United States Department of State

United States Delegation Report

World Radiocommunication Conference 2007

Geneva, Switzerland
October 22 —November 16, 2007

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Submitted to the Secretary of State

by

Ambassador Richard M. Russell
United States Head of Delegation

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REPORT OF THE UNITED STATES DELEGATION TO WRC-2007

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United States Delegation Report
World Radiocommunication Conference 2007

1.0 EXECUTIVE SUMMARY

The International Telecommunication Union (ITU), a specialized agency of the United Nations, periodically convenes World Radiocommunication Conferences to review and update international Radio Regulations (a treaty ratified by the United States) and to address other radiocommunication matters of a worldwide character. The 2007 World Radiocommunication Conference, WRC-07, took place from October 22 to November 16, 2007, in Geneva, Switzerland. Under the leadership of Ambassador Richard M. Russell, 157 registered U.S. delegates joined over 2800 delegates representing 164 ITU Member States and 104 Observers at the four-week Conference.

The Conference took place in an atmosphere of optimism and expectation generated by advances in telecommunications technology since 2003, when the last conference took place. These innovative advances promised exciting new information services and applications, but their deployment would further burden an already crowded frequency spectrum. Additionally, earlier ITU forums, such as the 2005 World Summit on the Information Society, made clear that at WRC-07, nations lagging behind the more developed world in the deployment of advanced telecommunications technology would seek a more balanced distribution of telecommunications resources and frequency spectrum access. Thus, as the delegates began their deliberations, they faced the daunting task not only of balancing the spectrum needs of new telecommunications systems and services with those of incumbent operations, but also of providing the developing world with access to these systems and services.

In the tradition of previous World Radiocommunication Conferences, WRC-07 sought to reach decisions on the important issues before it through consensus rather than country-by-country vote. Because neither the ITU nor the WRC has enforcement powers, worldwide acquiescence to measures adopted by World Radiocommunication Conferences is important for ensuring orderly international use of the spectrum through widespread compliance with the treaty provisions. But as the proceedings went forward, two developments made achieving consensus difficult. The European region, represented by the Conference of European Postal and Telecommunications Administrations (CEPT), arrived at WRC-07 strongly opposed to U.S positions on several key issues and actively lobbied other regional groups to also oppose U.S. positions. In addition, a WRC trend of promoting negotiation through the regional organizations continued and intensified at WRC-07, allowing even one determined and well-organized region to prevent the Conference from reaching an accord.

But for diligent U.S. efforts to strengthen ties and improve coordination with its neighbors in the Americas region, some of the most important matters on the WRC-07 agenda could have ended in deadlock rather than accord. Instead, the Inter-American Telecommunication Commission (CITEL) – the regional organization of which the U.S. is a part – became a driving force that lead the Conference to consensus, overcoming resistance from the European bloc.

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U.S. worldwide outreach, both before and during the Conference, proved invaluable in building consensus on these and other difficult issues. In the months preceding WRC-07, a team of U.S. officials led by Ambassador Russell traveled around the world to participate in multinational preparatory sessions and bi-lateral meetings, holding talks with their counterparts from over 40 countries. With assistance from many members of the U.S. Delegation, these efforts continued at the Conference in Geneva, expanding relationships with individual countries into effective coalitions.

Nowhere did the value of wide-ranging U.S. international outreach – and its efforts within CITEL in particular – become more apparent than in the struggle over an agenda item which involved the international deployment of future generations of terrestrial wireless systems (such as wireless broadband) known as international mobile telecommunications (IMT). This item, the commercial centerpiece of the WRC-07 agenda, required the Conference to consider which spectrum bands should be identified and the amount of globally harmonized spectrum for promising IMT services. The presence of other established or planned services within many of the proposed frequency bands greatly complicated the task. With the European group and the U.S. at odds on the two most significant bands under consideration and other countries' support divided among a variety of bands, the prospects for advancing IMT deployment at WRC-07 seemed unlikely.

The tide turned when Ambassador Russell and other leaders of CITEL developed a flexible compromise plan to which the nations of the Americas gave their unified support. The plan identified spectrum in the 700 MHz range (TV band) while avoiding identification of 3400-4200 MHz (satellite C-band). Because the CITEL plan accommodated the diverse needs of countries from every region of the world, it garnered sufficient international support to overcome European opposition. In addition, the outcome on this agenda item ensured that the band planned for IMT use in the U.S. was identified for IMT not only in the Americas but also in countries comprising a market of three billion consumers in Asia and that the C-band (used by satellites and U.S. radars) was protected.

