Liaison Statement from ITU-R WP5A to ITU-D SG 2 on the Use of spectrum and radio technology low cost sustainable telecommunication infrastructure for rural communications in developing countries	RES.9, Q10-3/2
[RGQ10-3/2/27]	2012-10-16	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-R Working Parties 4B and 5C, ITU-T SG 13 Question 15/13 and ITU-D SG2 Questions 10-3/2 and 25/2, on the Appointment of Sub-Working Group Handbook Chairman and Work Progress	Q25/2, Q10-3/2
[RGQ10-3/2/11]	2011-03-25	Rapporteur for Question 10-3/2	Liaison Statement to ITU-T Study Groups 5 and 15	Q10-3/2

Q11-3/2

Web	Received	Source	Title	Question
[RGQ11-3/2/37] +Ann.1	2013-02-22	ITU-T Focus Group on AVA	Liaison Statement to ITU-D Study Groups from FG-AVA regarding LS to ARIB, ATSC, DVB and SBTVD on signing service guideline	Q20-1/1, Q11-3/2

Web	Received	Source	Title	Question
[RGQ11-3/2/36]	2013-04-12	ITU-D Study Group 2 Question 11-3/2	Liaison Statement from ITU-D SG2 Question 11-3/2 to ITU-R Working Party 6A on Broadcasting industry and regulators facing both opportunities and challenges in dealing with the transition from analogue to digital broadcasting.	Q11-3/2

Q14-3/2

Web	Received	Source	Title	Question
[2/268]	2013-06-05	ITU-R Study Groups - Working Party 5A	Liaison Statement from ITU-SG WP5A to ITU-D Study Groups 1 and 2 on Draft revision of Recommendation ITU-R M.1076	Q20-1/1, Q14-3/2, LS
[2/254]	2013-05-24	ITU-R Study Groups - Working Party 5B	Liaison Statement from ITU-SG WP5B to ITU-D SG 1 and 2 on a draft revision of Recommendation ITU-R M.1076	Q20-1/1, Q14-3/2, LS
[2/252]	2013-05-23	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Study Groups 1 and 2 on Technical characteristics of wireless aids for hearing impaired people operating in the VHF and UHF frequency range (COM 16-LS 14) [to ITU-R WP5A and ITU-T SG 16]	Q20-1/1, Q14-3/2, LS
[2/249]	2013-05-07	ITU-T Study Group 17	Liaison Statement from ITU-T SG17 to ITU-D SG2 Q14-3/2 on collaboration on e-health, considering WTSA-12 Resolution 78	Q14-3/2, LS
[2/248]	2013-05-06	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Q20-1/1, Q14-3/2 and Q22-1/2 on contact person for JCA-AHF	Q22-1/2, Q20-1/1, Q14-3/2, LS
[2/247]	2013-05-06	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Q20-1/1, Q14-3/2 and Q22-1/2 about new work items on e-health (COM 16 - LS 19 -E)	Q22-1/2, Q20-1/1, Q14-3/2, LS
[RGQ14-3/2/19]	2013-02-05	ITU-T Study Group 16	Liaison Statement from ITU-T SG 16 to ITU-T SG 13, ITU-T SG 17, JCA-AHF; ITU-D Q14/2 on new work items on e-health	Q14-3/2

Q17-3/2

Web	Received	Source	Title	Question
[RGQ17-3/2/15]	2012-03-28	ITU-T Study Group 17	LS to ITU-D Study Group 2 on Security Aspects of the Toolkit for ICT-based Services Using Mobile Communications within the Framework	Q17-3/2
[RGQ17-3/2/13]	2012-03-28	ITU-T Study Group 17	Migration to NGN - security aspects	Q17-3/2
[RGQ17-3/2/11]	2012-03-09	ITU-T Study Group 17	Reply to Liaison Statement from ITU-D SG2 Q17-3/2	Q17-3/2

