

RADIO RESEARCH ADVISORY COMMITTEE

Information Note From the Radiocommunications Agency

WORLD RADIOCOMMUNICATION CONFERENCE 2003 (WRC - 03)

The next WRC will be held in June /July 2003. Venezuela has offered to host the event.

The agenda for WRC-03 was drawn up by the last WRC (WRC-2000), endorsed by the ITU Council and then approved by consultation with the ITU membership. By any standard, it is a formidable agenda at least in breadth with over 40 separate items. Although at this stage there do not appear to be any dominant issues, many agenda items will result in conflicts between different user and industry interests even within the UK and certainly internationally. The breadth of the agenda and the vagueness of several items will mean that a great number of interested parties will need to be involved in the preparations and the WRC itself.

Already, the ITU machinery of Study Groups etc, and the various working groups of the CEPT, are working on detailed aspects of the issues raised. The first meeting of the formal UK preparatory committee, the IFPG, was held on 6th February 2001. This meeting appointed UK coordinators for each agenda item. The first meeting of the European preparatory group will be held during February 13th - 15th.

Although it is too early to identify the key issues that will emerge during the next two years of preparatory work, the attached annex, (which presents the agenda items in more user-friendly language than the formal WRC agenda), attempts to identify the main issues as far as they can be assessed at this stage.

The agenda highlights several issues of particular interest to the RRAC:

- a) the increased pressure on sharing spectrum between different services and especially between terrestrial and space services;
- b) the emphasis on space services, not just mobile-satellite and fixed-satellite, but earth exploration-satellite etc and over a very wide range of frequencies (100 MHz to over 100 GHz);
- c) the use of frequencies well above 30GHz for many applications.

Mike Goddard

Radiocommunications Agency, March 2001

WRC-03 Agenda Items

Agenda Item	UK Interest / Concerns
1.1 Country Footnotes*	No current issues
1.2 HF Broadcasting – new modulation techniques (ssb/digital)	Strong BBC WS interest likely in facilitating move to digital while preserving audience with analogue receivers.
1.3 Global/regional allocations for public protection agencies, inc emergency comms and disaster relief	Item results from industry pressures. Emphasis originally on emergency communications; now shifting to disaster relief. Potentially problematical with limited real benefits to users and many risks.
1.4 Review allocations to NGSO MSS feeder links, Aero Radionav, and FSS at 5091-5150 MHz	Complex sharing issues to be tackled
1.5 Review allocations in 5150-5725 MHz and consider allocations for RLANS, FWA in Reg 3, primary allocations for EES and SR (active) and upgrading of radiolocation	As above. Pressures over the years have piled basically incompatible services on each other.
1.6 Protection of feeder links for MSS in band 5150-5250MHz	UK will be obliged to try to help UK-based interests. Potential conflicts.
1.7 Amateur and amateur-satellite: 1.7.1 Review of Art S25 (inc Morse requirement) 1.7.2 Review of Art S19 (call signs) 1.7.3 Review of definitions as consequence of any changes to Art S25	Mainly issue of whether to remove mandatory international requirements for Morse at HF. Emotions could run high, even within amateur community and many countries could take conservative view. UK likely to support relaxation.

Agenda Item	UK Interest / Concerns
<p>1.8 Unwanted emissions:</p> <p>1.8.1 Boundary between spurious and out-of-band</p> <p>1.8.2 Protection of passive services from unwanted emissions, esp .from space services</p>	<p>On-going battle between those who potentially interfere, and do not want to pay price of higher standards, and those who want as much protection as possible.</p>
<p>1.9 Possible deletion of App S13 and Res 331 in light of GMDSS developments</p>	<p>On-going modernization of maritime provisions. Confined to maritime community.</p>
<p>1.10 Maritime Issues:</p> <p>1.10.1 Maritime mobile service identity numbers</p> <p>1.10.2 Priorities of shore-to-ship distress comms</p>	<p>As above.</p>
<p>1.11 Extension of MSS allocations at 14 –14.5 GHz to permit aero mobile</p>	<p>Driven by Boeing who want to provide high speed data to passengers’ laptops. Concerns over ability to control risk of interference over large geographical areas.</p>
<p>1.12 Review space science service allocations, and review all EES and SR allocations between 35 and 38 GHz</p>	<p>Space science interests want enhanced status in many bands. Existing users will resist.</p>
<p>1.13 HAPS – review regulatory provisions and possible new bands</p>	<p>Most countries will not want to extend provisions until they are satisfied that the impact will be limited. Others, esp Japan, will push hard.</p>
<p>1.14 Harmful interference to HF maritime and aero (R) mobile services, and review frequency and channel arrangements in maritime MF and HF bands for digital technology</p>	<p>Continuation of WRC-2000 debate. Confined to specialised communities.</p>

