

**FINAL PROTOCOL AND PARTIAL REVISION OF THE 2001 RADIO  
REGULATIONS, AS INCORPORATED IN THE INTERNATIONAL  
TELECOMMUNICATION UNION FINAL ACTS OF THE WORLD  
RADIOCOMMUNICATION CONFERENCE (WRC-03), DONE AT  
GENEVA ON 4 JULY 2003  
[2005] ATNIF 4**

**Documents tabled on 11 May 2005:**

**National Interest Analysis [2005] ATNIA 7**

**with attachment on consultation**

**Text of the Proposed Treaty Action**

**Background information:**

**Current status list**

# **NATIONAL INTEREST ANALYSIS: CATEGORY 2 TREATY**

## **SUMMARY PAGE**

### **Final Protocol and Partial Revision of the 2001 Radio Regulations, as incorporated in the International Telecommunication Union Final Acts of the World Radiocommunication Conference (WRC-03), done at Geneva on 4 July 2003 [2005] ATNIF 4**

#### **Nature and Timing of Proposed Treaty Action**

1. It is proposed that Australia consent to be bound by the Final Protocol and Partial Revision of the Radio Regulations, as incorporated in the Final Acts of the World Radiocommunication Conference (WRC-03) of the International Telecommunication Union (ITU), done at Geneva on 4 July 2003. Australia signed the Final Acts on the same date and a reservation was lodged to indicate that Australia does not recognise the claims by equatorial countries to preferential rights to the geostationary satellite orbit.

2. Under Article 54 of the ITU Constitution, a revision to the Radio Regulations applies provisionally to all Members who did not oppose it at the time of signature. The bulk of WRC-03 revisions applied provisionally from 1 January 2005, with the remaining provisions to apply from the special dates of application indicated in Article 59 of the revised Radio Regulations.

3. As Australia has signed the WRC-03 Final Acts, it is subject to the provisional application of the revised Radio Regulations, which continue until Australia notifies the Secretary-General of the ITU of its decision concerning its consent to be bound by the WRC-03 revisions. In the absence of such notification, a Member who has signed the Final Acts shall be deemed to have consented to be bound thirty-six months from the date of commencement of provisional application of the revision.

#### **Overview and National Interest Summary**

4. It is proposed that Australia consent to be bound by the WRC-03 revisions of the ITU Radio Regulations and that the reservation lodged by Australia at the time of signature be maintained.

5. The proposed treaty action would place Australia in line with the rest of the world in its regulation of the radio-frequency spectrum. Australia would retain its sovereign right to control transmissions within and into its territory and to protect Australian users from interference from foreign systems. This makes possible the introduction of new communication technologies and greater access to wireless networking and broad-band data services. It would also continue Australia's good standing in the ITU and enable Australia to maintain its position that the geographical situation of particular countries does not enable them to claim any preferential rights to the geostationary satellite orbit.

## **Reasons for Australia to Take the Proposed Treaty Action**

6. The ITU is a specialised United Nations agency with 189 Members. It is concerned with international cooperation in the use of telecommunications and the radio-frequency spectrum. To this end, it establishes treaties and recommends world standards for telecommunication and radiocommunication services, including satellite services. Australia has been a Member of the ITU and its predecessors since the 19th century.

7. The basic instruments of the ITU are the Constitution and the Convention, which set out the rights and obligations of the Members of the ITU. They are complemented by the International Telecommunication Regulations and the Radio Regulations, which together constitute the Administrative Regulations of the ITU. The provisions of the Administrative Regulations have treaty status and are binding on Members.

8. The purpose of the Radio Regulations is to ensure the rational, efficient and equitable use of the radio-frequency spectrum. In this respect, the Radio Regulations contain allocations to over 40 radiocommunication services and provide technical, operational and regulatory conditions for the use of the radio-frequency spectrum and satellite orbits.

9. To ensure that the Radio Regulations facilitate the introduction of new technical advances, they are periodically reviewed (and may be revised) by a World Radiocommunication Conference. WRC-03 (held in Geneva from 9 June to 4 July 2003) was such a conference and resulted in the revision under consideration.

### *Benefits to Australia*

10. The WRC-03 revisions ensure that the Radio Regulations are up to speed with developments in technology such as new satellite delivered broadband services, protection of rural telephony services from potential satellite interference, satellite navigation, new aviation systems and protection for meteorology and radioastronomy observations.