Breaking the deadlock on this major item allowed WRC-07 to conclude successfully. Moreover, in a major accomplishment for WRC-07, every one of the items on the agenda was resolved through consensus and without the need for a country-by-country vote. What is more, the U.S. Delegation achieved every significant objective it set for WRC-07 and returned from Geneva with international rules supporting the country's existing and future spectrum needs on land, at sea, in the air, and in space. The U.S. Delegation also ensured that existing critical services necessary for the country's national and economic security had continued protection. The leadership and vision provided by the U.S. Delegation at WRC-07, along with its strong partnership with the countries of CITEL, played a major role in advancing critical issues to a positive conclusion and opening the way for deployment of new technologies and services to improve the lives of people in the U.S. and around the world.

1.1 Results of Action on Major Agenda Items

The United States substantially met every one of its major objectives for the Conference, including the following:

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- Identification of Spectrum for Wireless Broadband. Identify spectrum and obtain favorable regulatory treatment for international deployment of international mobile telecommunications (IMT), to be used for advanced terrestrial wireless services (*e.g.*, wireless broadband), while protecting the satellite and radar systems that rely on the C-band (3400-4200 MHz) from IMT identification to the maximum extent possible;

- Protecting Wireless Broadband Rollout in the U.S. Secure stringent limits to protect emerging terrestrial systems from interference from satellite systems in the 2500-2690 MHz band and impose such limits as soon as possible;

- Preserving Access to HF. Prevent allocation of new frequencies for broadcasting in the 4-10 MHz (high frequency or "HF") band, which is already fully-utilized;

- Resolving Conflicts between Scientific and Commercial Systems. Balance the competing demands of protecting valuable scientific research conducted by passive sensing satellites without unnecessarily hampering deployment and operation of commercial and government services today and in the future;

- Increasing Spectrum for Aeronautical Telemetry. Obtain international recognition of bands in the 4-6 GHz bands as harmonized spectrum for aeronautical telemetry to be used for air-to-ground flight tests in designated test areas;

- Providing Spectrum for Aviation. Allocate new spectrum in the 112-117.975, 960-1164, and 5091-5150 MHz bands for aeronautical mobile satellite services to support modernization of civil aviation communication systems; and

- Defining the Agenda for WRC-11. Adopt an agenda for the next World Radiocommunication Conference that contains a manageable number of timely and significant agenda items.

The following is a more detailed discussion of action on each of the key agenda items mentioned above as well as other agenda items of particular interest or importance.

1.1.1 Worldwide deployment of advanced terrestrial wireless services known as international mobile telecommunications (IMT) (Agenda Item 1.4)

With the rollout of promising new terrestrial wireless services on the horizon and a broad swath of very suitable spectrum in the 700 MHz band scheduled to become available in the U.S. in 2009 through the digital television transition, this agenda item not only was a top priority for the U.S., but also was viewed as the highest-profile issue on the WRC-07 agenda. The U.S. had four goals: (1) to secure a technology neutral and expansive approach that included WiMax and other technologies within the regulatory treatment afforded IMT; (2) to obtain identification of the UHF band (in particular the 700 MHz band) and to prevent either global or regional identification of the C-band (3.4-4.2 GHz) currently in widespread use for satellite communications and U.S. radars; (3) to have the Conference adopt a non-binding Recommendation to encourage deployment of hybrid mobile-satellite systems (MSS) with an auxiliary terrestrial component (MSS ATC); and

(4) to ensure that possible identification for IMT in the 450-470 MHz band would not in any way preclude the existing and planned operations of public safety services in the U.S.

The first hurdle to the successful conclusion of the IMT agenda item was the definition of IMT. The U.S. supported a technology neutral and expansive definition which included WiMax. After a hotly-contested pre-conference study group process, the U.S. position prevailed. The matter was addressed by the ITU Radiocommunication Assembly, which reached a favorable decision shortly before the Conference began.