Agenda Item	UK Interest / Concerns
1.15 Review results of studies on RNSS at around 1.2 and 5 GHz (follow-up to WRC-2000 decisions)	GPS/Galileo interest will want to maintain or further relax provisions. Aeronautical community may want to tighten, depending on results of studies.
1.16 Consider allocations for feeder links around 1.4 GHz for NGSO MSS operation below 1 GHz	MSS (little –LEO) operators have woken up to real need for low frequency (hence cheaper) feeder links. All potential spectrum is occupied. Therefore very difficult to find acceptable solution.
1.17 Consider upgrading radiolocation at 2 900 - 3 100 MHz to primary	Response to increased sharing risks. Civil & defence aeronautical and maritime radar interests want to preserve an important allocation.
1.18 Consider a primary allocation to Fixed in Reg 1 at 17.3 –17.7 GHz	Potential for creating useful fixed allocation.
1.19 Procedure to avoid mis-application of NGSO FSS single-entry limits	Detailed regulatory issue to plug loop-hole in NGSO procedures.
1.20 Additional allocations for NGSO MSS below 1 GHz	Continuing saga of little-LEO operators wanting spectrum in very crowded VHF and lower VHF bands.
1.21 Technical and regulatory requirements for terrestrial wireless interactive multimedia applications	Originally intended to satisfy industry need for common allocations for new, ill-defined, applications, this item may allow us to open the door for non-broadcasting applications in the VHF TV bands.
1.22 Future development of IMT-2000 and beyond	Building on WRC-2000 results to keep the pressure on increasing the supply of harmonised spectrum for mobile systems.
1.23 Re-alignment of allocations to amateur and broadcasting around 7 MHz	An attempt to tackle the only mismatch between the regional allocations in the HF bands. Records show that this was an issue in the 1947 and 1979 conferences, and previous attempts failed.

Agenda Item	UK Interest / Concerns
1.24 Review sharing conditions (FSS and Radars) in 13.75-14 GHz	FSS is limited by an unconventional <u>minimum</u> disk size to limit impact on radars. UK and allies managed to resist pressure to remove restriction at WRC-2000 but we only bought time.
1.25 High density FSS above 17.3 GHz	US-initiated response (backed by some Europeans) to counter our emphasis on facilitating high density terrestrial fixed services. Likely to be very difficult, with conflicts even within UK.
1.26 Earth Stations on board vessels	This issue, initiated by US, has become more difficult the more it is discussed. A voluntary regulatory regime was adopted at WRC-2000 but this has not satisfied everyone.
1.27 Regulatory procedures and sharing criteria in App S30 and S30A (BSS and feeder link plans)	Detailed technical and regulatory follow-up to WRC-2000 decisions.
1.28 Use of 108-117.975 MHz for RNSS differential correction signals	A relatively easy issue which could not be tackled at WRC-2000 as it was outside the agenda.
1.29 Review sharing between NGSO and GSO systems	Review of previous WRC decisions. Potential for re-opening arguments when industry wants stability to develop systems.
1.30 Review advance publication, coordination and notification of satellite networks	Attempts to tackle major problem of ITU- enormous backlog of filings, “paper satellites” etc.
1.31 Additional allocations to MSS, 1-3 GHz	This item was included at the insistence of the UK, given our failure to achieve anything substantial at the last two WRC’s. It won’t be any easier this time.
1.32 Review pfd limits in band 37.5-43.5 GHz	An important issue for the UK (40 GHz broadband fixed access band) FSS allocations were imposed on us and we imposed stringed technical constraints on them, but these were made provisional for review at WRC-03
1.33 HAPS in IMT-2000 bands	Review of WRC-2000 decisions. There are likely to be concerns about the impact on spectrum efficiency and the potential for interference to other countries

Agenda Item	UK Interest / Concerns
1.34 Review threshold values for NGSO BSS sound in 2630-2655 MHz	Of interest to a limited number of countries.
1.35 Updating “remarks” column in tables of Art 9A (App 30A) and Art 11 (App S30) (BSS plans)	Detailed follow-up from WRC-2000
1.36 Adequacy of allocations for HF broadcasting, 4-10 MHz	A long-running saga. The BBC and other broadcasters want larger allocations; the developing countries are against as will be the defence community.
1.37 Use of highly elliptical satellite orbits	A difficult issue postponed from previous conferences.
1.38 Provision of 6 MHz of spectrum for EES (active) in 420-470 MHz	Major conflict with UK interests – civil and defence.
1.39 Spectrum requirements below 17 GHz for TT&C of FSS networks operating above 17 GHz	Should not require large amounts of spectrum but difficult to assess impact until detailed proposals are made.
2 Incorporation by reference*	-
3 Consequential changes to RRs*	-
4 Review of Resolution and Recommendations of previous Conferences*	-

Agenda Item	UK Interest / Concerns
5 Review Report of Radio Assembly*	-
6 Identify items for urgent study by SGs*	-
7.1 Consider Report of Director, Radio Bureau*	-
7.2 Agenda for future WRCs*	-

* routine agenda item