11. Additional benefits of the WRC-03 revision to Australia include improved access to global positioning systems planned or operated by the USA, Europe and Russia; agreement on spectrum sharing arrangements between aviation navigation radars and other radars which are important for the future capability of the Department of Defence; protection of naval radars while allowing satellite operators to use small antennas in most situations; regulations to improve the safety of aviation navigation and airborne systems around airports; allocation of satellite spectrum for airline passengers and crew to connect to the Internet in flight; and refinements to international shortwave broadcasting arrangements which will benefit shortwave broadcasters in Australia.

### *Effects on Australia's standing in the ITU*

12. If Australia takes no action, the WRC-03 revision will automatically enter into force at the end of the 36-month provisional application period. However, inaction by Australia may have a negative effect on Australia's standing within the ITU and on Australia's negotiating position at future reviews of the Radio Regulations.

13. In contrast, notification to the ITU Secretary-General of Australia's consent to be bound by the WRC-03 revision would maintain Australia's good standing in the ITU and would place Australia's administration of the radio-frequency spectrum in line with the rest of the world. Australia's good standing was very evident at this conference and crucial to achieving tolerable results on some critical issues, especially for the Department of Defence.

## Obligations

14. Australia as a member of the ITU is bound by the Constitution, the Convention and the Administrative Regulations (which include the Radio Regulations). The WRC-03 revisions do not substantively alter Australia's basic obligations relating to the use of radio-frequency spectrum, whereby members are required to ensure that the radio spectrum is used internationally in a manner that will prevent harmful interference to services, and which will allow distress calls and messages to be freely conveyed (Articles 45 and 46, ITU Constitution). The WRC-03 revisions only affect the Radio Regulations.

15. The WRC-03 revisions made a number of technical changes to the Radio Regulations to accommodate services requiring the use of the radio-frequency spectrum including:

- a. *Promotion of HF (High Frequency) digital radio broadcasting (Resolutions 517 and 543; Provision 5.134; Appendix 11).*

Administrations are to encourage the inclusion in all new HF broadcasting transmitters put into service after 1<sup>st</sup> January 2004 of the capability to offer digital transmission. Provision 5.134 allocates specific bands between 5 900 to 19 020 kHz available to the broadcasting service from 1 April 2007 and encourages administrations to use those bands for digital transmissions. Australia is currently trialling a number of digital technologies and the bands allocated will assist in facilitating the introduction of HF digital radio broadcasting.

- b. *Introduction of new aviation navigation augmenting digital communications systems (Resolutions 114, 413, 414 and 415; Provisions 5.197A and 5.444A).*

The Australian Radiofrequency Spectrum Plan 2005 has been updated to reflect the following changes arising from WRC-03. Provision 5.444A provides an additional allocation on a primary basis to the fixed satellite service uplink transmissions in the band 5 091-5 150 MHz, subject to conditions. Provision 5.197A allows the use of the band 108-117.975 MHz for aeronautical mobile (R) service on a primary basis for navigational and surveillance functions. Resolution 114 establishes compatibility studies to be undertaken between new systems for aeronautical radionavigation systems and Fixed-satellite services in the band 5 091-5 150 MHz. Resolutions 413, 414 and 415 establish further studies to accommodate additional aeronautical communications, air traffic management and ground surveillance services in parts of the band between 108 MHz and 6 GHz. This matter will be considered at WRC-07, Australia is actively participating in relevant ITU-R Study Group work on this matter.

- c. *Operating conditions for the radio navigation-satellite service (RNSS), which will be used to support global positioning systems (Resolutions 608, 609, 610 and 741; Articles 5, 9 and 21; Provisions 5.331, 5.328A, 5.328B, 5.329 and 5.443B; Appendix 4; Recommendation 608).*

An additional allocation has been made in the band 1 215-1 300 MHz for RNSS on a primary basis. The Australian Radiofrequency Spectrum Plan 2005 has been updated to reflect the relevant changes. WRC-03 has proposed protection limits for radio astronomy and aeronautical radionavigation services from RNSS in specific bands.

Coordination and compatibility issues which must be resolved with RNSS are addressed through specific limits imposed on unwanted emissions in these changes.