Q22-1/2

Web	Received	Source	Title	Question
[2/310]	2013-07-22	ITU-T Study Group 15	Liaison statement from ITU-T SG15 to ITU-D SG2 Q22-1/2 on the Approval of new Recommendation ITU-T L.92 (reply to ITU-D-SG2-LS07 / 2/47-E)	Q22-1/2
[2/266]	2013-06-04	ITU-R Study Groups - Working Parties 5A and 5C	Liaison Statement from ITU-R WP5A and WP5C to ITU-D SG 2 Question 22-1/2 on Fixed wireless systems for disaster mitigation and relief operations	Q22-1/2
[2/250]	2013-05-09	ITU-R Study Groups - Working Party 6A	Liaison Statement from ITU-R WP6A to ITU-D SG2 Question 22-1/2 on the importance of radio and television broadcasting for emergency information to the public	Q22-1/2
[2/248]	2013-05-06	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Q20-1/1, Q14-3/2 and Q22-1/2 on contact person for JCA-AHF	Q22-1/2, Q20-1/1, Q14-3/2
[2/247]	2013-05-06	ITU-T JCA-AHF	Liaison Statement from ITU-T JCA-AHF to ITU-D Q20-1/1, Q14-3/2 and Q22-1/2 about new work items on e-health (COM 16 - LS 19 -E)	Q22-1/2, Q20-1/1, Q14-3/2
[2/245]	2013-04-17	ITU-T Focus Group on DR & NRR	Liaison Statement from ITU-T FG on DR&NRR to ITU-D SG2 Q22-1/2 on the Status Report of the Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR)	Q22-1/2

Web	Received	Source	Title	Question
[2/244]	2013-04-15	ITU-T Focus Group on AVA	Liaison Statement from ITU-T FG-AVA to ITU-D Q22-1/2 on LSOR from FG AVA to ITU-D on draft third edition of "Handbook on Emergency Telecommunications"	Q22-1/2, Q20-1/1
[2/152]	2012-06-04	ITU-R Study Groups - Working Party 4B	Liaison Statement to ITU-D Study Group 2 Question 22-1/2 - ITU Handbook for Telecommunications Outside Plants in Areas Frequently exposed to Natural Disasters	Q22-1/2, LS
[2/15]	2010-08-27	ITU-T Study Group 13	Liaison response on defining a physical architecture of NGN specifying various network elements	
[2/14]	2010-08-27	ITU-R Study Groups - Working Party 4B	Liaison Statement to ITU-D Study Group 2 Q.22/2 for Action and ITU-R Working Parties 4A and 5A for Information Draft List Of Terminology On Emergency Telecommunications	
[2/12]	2010-08-27	ITU-R Study Group - Working Party 4C	Liaison Statement to ITU-D Study Group 2 (Question 22/2) and the BDT Programme 5 Preliminary draft revisions of Recommendation ITU-R M.1854 "Use of mobile satellite service (MSS) in disaster response and relief" and of Report ITU-R M.2149 "Use and examples of mobile-satellite service systems for relief operation in the event of natural disasters and similar emergencies"	
[2/11]	2010-08-27	ITU-T Study Group 15	Liaison Statement Proposal for a revised draft of new ITU-T Recommendation "Technical considerations on protecting outside plant facilities from natural disasters" L.tcosp	
[RGQ22-1/2/27]	2013-02-20	ITU-T Focus Group on DR & NRR	Liaison Statement to ITU-D SG1 Question 20-1/1 and SG2 Question 22-1/2 from FG DR&NRR on Study on "Emergency Communication System for Persons with Hearing and Speaking Disabilities"	Q22-1/2, Q20-1/1

Web	Received	Source	Title	Question
[RGQ22-1/2/26]	2013-02-12	ITU-T JCA-AHF	Liaison Statement to ITU-D Study Groups 1 and 2 from JCA-AHF about a reply liaison statement to the Facilitator of Correspondence Group on "Handbook on Emergency Telecommunications" third draft edition (8 January 2013) - request for comments	Q22-1/2, Q20-1/1
[RGQ22-1/2/25]	2013-02-12	ITU-T JCA-AHF	Liaison Statement to ITU-D Study Groups 1 and 2 from JCA-AHF about a reply liaison statement to ITU-T Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR)	Q22-1/2, Q20-1/1
[RGQ22-1/2/24]	2013-02-22	ITU-T Focus Group on AVA	Liaison Statement to ITU-D Study Group 2 Q22-1/2 from FG-AVA regarding LS from FGAVA to ITU-D on draft third edition of "Handbook on Emergency Telecommunications"	Q22-1/2, Q20-1/1
[RGQ22-1/2/21]	2012-10-05	ITU-T Study Group 15, Rapporteur Q17/15	Liaison Statement from ITU-T SG 15 to ITU-D SG 2 Question 22-1/2 for reporting the progress on the draft new Recommendation ITU-T L.dmosp	Q22-1/2
[RGQ22-1/2/11]	2011-11-28	ITU-R Study Groups - Working Party 7C	Liaison Statement to ITU-D Study Group 2 and the World Meteorological Organization Additional Information in Support of Question 22-1/2	Q22-1/2

