Bruce Gracie (Industry Canada),
Chairman, Radiocommunication
Assembly

*Radiocommunication assem-
blies are normally convened
every three or four years,
associated with a world radio-
communication conference.
They are responsible for the
structure, programme and
approval of radiocommunica-
tion studies at ITU. Their tasks
include approving and issu-
ing Recommendations devel-
oped by ITU–R study groups,
for which they set the work
programme.*

*Over 600 participants attend-
ed the Assembly that took
place in Geneva from 15 to 19
November 2007. Its results will
be taken into account at the
World Radiocommunication
Conference (WRC-07), in
Geneva from 22 October to
16 November 2007.*

Assembly approves new technology

for mobile communications and sets direction of radiocommunication studies

New developments in 3G standards

On 18 October 2007, the ITU Radio-communication Assembly (RA-07) took a decision of global importance by adding a WiMAX-derived technology to the IMT-2000 set of standards. This paves the way for the deployment of voice, data, and multimedia services to both stationary and mobile devices, at higher speeds and across wider areas. Significantly, it opens the door to mobile Internet access, catering to demand in both urban and rural markets. This in turn is expected to bring wireless networks to places that were previously impossible or too costly for operators to reach.

International Mobile Telecommunications-2000 (or IMT-2000) is the global standard developed at ITU for third-generation (3G) mobile communications. In 2000, the Radiocommunication Assembly approved five radio access interfaces for IMT-2000. These are specified in Recommendation M.1457-6 of the ITU Radiocommunication Sector (ITU–R).

Responding to the demands of the ITU membership to meet the ever-growing needs of the wireless marketplace, the Assembly formally recognized a WiMAX-derived technology as the sixth terrestrial IMT-2000 radio interface by incorporating it into the seventh revision of Recommendation ITU–R M.1457 under the name "IMT-2000 OFDMA TDD WMAN" (or orthogonal frequency division multiple access — time division duplex — wireless metropolitan area network). This new interface is based on the standard IEEE 802.16 developed by the Institute of Electrical and Electronics Engineers. It is the first addition to IMT-2000 since the original technologies were adopted as part of the 3G radio standards being used globally today.

A milestone for WiMAX technology

The Assembly's approval of the revised Recommendation ITU–R M.1457, along with the endorsement of other IMT-related Recommendations and Resolutions, represented the culmination of many months of discussion among administrations, industry and ITU experts.

"It gives me great satisfaction to observe that the ITU Radiocommunication Sector continues to be responsive to the most pressing needs of the wireless industry," commented Radiocommunication Bureau Director Valery Timofeev.

Roger Marks, Chairman of the IEEE 802.16 Working Group on Broadband Wireless Access, said: "I am immensely gratified that the international community, through ITU, has recognized the significance of the IEEE 802.16 WirelessMAN standard."

Nokia

Nokia

For Ron Resnick, President of the WiMAX Forum, it was a very special milestone. "WiMAX technology currently has the potential to reach 2.7 billion people. And today's announcement expands the reach to a significantly larger global population," Mr Resnick said. He added that the decision would allow greater economies of scale, reducing the cost of delivering broadband services via WiMAX, including voice over Internet protocol (VoIP). "The bottom line is that operators across the globe now have the freedom to select the right technology to best meet their business and regional needs," he commented.

IMT-Advanced officially named

The Assembly agreed on "IMT-Advanced" as the name of the future generation of radio technologies beyond IMT-2000. Services provided through IMT-Advanced technologies (also dubbed 4G) could be commercially available by 2011, subject to market demand.

It was decided that "IMT-2000" will be retained as the term for describing 3G services and networks. (The term "IMT" covers both IMT-2000 and IMT-Advanced.) The Assembly also established the guiding principles that underpin the process for specifying radio interfaces for IMT-Advanced.

Future direction of radiocommunications

As Mr Timofeev noted in his opening remarks, RA-07 represented a key transition point in ITU–R from one study period to the next. It provided an opportunity to review what had been achieved, to determine what needs to be done, and to define the structure in which the work will be undertaken.

Accordingly, one of the principal achievements of the Assembly was the restructuring of the ITU–R study groups. Composed of the old Study Groups 8 and 9, a new Study Group 5 on terrestrial services focuses on systems and networks for fixed, mobile, radiodetermination, amateur and amateur-satellite services. A transformed Study Group 4 combines systems and networks for the fixed-satellite service, mobile-satellite service, broadcasting-satellite service and radiodetermination-satellite service.

By configuring the new study groups in this way, two clear objectives were achieved: to establish a structure that keeps pace with technological developments, and to facilitate the participation of the membership in meetings and related activities.

At the helm of the Radiocommunication Assembly 2007

Chairman
▶ *Bruce Gracie (Canada)*

Vice-chairmen
▶ *Richard Beaird (United States),*
▶ *E. Sestacov (Moldova),*
▶ *Masao Matsumoto (Japan),*
▶ *Nabil Kisrawi (Syrian Arab Republic),*
▶ *Reiner Liebler (Germany) and*
▶ *Idriss Jazaïry (Algeria)*

Left to right:
Malcolm Johnson,
Telecommunication
Standardization
Bureau Director;
Houlin Zhao, ITU Deputy
Secretary-General;
Dr Hamadoun I. Touré,
ITU Secretary-General;
Kevin Hughes, Head,
Radiocommunication
Study Group Department;
Bruce Gracie, Chairman of the
Radiocommunication Assembly;
and Valery Timofeev,
Radiocommunication
Bureau Director

ITU/J.M. Ferré

New ITU–R study group structure for 2008–2011
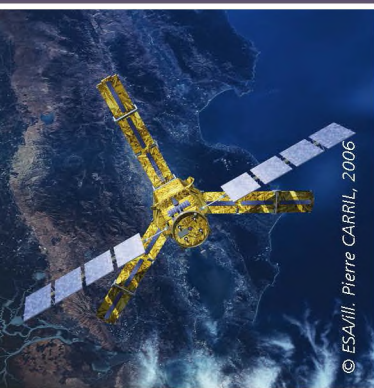
Study Group 1
Spectrum Management

Study Group 3
Radiowave Propagation

Study Group 4
Satellite Services

Study Group 5
Terrestrial Services

Study Group 6
Broadcasting Service

Study Group 7
Science Services

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A second major achievement was the appointment of a team of chairmen and vice-chairmen for the six ITU–R study groups dedicated to achieving optimum results quickly and efficiently in a rapidly changing radiocommunication environment. Chairmen and vice-chairmen were also appointed for the Coordination Committee for Vocabulary (CCV), the Radiocommunication Advisory Group (RAG), the Conference Preparatory Committee (CPM) and the Special Committee on regulatory and procedural matters. Given the need to attract experts from a wide cross-section of the ITU membership, criteria such as competence, experience and equitable geographic distribution were among those applied in the selection process.

The Assembly also refined many of the basic Resolutions upon which the working methods of ITU–R are based. Another notable achievement was the approval of two new ITU–R Resolutions on the use of radiocommunications in disasters and emergencies, including prediction, detection, mitigation and relief. As noted by ITU Secretary-General Hamadoun Touré in his opening remarks to WRC-07, the approval of these two Resolutions underlines the active and effective role ITU can play in this key activity.

In summary, the Assembly was highly successful, and places ITU–R on a very sound footing for the future.

RA WRC07

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