Even after the inclusion of WiMax in IMT, the identification of spectrum for IMT proved to be a difficult struggle that persisted throughout the Conference. From the start of the Conference, CEPT had posed a major roadblock to consensus on the 700 MHz band and the 3400-4200 MHz band (the C-band). After continuous consultation with delegation leaders from other regions, the U.S and a small group of its regional partners in CITEL devised a plan to address the concerns of the majority of administrations at the WRC. For the 700 MHz band, the plan consisted of identification of portions of the UHF band (including the 700 MHz band) regionally, phasing in the new spectrum use as each individual country approved its transition from analog to digital TV. Instead of global or regional identification of the C-band, the plan proposed an opt-in footnote approach for individual country identification for countries in Europe and Africa (Region 1) and in Asia (Region 3). The Americas (Region 2) would have no identification in the C-band. With regard to the 450-470 MHz band, the U.S. was able to successfully introduce text into the ITU-R Resolution that recognized the importance of the public protection and disaster relief communications services in this band. In addition, the U.S. and Canada introduced a Declaration in the Final Acts of the Conference to clarify that the U.S. and Canada intend to make use of applications in the mobile service and fixed service, including public safety networks, in the 450-470 MHz band, as appropriate, which may preclude its use for terrestrial IMT.

With CITEL unified, the plan garnered sufficiently widespread international support to overcome the European group's intense opposition. This led to WRC consensus on identifying the UHF band on a phased-in basis, securing its identification in the Americas region and facilitating deployment of IMT in that band in the largest consumer markets in Asia. In all, over three billion consumers now live in countries that have committed to transition to IMT in the UHF band. In the end, the Conference also rejected global or regional identification of the C-band, permitting countries to access the band only through an opt-in footnote mechanism with provision for cross-border coordination. The identification of the 450-470 MHz band does not establish regulatory priority for IMT vis-à-vis other services in the band. Finally, the Conference adopted a non-binding Recommendation that had the effect of encouraging implementation of MSS ATC. This Recommendation fully conformed to U.S. objectives regarding MSS ATC at WRC-07.

1.1.2 Measures for sharing and protection of terrestrial services from satellite interference in the 2500-2690 MHz band (Agenda Item 1.9)

In order to protect existing and planned terrestrial wireless broadband services and the current WiMax rollout in the U.S. from interference, the U.S. supported rapid implementation of stringent power flux-density (pfd) limits on satellites in the 2.5 GHz band. In complete accord with this U.S. objective, the Conference adopted new limits that fully protect terrestrial systems. These limits took effect immediately.

1.1.3 High frequency (HF) spectrum allocations for broadcasting (Agenda Item 1.13)

Proponents of broadcasting in the 4-10 high frequency (HF) band supported additional broadcast spectrum in a band that most countries consider to be fully occupied by other important services. Despite strong support from Europe, which favored the requested broadcast allocation, most of the rest of the world strongly opposed it. The majority view ultimately prevailed, and the Conference declined to allocate additional HF spectrum for broadcasting. This resolution fully conformed to the U.S. goals and objectives. Additionally there was no new agenda item for additional HF spectrum for broadcasting included in the agenda for WRC-11.

1.1.4 Protection of operations of passive sensing satellites from harmful interference (Agenda Items 1.2 and 1.20)

The U.S. sought to expand the operations of meteorological satellites and protect the operations of passive sensing satellites engaged in scientific research and space exploration from harmful interference by active services, without placing undue burdens on the current and future operation of commercial and government active services. In all but one of the bands below 31 GHz, the Conference reached an outcome fully consistent with U.S. objectives by adopting recommended levels on active services. The exceptional band has one limit which is currently in force and can be met by current systems, and a future stricter limit has been found acceptable to the single U.S. licensee for its forthcoming systems. Above 31 GHz the Conference addressed the U.S. concerns by settling on less stringent mandatory limits, extending compliance dates, and grandfathering planned systems.

1.1.5 Harmonized spectrum for aeronautical telemetry (Agenda Item 1.5)

Technological advances have paved the way for flight testing operations that employ wideband aeronautical telemetry capable of accommodating increasing telemetry data rates associated with the testing of new technologies. In order to facilitate the development and deployment of such advanced flight testing systems for civilian and military aircraft, the U.S. supported international recognition of spectrum in the 4, 5, and 6 GHz bands for air-to-ground telemetry in designated test areas. The Conference conferred international recognition sought by the U.S. through a global allocation in the 5091-5150 MHz band and a Region 2 (the Americas) allocation in both the 4400-4940 and 5925-6700 bands. In addition, the Conference identified 5150-5250 MHz in Region 1 (Europe, Africa, and Middle East).