Q24/2

Web	Received	Source	Title	Question
[2/76]	2011-06-06	Telecommunication Standardization Sector, Rapporteurs for Questions 22/5 and 23/5	Liaison Statement: Questionnaire on ICTs and Climate Change	Q24/2
[RGQ24/2/30]	2013-02-15	ITU-T Study Group 5	Liaison statement to ITU-D SG2 Question 24/2 from ITU-T SG5 on Information concerning progress of work in setting up the requirements for the ICT and Adaptation to Climate Change Portal	Q24/2
[RGQ24/2/24]	2012-10-22	ITU-T Study Group 5 - Working Party 3/5	Liaison statement to ITU-D SG2 Question 24/2 from ITU-T Study Group 5 on Handbooks for climate change mitigation	Q24/2

			techniques	
[RGQ24/2/11]	2011-09-29	ITU-T Study Group 5	Liaison Statement on ICT and Climate Change Mitigation	Q24/
[RGQ24/2/4]	2011-03-14	ITU-T Study Group 5 - Working Party 3	Telecommunication Standardization Sector, ITU-T SG5 WP3	Q24/2
[RGQ24/2/2]	2010-11-03	ITU-R Study Group 7	Liaison Statement to ITU-D Study Group 2 concerning Question 24/2 ICT and Climate Change	Q24/2

Q25/2

Web	Received	Source	Title	Question
[2/309]	2013-07-22	ITU-T Study Group 15	Liaison statement from ITU-T SG15 to ITU-D SG2 Q25/2 on Content for the Report on Access technology for broadband telecommunications including IMT, for developing countries (reply to ITU D SG2 LS13 / RGQ25/2/55 E)	Q25/2
[2/308]	2013-07-22	ITU-T Study Group 15	Liaison statement from ITU-T SG15 to ITU-D Q25/2 on New versions of the Access Network Transport (ANT) Standardization Overview and Work Plan	Q25/2
[2/307]	2013-07-22	ITU-R Study Groups - Working Party 5D	Liaison Statement from ITU-R WP5D to ITU-D Study Group 2 Q25/2 about Work Progress on development of Handbook on "Global Trends in IMT"	Q25/2
[2/305] (Rev.1)	2013-07-22	ITU-R Study Groups - Working Party 5D	Liaison Statement from ITU-R WP5D to ITU-D Study Group 2 Q25/2 on the "Report on Access technology for broadband telecommunications including IMT, for developing countries"	Q25/2
[2/246]	2013-05-02	ITU-R Study Groups -Working Party 4C	Liaison Statement from ITU-R WP4C to ITU-D SG Question 25/2 about Report on Access technology for broadband telecommunications including IMT, for developing countries	Q25/2
[2/161]	2012-04-23	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-D SG 2, ITU-T SG 13 Question 15/13, and ITU-R WP 4B and WP 5C	Q25/2

Web	Received	Source	Title	Question
[2/153]	2012-06-04	ITU-R Study Groups - Working Party 4B	Liaison statement to ITU-D Study Group 2 Question 25/2 and ITU-R Working Party 4B (Copy to ITU-T Study Group 13): Development of Handbook on "Global Trends in IMT" and Report on "Broadband Access Technology"	Q25/2
[2/150]	2012-05-30	ITU-R Study Groups - Working Party 5C	Liaison Statement to ITU-D Study Group 2 Question 25/2	Q25/2
[2/82]	2011-07-28	ITU-R Study Groups - Working Party 5A	Liaison Statement to ITU-D Study Group 2 (Copy for information to Working Party 5D)	Q25/2
[2/81]	2011-07-22	ITU-R Study Groups - Working Party 5C	Reply Liaison Statement to ITU-D Study Group 2 (copy to ITU-R WPs 4B and 4C)	Q25/2
[2/16]	2010-08-30	ITU-R Study Groups - Working Party 4C	Liaison Statement to ITU-D SG2 Implementation aspects of IMT-2000 and information-sharing on systems beyond IMT-2000 for developing countries	Q25/2
[RGQ25/2/42]	2013-02-18	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-D Study Group 2 Q25/2 from ITU-R Working Party 5D on Work Progress on Development of Handbook on "Global Trends in IMT"	Q25/2
[RGQ25/2/36]	2012-11-21	ITU-R Study Groups - Working Party 5C	Liaison Statement from ITU-R WP-5C to ITU-D SG2 Question 25/2, copied to ITU-T SG13 Question 15/13 and ITU-R WP-4B&5D regarding ITU-D Report on Access technology for broadband telecommunications, including IMT, for developing countries	Q25/2
[RGQ25/2/35]	11-21	ITU-R Study Groups ? Working Party 5C	Liaison Statement from ITU-R WP-5C to WP-5D, copied to ITU-D SG2 Question 25/2, ITU-T SG13 Question 15/13 and ITU-R WP-4B regarding Handbook on "Global Trends in IMT"	Q25/2
[RGQ25/2/34]	2012-10-16	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-R Working Parties 4B and 5C, ITU-T SG 13 Question 15/13 and ITU-D SG2 Questions 10-3/2 and 25/2, on the Appointment of Sub-Working Group Handbook Chairman and Work Progress	Q25/2, Q10-3/2