- d. *Spectrum allocations and sharing arrangements for two-way communications between mobile radio via satellite (Resolutions 225, 670, 744 and 745; Provisions 5.340, 5.348, 5.348A, 5.348B, 5.348C, 5.379B, 5.379C, 5.379D, 5.379E, 5.380A and 5.388A).*

This focuses on new spectrum allocations made to the Mobile Satellite Service uplink and the satellite component of International Mobile Telecommunications-2000 while protecting, from interference, Earth exploration-satellite service, space research and radio astronomy. Resolution 225 invites ITU-R studies to consider additional allocations and to further refine any protection requirements based on internationally harmonised regulatory provisions. Australia is participating in this process.
- e. *Sharing arrangements for services around 5 GHz, particularly wireless networking (Resolutions 114, 229 and 741; Provisions 5.443B, 5.444, 5.444A, 5.446A, 5.446B, 5.447E, 5.447F, 5.448B, 5.448C, 5.448D, 5.450A and 5.450B).*

New and upgraded allocations were made to various services. The Australian Radiofrequency Spectrum Plan 2005 has been updated to reflect the relevant changes. A number of the Provisions ensure adequate protection of incumbent services subsequent to these changes. The Australian Communications Authority plans to attend WRC regional and international meetings following WRC-03 to ensure permissions for use and restrictions imposed will be adequate to meet Australia's present and future requirements.
- f. *Operating conditions allowing earth stations on board vessels (ESVs) (Resolution 902; Recommendation 37; Provision 5.457A).*

Provision 5.457A identifies frequency bands available to ESVs transmitting to Fixed satellites. The Australian Radiofrequency Spectrum Plan 2005 has been updated to include these changes. Recommendation 37 provides clear direction for use of ESVs and avoidance of interference to other services operating in the same bands. ESVs have the potential to cause unacceptable interference and without special regulatory provisions and coordination, protection and future growth of other services will be affected. Resolution 902 details the regulatory and operational provisions for ESVs transmitting in specified bands.
- g. *Operating conditions for new highly elliptical orbit non-geostationary (non-GSO) satellites were established (Resolution 545; Provision 5.311; Article 22).*

Resolution 454 and Provision 5.311 establishes conditions under which the band 620-790 MHz may be used for assignments to television stations using frequency modulation in the broadcasting-satellite service. The Australian Radiofrequency Spectrum Plan 2005 has been updated to include these changes. The Resolution invites ITU-R members, including Australia to conduct studies to further develop sharing criteria and regulatory provisions for the protection of terrestrial services, in particular terrestrial television broadcasting services in the 620-790 MHz band from BSS satellite networks or systems. Australia is participating in these studies which will be brought to the attention of WRC-07.
- h. *Spectrum was allocated for high-density fixed satellite services (HDFSS) (Resolution 143; Provisions 5.516B and 5.340).*

Provision 5.516B identifies bands to be allocated to HDFSS (an advanced broadband communication application concept) on a co-primary basis with other services. Australia has accordingly amended the Australian Radiofrequency Spectrum Plan 2005. Guidelines to administrations under Resolution 143 recommends, as a first preference, the deployment of HDFSS in bands not shared with terrestrial services.

- i. *Many refinements were made to satellite operating procedures (Resolutions 33, 56, 57, 74, 85, 86, 87, 89, 146, 546, 547, 548, 703, 900 and 901; Articles 7, 9, 11, 21, 22; Appendix 4, 5, 7, 8, 30, 30A and 30B).*  
WRC-03 adopted many new sharing criteria and calculation methods for the processing of satellite networks internationally. Australia uses these procedures to record our satellite use for interference protection and aims for simplified and clear processes to remove regulatory overheads. While the changes are aimed at streamlining and simplifying satellite filing processes more studies are being undertaken leading up to WRC-07. Australia is monitoring and participating where necessary in these studies.
- j. *New spectrum and easing of regulations for amateur (HAM) radio operators (Article 25; Provision 5.141B).*  
Provision 5.141B is an additional allocation to the fixed and mobile, except aeronautical mobile (R) services from the 29 March 2009 in the band 7 100-7 200 kHz. The Australian Radiofrequency Spectrum Plan 2005 has been updated to acknowledge this change. Changes to Article 25 (Amateur services) include the encouragement of administrations to take the necessary steps to allow for the use of amateur services to prepare for and meet communication needs in support of disaster relief, in addition to other domestic and international regulatory requirements.
- k. *Updating maritime regulations related to radio operators and systems (Resolutions 207, 331, 339, 344, 351 and 352; Articles 19, 32, 33, 47, 51 and 52; Appendix 13, 15, 17 and 25).*  
Administrations, including Australia, are invited to participate in monitoring programs, employ interference mitigation techniques, establish public awareness programs and identify and prevent unauthorised transmissions affecting maritime mobile and aeronautical mobile (R) services. These matters update and modify operational procedures for mandatory and voluntary compliance of transmission of maritime safety information, such as the use of maritime mobile service identify (MMSI) in Global Maritime Distress and Safety Systems (GMDSS) and in the use of carrier frequencies for safety-related calling to and from rescue coordination centres. Unauthorised operations using maritime and aeronautical frequencies, already a risk to distress, safety and other communications are increasing. From WRC-03, there were no allocation changes to the Australian Radiofrequency Spectrum Plan 2005.