1.1.6 Additional spectrum allocations in parts of the bands between 108 MHz and 6 GHz to support modernization of civil aviation communication systems (Agenda Item 1.6)

Existing aeronautical mobile frequency bands are nearing saturation in high aviation traffic areas. In addition, new applications and concepts in air traffic management put further pressure on these existing bands. To facilitate modernization of civil aviation communication systems, the U.S. sought to obtain new spectrum allocations for the aeronautical mobile (R) service. Its objectives were met through new allocations at 960-1024 MHz and 5091-5150 MHz, and by setting the band 5000-5030 MHz to be reviewed for allocation at the next Conference. In addition, the U.S.

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succeeded in preserving necessary regulatory protection for FM radio broadcast operations in the adjacent 87-108 MHz band from aeronautical communication applications in the 108-118 MHz band.

1.2 Other Agenda Items and Matters of Particular Interest or Importance

1.2.1 Maritime Issues (Agenda Items 1.13, 1.14, and 1.16)

The operations of the U.S. Navy, Coast Guard, and maritime industry stand to benefit from recent technological advances in global maritime distress and safety systems, automatic identification systems, and other innovations useful in modernizing maritime communications. The Conference took a number of important steps to update the international Radio Regulations so that the maritime mobile service can utilize current technology within the Global Maritime Distress and Safety System (GMDSS).

1.2.2 Other Fixed-Satellite Service Issues (Agenda Items 1.10 and 1.19)

The agenda contained two items that could have embroiled both the Conference and the ITU Radiocommunication Sector (ITU-R) in difficulties. In particular, the U.S. kept close watch on a proposed review of regulatory procedures and associated technical criteria for the fixed-satellite service Plan in Appendix 30B (Agenda Item 1.10) to make sure that existing satellite systems were protected and to avoid the possibility of a full-scale future planning conference. The U.S. fully achieved its objectives under Agenda Item 1.10. In addition, the U.S. opposed an unnecessary global identification of spectrum for satellite Internet applications (Agenda Item 1.19). The U.S. successfully asserted that all spectrum used by the FSS was usable for Internet applications and that allocating only specific FSS bands would needlessly restrict the use of the Internet. The Conference agreed with this position, and this was the first agenda item in WRC-07 to be completed.

1.2.3 Resolutions

Resolution **80.** Resolution **80**, "Due Diligence in Applying the Principles Embodied in the Constitution," related to the question of equitable access to the satellite orbits and spectrum resources. In response to a proposal from Colombia, the Resolution, last revised at WRC-2000, was modified to renew the call for studies and recommendations on the issue by the Radiocommunication Sector and the Radio Regulations Board. Pursuant to the revised Resolution, the Director of the Radiocommunication Bureau is charged to report in detail to each future WRC on action taken in furtherance of the Resolution. A standing agenda item was thus added to future conference agendas. In the proposed agenda for WRC-11, Agenda Item 8.1.3 calls for consideration of the Director's Report to the Conference in response to Resolution **80** (**Rev.WRC-07**). U.S. objectives − to maintain a constructive environment of cooperation within the Americas and to retain a stable regulatory environment for satellite services − were achieved.

Resolution **951.** This Resolution was revised at WRC-07 consonant with proposals of several regional groups to study further how to enhance the international spectrum regulatory framework in light of evolving radiocommunication technologies and convergence of some traditional radio

services. In addition to revising the Resolution (albeit without much progress on the issue since the Resolution was originally adopted at WRC-03), an agenda item was added to the recommended WRC-11 agenda to take into account further ITU-R studies on this matter and to take appropriate action (WRC-11 Agenda Item 1.2). Neither the U.S. nor CITEL made proposals on this issue, but U.S. objectives were largely met by limiting the scope of the Resolution and agenda item.

1.3 Future Agenda Items

All agenda items proposed by the U.S. gained placement on the proposed future conference agendas. U.S.-backed items to be considered at the next WRC, expected to be scheduled for 2011, include matters dealing with unmanned aircraft systems (UAS), modernization and incorporation of digital technologies in the maritime mobile service, safety system communications for ships and ports, several interference protection measures, and allocations for space research and radars. In addition, a fixed-satellite service issue of interest to the U.S. will be taken up at the following conference, WRC-15. The U.S. modified two agenda items by reducing the scope of the spectrum under consideration to minimize exposure of important government and commercial systems. The slate of 31 items approved for WRC-11 should make for a manageable agenda, with items that may prove adverse to U.S. objectives having been kept to a minimum. The WRC-11 agenda will be considered for final approval by the ITU Council in November 2008.

