

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

This study should include an economic and technical analysis of the factors affecting the deployment of various broadband wired and wireless access technologies. This study should also include an assessment of the benefits of using broadband technologies, taking into account the gender perspective.

1 Statement of the situation

During the study period 1998-2002, Study Group 2 Question 12-1/2 analysed broadband telecommunications over traditional copper wire, or digital subscriber line (DSL), principally because of its ability to leverage existing investments made by telecommunication administrations. Given the rapid advancement of telecommunication technologies since 1998, other broadband access technologies, specifically wireless, have become available that provide similar or improved performance. Broadband technologies permit the deployment of e-applications, such as e-health, distance learning, e-government, tele-working, public safety, national security, internet access, intranet access, etc.

ITU-D can play a role in assisting developing Member States and their Sector Members in understanding the suitability of different technologies available for broadband access terrestrial telecommunications. ITU-D can also assist developing Member States and their Sector Members in analysing the economic issues involved in deploying broadband access technologies, including the integration of these access network solutions with existing or future network infrastructure.

2 Question 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.

3 Expected output

Taking into account the expected results from ITU-T and ITU-R, there will be a set of best-practices guidelines for implementing wired and wireless broadband technologies in developing countries. The guidelines will need to take into consideration the economic and technical factors that are affecting broadband deployment, assess the requirements of developing countries for broadband implementation and focus more on the experiences of developing countries rather than developed countries as was the case from the last study period of Question 20-1/2.

- a) 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.
- b) 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.

4 Timing

The work of the revised Question will commence after WTDC-06 and continue until the next ITU-D study period.

5 Proposers

Developed and developing countries.

6 Sources of input

- 1) Collection of the requirements of developing Member States through a questionnaire.
- 2) An assessment of developing countries' experience with broadband access technologies, using the same questionnaire referred to above.
- 3) An update of ITU-T and ITU-R outputs relevant to broadband access technologies.
- 4) Contributions of concerned industry on the development of broadband access technologies for both wired and wireless.
- 5) Contributions on economic factors relevant to the deployment of wired and wireless broadband technologies, this might include information on tariffs, equipment costs, interconnection charges, licensing fees for wireless applications, etc.

7 Target audience

Target audience	Developed countries	Developing countries	Least developed countries (LDCs)
Telecom policy-makers	No	Yes	Yes
Telecom regulators	No	Yes	Yes
Service providers	No	Yes	Yes
Manufacturers	Yes	Yes	Yes

a) Target audience

Users of the output will be manufacturers, operators, regulatory agencies and service providers in developing countries and LDCs.

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 rapporteur group dealing with this Question should coordinate closely with:

- 9.1 ITU-T Study Groups 13, 15, 16 and 19.
- 9.2 ITU-R Study Groups 4, 6, 8 and 9.
- 9.3 Other relevant Questions in ITU-D study groups.

In addition, the rapporteur group should take into consideration any relevant progress on agenda item 19 of the World Radiocommunication Conference (WRC-07) relating to "global broadband satellite systems".

10 Other relevant information

As may become apparent within the life of this Question.