Web	Received	Source	Title	Question
[RGQ25/2/33]	2012-10-05	ITU-T Study Group 15	Liaison Statement from ITU-T SG 15 to ITU-D SG2 Question 25/2 on New Versions of the Access Network Transport (ANT) Standardization Plan and Work Plan	Q25/2
[RGQ25/2/4]	2010-11-17	ITU-R Study Groups - Working Party 5A	Liaison Statement to ITU-D SG2 Question 25 (copy to ITU-R WP 5D) on the land mobile handbook volume 5 on deployment of BWA systems	Q25/2
[RGQ25/2/3]	2010-11-10	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-D SG 2 AND ITU-T Q.13/13 Rapporteur Group (Copy to WP 5A and WP 4C) progress update - Development of Handbook on Global Trends in IMT	Q25/2
[RGQ25/2/2]	2010-10-29	ITU-R Study Groups - Working Party 5D	Liaison Statement to ITU-D Study Group 2 (copy to WP 5A) Revision to Supplement 1 Handbook - Deployment of IMT-2000 Systems - Migration to IMT-Systems	Q25/2

Q26/2

Web	Received	Source	Title	Question
[2/151]	2012-06-04	ITU-R Study Groups - Working Party 4B	Liaison statement to ITU-D Study Group 2 Q26/2: Migration from Existing Networks to Next-Generation Networks for Developing Countries: Technical, Regulatory and Policy Aspects	Q26/2
[2/10]	2010-08-25	ITU-R Study Groups - Working Party 5A	Liaison Statement to External Organizations on the Revision Work on Report ITU-R F.2086 (Copy To ITU-T SG 2 for Information)	Q26/2
[2/6]	2010-08-24	ITU-R Study Group - Working Party 5D	Liaison Statement to ITU-T SG 13 (Copy to ITU-D SG2 and ITU-R SG5)	Q26/2
[RGQ26/2/26]	2013-03-18	ITU-T Study Group 13	Liaison Statement to ITU-D Study Group 2, Question 26/2 from ITU-T Study Group 13 as a Response to the liaison statement from ITU-D Question 26/2	Q26/2
[RGQ26/2/24]	2013-03-15	ITU-T Study Group 11	Liaison Statement to ITU-D Study Group 2, Question 26/2 from ITU-T Study Group 11 on Guidelines for implementations of signalling requirements and protocols	Q26/2

Web	Received	Source	Title	Question
[RGQ26/2/23]	2013-03-15	ITU-T Study Group 11	Liaison Statement to ITU-D Study Group 2, Question 26/2 from ITU-T Study Group 11 on Migration from existing network to NGN for developing countries; Technical, Regulatory and Policy aspects	Q26/2
[RGQ26/2/11]	2012-01-04	ITU-T Study Group 11	Reply from SG11 to COM 13-LS 79 on defining a physical architecture of NGN specifying various network elements	Q26/2
[RGQ26/2/10]	2011-11-14	ITU-R Study Groups - Working Party 5C	Reply Liaison Statement to ITU-D Study Group 2, Question 26/2 Migration from existing networks to next-generation networks for developing countries: technical, regulatory and policy aspects	Q26/
[RGQ26/2/7]	2011-09-26	ITU-R Study Groups - Working Party 4B	Liaison Statement to ITU-D Study Group 2, Question 26/2	Q26/2

Resolution 9

Web	Received	Source	Title	Question
[2/306]	2013-07-22	ITU-R Study Groups - Working Party 5D	Liaison Statement from ITU-R WP5D to ITU-D Study Group 2 on the use of spectrum and radio technology low cost sustainable telecommunication infrastructure for rural communications in developing countries	RES.9, Q10-3/2, Q09-3/2
[2/60]	2011-06-02	Radiocommunication Bureau	Liaison Statement to ITU-D Study Group 2: Nomination of Co-Chairmen of the Joint Group on ITU-D Resolution 9 (Rev. Hyderabad, 2010)	RES.9
[JGRES09/22]	2013-06-05	ITU-R Study Groups - Working Party 5A	Liaison Statement from ITU-R WP5A to ITU-D SG 2 on the Use of spectrum and radio technology low cost sustainable telecommunication infrastructure for rural communications in developing countries	RES.9, Q10-3/2