



International Telecommunication Union

Space-related Activities

28th United Nations Inter-Agency Meeting on Outer Space Activities
Geneva, Switzerland
16-18 January 2008

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The ITU in brief

- UN specialized agency, concerned with the development of telecommunication networks and services worldwide
- 142 years old (Founded on 17 May 1865)
- 191 Member States, 700 Sector Members
- 750 staff / 71 nationalities
- Website: <http://www.itu.int>

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ITU is the leading United Nations agency for information and communication technology (ICT)

- bridging the digital divide;
- stewardship of the radio spectrum;
- adopting international telecommunication standards;
- building confidence and security in the use of information and communication technologies (ICTs);
- emergency communications.

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ITU and Space Radiocommunications

"To ensure rational, equitable, efficient and economical use of the radio frequency spectrum by all radiocommunication services -- including those using the geostationary satellite orbit or other satellite orbits -- and to carry out studies on radiocommunication matters"

Constitution of the ITU, Article 12

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ITU Radiocommunication Sector

- Plays a vital role in global management of international radio frequency-spectrum & satellite orbits, an important components of any space-related activities
- Ensures development of legally binding Worldwide Agreements and Standards, for more than 100 years:

- The Radio Regulations
- The ITU-R Recommendations Reports and Handbooks



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World Radiocommunication Conference 2007



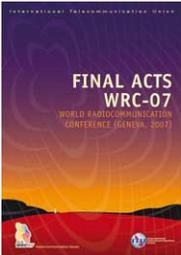
'bringing all radio services together'

**(Geneva, 22 October –
16 November 2007)**

At the dawn of a new radio century

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The Radio Regulations is updated every 3/4 years at WRCs (... , 2003, 2007, 2011, 2015...) reflecting latest technological achievements

Space-related activities (RA/WRC-07 decisions)

- Extend frequency allocations for Earth Exploration by satellite
 - facilitating research and exploration of Earth resources and environmental elements,
 - for key services to monitor the planet and predict and monitor disasters, meteorology and climate change.
- Call for urgent studies on Spectrum Management and ICT aspects for early warning, disaster mitigation and relief operations – ITU Database of available frequencies

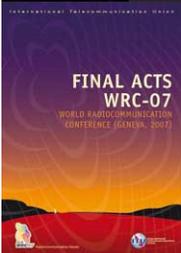


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Space-related activities (RA/WRC-07 decisions) (2)

- Reflect the latest technological achievements in the worldwide allocated spectrum/orbit resources for satellite applications such as communications, TV, Internet, etc.
- Set future course for wireless with spectrum identification for IMT — concept embracing advanced broadband mobile wireless technology for use on a global basis
- Other important decisions related, for example, to:
 - use and further development of satellite systems using highly inclined orbits,
 - To ensure interference compatibility between different space & terrestrial services sharing the same bands



Space-related activities (studies for **WRC-11**)

■ **New frequency allocations for Science Services:**

- for high-resolution sensors of Meteorological satellites, essential for whether forecast, climate changes, etc.
- for the Space research, to support the increased data requirements of planned manned and scientific missions (e.g. Moon exploration, etc.)
- For the needs of passive systems for lightning detection in Meteorological Aids
- for the oceanographic radar applications
- for the future development of passive services between 275 and 3000 GHz

Space-related activities (studies for WRC-11) (2)

■ Other space services and other activities:

- Ensure long-term spectrum availability for the new requirements of the Aeronautical Mobile by satellite
- Finalized the spectrum usage around 22 GHz for the High-Definition TV Broadcasting by satellite
- Identify global frequency allocation around 2.5 GHz for the radio-determination by satellite
- Additional allocations for advanced broadband mobile technology by satellite (the satellite component of IMT)
- Enhancement of the International Regulatory Framework and studies of new software-oriented tools for spectrum management (Cognitive Radio)
- Electronic News Gathering, Short Range Devices, etc.

ITU Radiocommunication Sector's Activities

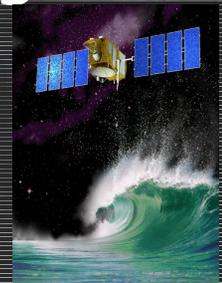
Other Space-related activities (regular basis)

- Development of Recommendations and Reports on
 - ✓ describing radiocommunication features of space research systems, and
 - ✓ providing guidelines on use of such systems in deep space research operations and on planets exploration
- Continue development of Handbook for the Spectrum monitoring of space emissions
- Continue frequency coordination activity for Satellite systems providing positioning and location capabilities
- Processing of satellite filings
- Provide assistance and support to Administrations and BR customers

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ITU and Emergency Radiocommunications

- Disaster prediction, Detection, Alerting and Disaster relief.
- ITU-R studies include:
 - ▶ identification of suitable frequency bands to be used on a global/regional basis for public protection and disaster relief (Res.647 (WRC-07));
 - ▶ facilitating cross-border circulation of equipment intended for use in emergency and disaster relief situations (Tampere Convention)



ITU Bridging the Digital Divide

- ICTs are omnipresent tools (e-Commerce, e-government, e-learning, and e-Health, e-community development...)
- Global issues that will shape our common future in the 21st century.
- Success in finding viable and sustainable solutions to bridging the digital divide will determine to what extent we are able to fulfill the World Summit on the Information Society (WSIS)

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A satellite with two large solar panel arrays is shown in space, orbiting the Earth. The Earth's blue and white clouds are visible in the background, along with a portion of the dark, cratered surface of the Moon in the upper right corner.

■ ITU's ambition:
to 'Connect the World'

To achieve that goal, we need to work in partnership with other UN organizations, at first place, governments, private sector and civil society.

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A satellite with a large parabolic dish antenna and a grid-like structure is shown in space. The Earth is visible in the background, along with the Moon. The text "International Telecommunication Union" is overlaid in white.

International Telecommunication Union

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