#### *Maintenance of Australia's Position on the Geostationary Orbit*

16. At the time of signature of the Final Acts, Australia made one declaration (No. 80) that it proposed will be maintained. The declaration concerns claims by equatorial countries to exercise sovereign rights over segments of the geostationary satellite orbit. The Geostationary Orbit is where a satellite is fixed in position relative to the Earth above the equator. The declaration reflects Australia's position that the geographical situation of particular countries does not support claims to any preferential rights to the geostationary orbit.

#### **Implementation**

17. Australia's obligations under the Radio Regulations are implemented through the Australian Radiofrequency Spectrum Plan prepared by the Australian Communications Authority in accordance with sections 30 and 34 of the Radiocommunications Act 1992. The existing Australian Radiofrequency Spectrum Plan has been updated to accord with the WRC-03 revision.

## **Costs**

18. There are no foreseeable direct costs to Commonwealth, State or Territory Governments arising from the proposed treaty action.

## **Regulation Impact Statement**

19. The Office of Regulation Review (Productivity Commission) has been consulted and confirms that a Regulation Impact Statement is not required.

## **Future Treaty Action**

20. Under Article 13 of the ITU Constitution, a World Radiocommunication Conference may partially or completely revise the Radio Regulations. The next World Radiocommunication Conference will be held in 2007. Based on the results of lead-up studies further changes to the Radio Regulations will be considered at that meeting. Future revisions will be subject to Australia's domestic treaty process, including tabling and consideration by JSCOT.

## **Withdrawal or Denunciation**

21. In order to withdraw from the Radio Regulations, it would be necessary for Australia to denounce the ITU Constitution and Convention by notification to the Secretary-General of the ITU. Any denunciation would be subject to Australia's domestic treaty process.

22. Under Article 57 of the ITU Constitution, such denunciation would take effect at the expiration of one year from the date of receipt of its notification by the Secretary-General of the ITU and would have to be done as a single instrument, denouncing the Constitution and the Convention simultaneously.

## **Contact details**

International Branch  
Department of Communications, Information Technology and the Arts

**Final Protocol and Partial Revision of the 2001 Radio Regulations, as incorporated in the  
International Telecommunication Union Final Acts of the World Radiocommunication  
Conference (WRC-03), done at Geneva on 4 July 2003  
[2005] ATNIF 4**

## **CONSULTATION**

23. Australian industry and government representatives were invited to participate in the preparation of the Australian brief for attendance at WRC-03. Those who contributed included Boeing Australia Ltd, the Australian Broadcasting Authority, Australian Broadcasting Corporation, Commercial Television Australia, Commercial Radio Australia, the Australian Maritime Safety Authority, the Department of Transport and Regional Services, the Department of Communications, Information Technology and the Arts, Telstra Corporation Ltd, SingTel Optus Pty Ltd, Vodafone Australia, Siemens Australia, Bramex Pty Ltd, AsiaSpace Ltd, the Department of Defence, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Commonwealth Bureau of Meteorology, Air Services Australia, Raytheon Australia Pty Ltd, Motorola Australia Ltd, Canberra Deep Space Communications Complex, Australian Spectrum Consultants, Cemdia-Asia Ltd, Worldspace Asia Ltd, Emergency Management Australia and the Wireless Institute of Australia.

