Regional Radiocommunication Conference 2006

# Landmark digitization framework agreed

On 16 June 2006, an agreement was signed in Geneva that will form the basis of digital television and radio broadcasting in more than 100 countries for years to come. The *Final Acts* of ITU's 2006 Regional Radiocommunication Conference (RRC-06) is an international treaty covering the frequency bands 174–230 MHz and 470–862 MHz. It sets out a plan for ending almost all analogue broadcasts by 17 June 2015 in Africa, Europe, the Commonwealth of Independent States, parts of Asia, and the Islamic Republic of Iran. A future framework for digital broadcasting is assured.

## Digital dividend

Digital broadcasting offers more channels and increasing choice for consumers, as well as the possibility of mobile reception of video, internet and multimedia services. It is about six times more efficient than analogue broadcasting, allowing more data to be carried across less bandwidth. This not only means better quality and more applications in countries where services have started; it also promises a "digital dividend" that can help in connecting remote communities and in closing the digital divide.

The dividend comes from the increased efficiency with which the radio spectrum is used, opening the way for innovative wireless technologies and potential new services. In this way, the plans produced by RRC-06 are a powerful and practical response in ITU's Radiocommunication Sector (ITU–R) to the goals of the World Summit on the Information Society (WSIS). RRC-06 was the first treaty-making conference to be held by ITU since the conclusion of WSIS in November 2005.

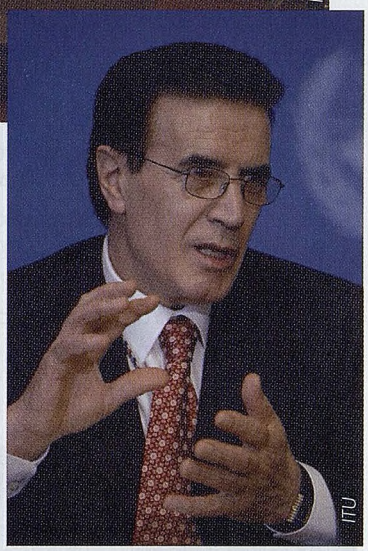
## Happy outcome to a complex task

More than 1000 delegates attended RRC-06, which began on 15 May. Under the chairmanship of Kavouss Arasteh of the Islamic Republic of Iran, the conference held

*Digital technologies can transform broadcasting and offer many new applications*

Philips

*More than 1000 delegates took part in the conference*



*RRC-06 was chaired by Kavouss Arasteh (Islamic Republic of Iran)*

some 850 meetings and satisfied 70 493 requests (known as "requirements") for entry in the plan for digital broadcasting. It was also the first time that ITU had undertaken the planning of analogue and digital services, in single and multiple frequencies, all at the same time.

Finding solutions was an enormously complicated task, but nevertheless the conference achieved all the objectives set out by the ITU membership. Almost every requirement was met, while fully complying with the Radio Regulations and a fundamental principle of ITU's Constitution that the Union should "maintain and extend international cooperation... for the improvement and rational use of telecommunications of all kinds."

The reasons for this success lay in the careful preparation begun in 2002 and continued at the first session of the Regional Radiocommunication Conference in 2004. Also, on the sidelines of RRC-06, many discussions and negotiations took place among small groups of neighbouring countries, leading to agreements that were then approved by the plenary session of the conference. Overall, this process was aided by a strong spirit of consensus and cooperation among delegates. During the entire conference, it had never been necessary to take a vote on any contentious point.

## A triumph for ICT

A further factor behind the success was ITU's own use of information and communication technologies (ICT). To handle the thousands of items of data and sort out bandwidth allocations and assignments, special computer software had been designed by ITU and the European Broadcasting Union (EBU). And as well as using ITU computers to run these programs, a crucial back-up system was provided by a computer network operated by the European Organization for Nuclear Research (CERN). Meticulous calculations made by these means were the foundation for a plan that everyone could agree to.

This outcome could never have been achieved in 1961, when pencil-and-paper calculations were the

main method for working out the Stockholm Agreement, which governed broadcasting in the European region for 45 years until one minute past midnight on 17 June 2006. In a similar way, "we expect the new agreement to last for decades to come," the Director of ITU's Radiocommunication Bureau Valery Timofeev told journalists at the conclusion of RRC-06. In order to do so, the plan has been carefully crafted so that it can easily accommodate changing technologies.

## Flexibility for the future

A major challenge faced by the conference was to find ways for digital and analogue broadcasting to coexist on the radio-frequency spectrum during the transition period without causing interference. The *Final Acts of RRC-06* include an Analogue Plan, covering this transitional period up to 2015, as well as a Digital Plan for the new services. The latter will need to be adapted as convergence between broadcasting and telecommunications continues, and as technology develops in ways that we can barely imagine today.

However, the Plan contains mechanisms that allow nations to easily submit modifications to spectrum use. According to some delegates, it is a "forward-looking, long-life and flexible system" that will ensure a smooth transition to digitization and continuing efficiency in how the technology is used.

## Dawn of a new epoch

The *Final Acts* of RRC-06 do not cover East Asia or the Americas, which have other arrangements for allocating radio spectrum. Also, both the United States and Japan have each established standards for this field that are different from the European one. However, even though a nation in Latin America, say, cannot be formally associated with the 2006 treaty, it is free to use the "Geneva Agreement" as a model for advancing its services. In this way, the agreement might lead to wider adoption of compatible technologies. This would permit even larger economies of scale by manufacturers, thus lowering costs and helping to close the digital divide.

Meanwhile, the new agreement sets the stage for huge advances in broadcasting and telecommunications, with many new applications on the horizon. "More than two-thirds of the world has agreed to one digital technology, and has agreed to go forward within the same timeframe," ITU Secretary-General Yoshio Utsumi said at a press conference at the end of RRC-06. "It was an epoch-making decision," he said, and "it will change the whole picture of ICT." ■


*Digital radios can now also record and store programmes*

## A mammoth task and a huge achievement

The 2006 Regional Radiocommunication Conference:

- Held some 850 meetings during its five-week duration
- Handled 70 493 requests for radio spectrum usage (compared with about 5000 in forming the 1961 agreement)
- Took just one weekend to draft the highly complex analogue and digital plans, using sophisticated software and computer networks (compared with 20 days for the simpler 1961 plan)
- In the VHF band, 98 per cent of requests for spectrum were accommodated, and 93 per cent in the UHF band (a much higher level than in 1961)
- The Digital Plan is flexible enough to deal with decades of changing technology and thousands more requests for spectrum usage
- The *Final Acts* consists of 1810 pages in its "simplified" version (and is at least double this size when including the complete database)
- The treaty was signed by some 120 countries, binding them to switch to digital by 17 June 2015*.

*except for some VHF services in Africa, which will switch to digital by 2020.