1.4 Political Issues

To an overwhelming extent, delegations kept their focus on conference business related to specific agenda items. With the exception of two political issues that often come up at ITU meetings, WRC-07 remained free from the politically-based disruption or discord that has sometimes interrupted ITU conferences in the past. A potential conflict was resolved without incident when Israel and the Palestinian Authority reached agreement to resolve Palestinian Authority concerns about its orbital allotments and wireless spectrum needs. Cuba once again attempted to raise objections to certain U.S. broadcasting operations that had been raised at the Plenipotentiary Conference and in the Radiocommunication Bureau Director’s Report; however, the Conference leadership’s skillful handling of the matter diffused the situation. Efforts by Cuba to change the Radio Regulations were pushed aside. Ambassador Russell made a statement to protect U.S. interests, and the statement was entered into the minutes of the Plenary with no further Conference action. The U.S. also made a submission concerning this matter which is recorded in the official Declarations and Reservations made by signatory delegations.

2.0 BACKGROUND

This section provides a more detailed discussion of the purposes of the WRC, as well as the events and preparations leading up to the Conference.

2.1 Introduction and Overview

2.1.1 The International Telecommunication Union

The International Telecommunication Union (ITU) is a specialized agency of the United Nations based in Geneva, Switzerland. At WRC-07 the ITU counted 191 countries as its Member States. In addition, over 700 private sector companies and organizations participate in ITU affairs as Sector Members and Associates. As the specialized United Nations agency for communication and information technology, the ITU provides a global forum for efforts to ensure orderly and interference-free radio communication around the world. In addition, through its Radiocommunication Sector (ITU-R), it manages detailed coordination and recording procedures for space systems and satellite earth stations. ITU-R also develops and manages space-related assignments and allotment plans and locates orbital slots suitable for new satellite services, the international radio-frequency spectrum, and orbital resources for satellite communications.

2.1.2 The ITU Radio Regulations

The ITU carries out its mission by implementing and updating the Radio Regulations and Regional Agreements through its periodic and regular World Radiocommunication Conferences every three or four years. The Radio Regulations consist of the following four volumes:

- Volume 1: Articles. This volume consists of Articles 1 through 50. Article 5 contains the Table of Frequency Allocations indicating radio services to which each frequency band is allocated.
- Volume 2: Appendices. This volume consists of Appendices 1 through 42.
- Volume 3: Resolutions and Recommendations, This volume contains the Resolutions and Recommendations adopted by past WRCs.
- Volume 4: ITU-R Recommendations incorporated by reference. This volume contains the ITU-R Recommendations incorporated by reference as a result of their application in other provisions and footnotes of the Radio Regulations.

References in this report to “Nos.” in the Radio Regulations refer to Volume 1, with the first number in the reference indicating the Article (e.g., No. 5.198 refers to a footnote to the Table of Frequency Allocations in Article 5.)

2.1.3 The 2007 World Radiocommunication Conference

The International Telecommunication Union (ITU) convenes World Radiocommunication Conferences on a periodic basis normally every three to four years, either in Geneva, Switzerland, or another host city. For WRC-07, more than 2800 delegates from 161 ITU Member States gathered at the International Conference Center adjacent to the ITU’s Geneva headquarters from

October 22 to November 16.[1] The five ITU Elected Officials participated in the Conference: Secretary General, Dr. Hamadoun Touré; Deputy Secretary General, Mr. Houlin Zhao; Director of the Radiocommunication Bureau, Mr. Valery Timofeev; Director of the Telecommunication Standardization Bureau, Mr. Malcolm Johnson; and Director of the Telecommunication Development Bureau, Mr. Sami Al Basheer Al Morshid. The twelve members of the Radio Regulations Board[2] also participated in an advisory capacity.

Ambassador Richard M. Russell served as the U.S. Representative to WRC-07 and Head of the U.S. Delegation. The Delegation consisted of 157 individuals serving as senior government advisors, government advisors, or private sector advisors. While in Geneva, Ambassador Russell and the Delegation also maintained contact with and received support from a stateside team of U.S. government experts.