24. Most of the above-mentioned groups were represented at the Conference and conferred daily on the need for any strategic changes. Upon return from the Conference, a debriefing session on Conference outcomes was held with these industry and government representatives on 1 August 2003. A preliminary draft Australian Radiofrequency Spectrum Plan incorporating updates in accord with the WRC-03 revisions, and some revisions of a purely domestic nature, was distributed to all known stakeholders on 16 July 2004, for comment by 10 August 2004. A draft Australian Radiofrequency Spectrum Plan was released for public comment, as required by section 33 of the Radiocommunications Act 1992, on 13 September 2004 by way of a Government Gazette notice and an Australia Communications Authority media release. Key stakeholders including all Australian Radiofrequency Study Group chairs were also advised of this release by e-mail. Comments were sought by 15 October 2004. Comments were received from the Australian Broadcasting Authority and the Bureau of Meteorology.

25. There is general support for the proposed treaty action from relevant stakeholders, including all state and territory governments, and acknowledgment of the benefits of the WRC-03 revision to Australia.



**FINAL PROTOCOL AND PARTIAL REVISION OF THE 2001  
RADIO REGULATIONS, AS INCORPORATED IN THE  
INTERNATIONAL TELECOMMUNICATION UNION FINAL  
ACTS OF THE WORLD RADIOCOMMUNICATION  
CONFERENCE (WRC-03), DONE AT GENEVA ON 4 JULY 2003  
[2005] ATNIF 4**

As of 21 April 2005, Cyprus and France are the only countries to have ratified the 2003 Final Acts.

**Current Status List of Member States of the International Telecommunications  
Union**

Afghanistan	China	Guinea
Albania	Colombia	Guinea-Bissau
Algeria	Comoros	Guyana
Andorra	Congo	Haiti
Angola	Costa Rica	Honduras
Antigua and Barbuda	Cote d'Ivoire	Hungary
Argentine Republic	Croatia	Iceland
Armenia	Cuba	India
Australia	Cyprus	Indonesia
Austria	Democratic People's	Iran
Azerbaijani Republic	Republic of Korea	Iraq
Bahamas	Democratic Republic of the	Ireland
Bahrain	Congo	Israel
Bangladesh	Denmark	Italy
Barbados	Djibouti	Jamaica
Belarus	Dominica	Japan
Belgium	Dominican Republic	Jordan
Belize	Ecuador	Kazakhstan
Benin	Egypt	Kenya
Bhutan	El Salvador	Kiribati
Bolivia	Equatorial Guinea	Korea
Bosnia and Herzegovina	Eritrea	Kuwait
Botswana	Estonia	Kyrgyz Republic
Brazil	Ethiopia	Lao People's
Brunei Darussalam	Fiji	Democratic Republic
Bulgaria	France	Latvia
Burkina Faso	Gabonese Republic	Lebanon
Burundi	Gambia	Lesotho
Cambodia	Georgia	Liberia
Cameroon	Germany	Liechtenstein
Canada	Ghana	Lithuania
Cape Verde	Greece	Libya
Central African Republic	Grenada	Luxembourg
Chad	Guatemala	Madagascar
Chile		Malawi

Malaysia	Solomon Islands
Maldives	Somali Democratic
Mali	Republic
Malta	South Africa
Marshall Islands	Spain
Mauritania	Sri Lanka
Mauritius	Sudan
Mexico	Suriname
Micronesia	Swaziland
Moldova	Switzerland
Monaco	Syrian Arab Republic
Mongolis	Tajikistan
Morocco	Tanzania
Mozambique	Thailand
Myanmar	The Former Yugoslav
Namibia	Republic of Macedonia
Nauru	Togolese
Nepal	Tonga
Netherlands	Trinidad and Tobago
New Zealand	Tunisia
Nicaragua	Turkey
Niger	Turkmenistan
Nigeria	Tuvalu
Norway	Uganda
Oman	Ukraine
Pakistan	United Arab Emirates
Panama	United Kingdom of
Papua New Guinea	Great Britain and
Paraguay	Northern Ireland
Peru	United States of America
Philippines	Uruguay
Poland	Uzbekistan
Qatar	Vanuatu
Romania	Vatican City State
Russian Federation	Venezuela
Rwandese Republic	Yemen
Saint Lucia	Zambia
Saint Vincent and the	Zimbabwe
Grenadines	
Samoa	
San Marino	
Sao Tome and Principe	
Saudi Arabia	
Senegal	
Serbia and Montenegro	
Seychelles	
Sierra Leone	
Singapore	
Slovak Republic	
Slovenia	