The WRC-07 agenda was established four years earlier at WRC-03 and approved in 2003 by the ITU Council. WRC-07 presented delegates with 30 highly complex agenda items. Many of them challenged the delegates to strike a balance among competing spectrum needs of worthy systems and services -- emerging and incumbent, terrestrial and satellite, or active and passive.

2.2 U.S. Objectives for the Conference

In general, U.S. objectives for WRC-07 were based upon five guiding principles: (1) ensuring that the Conference facilitated the roll-out of new communication technologies and services; (2) securing protection for critical government systems and services and, as necessary, providing them with the capacity to expand; (3) ensuring that the WRC carried out its mandate to manage, efficiently and effectively, the radiofrequency spectrum internationally; (4) establishing an environment that fosters predictable, transparent, pro-competitive regulatory policies for telecommunication; and (5) limiting the scope of issues to be considered by WRCs to treaty level issues, i.e., matters related to the allocation, allotment or assignment of portions of the frequency spectrum, including regulatory requirements necessary to implement an allocation, allotment or assignment.

Specific U.S. objectives for WRC-07, taken in order of the Conference agenda, were:

- To ensure that this periodic opportunity for countries to add or delete their names or to make other minor modifications to ITU Radio Regulation footnotes did not result in an adverse impact on allocations or services of interest to the U.S. (*Agenda Item 1.1*)

- To obtain an additional 100 MHz of spectrum for meteorological satellites and protect passive services such as space and Earth exploration, scientific research and meteorological satellite operations from harmful interference without unnecessarily hampering deployment and operation of commercial and government services today and in the future by limiting the imposition of overly stringent limits on those services' transmissions (*Agenda Item 1.2*)

[1] The 2003 World Radiocommunication Conference also took place in Geneva. Turkey hosted the WRC-2000 in Istanbul.
[2] One member of the Radio Regulation Board (Vice Chairman Julie Zoller) is from the U.S.

- To upgrade the radiolocation service to primary status in the 9000-9200 and 9300-9500 MHz bands and to secure allocation of an additional 200 MHz of spectrum to the Earth exploration-satellite service and the space research service in the 9300-9500 MHz band (*Agenda Item 1.3*)

- To: (1) secure a technology neutral and expansive approach to international mobile telecommunications ("IMT") that facilitates deployment of mobile wireless systems with broadband capacity; (2) obtain identification of the 700 MHz frequency band for IMT; (3) protect the operation of critical satellite and radar systems using the "C-band" (3400-4200 MHz) by foreclosing that band's identification for IMT; and (4) support international deployment of a hybrid mobile satellite system with an auxiliary terrestrial component ("ATC") (*Agenda Item 1.4*)

- To obtain international recognition of certain bands in the 4-6 GHz range for aeronautical telemetry used in advanced flight testing for military and civilian aircraft (*Agenda Item 1.5*)

- To secure additional spectrum in the 960-1024, 5000-5030, and 5091-5150 MHz bands for aeronautical and mobile-satellite services that support modernization of civil aviation systems (*Agenda Item 1.6*)

- To ensure that the space research service (passive) in the 1668-1668.4 MHz band is adequately protected from the mobile-satellite service (MSS) in that band and that the terrestrial fixed and mobile operations in the U.S. are not unduly constrained by the MSS in the 1668.4-1675 MHz band (*Agenda Item 1.7*)

- To increase countries' access to High Altitude Platform Stations (HAPS) and to identify a global HAPS band (*Agenda Item 1.8*)

- To protect U.S. terrestrial services in the 2.5 GHz band from interference through prompt implementation of stringent limits on certain satellite emissions (*Agenda Item 1.9*)

- To improve the regulatory procedures and technical criteria under Appendix 30B for allotting spectrum bands for fixed-satellite service (FSS); to protect existing satellite systems by extending the period of validity of registered frequency assignments; and to eliminate significant backlogs that prevent newer systems from being processed in a timely fashion (*Agenda Item 1.10*)

- To protect terrestrial broadcasting and non-broadcast use of the 620-790 MHz band in the U.S. by limiting the broadcasting-satellite service in the band (*Agenda Item 1.11*)

- To resolve difficulties created by application of the Radio Regulations, correct procedural deficiencies, and otherwise simplify or update procedures in a manner consistent with U.S. interests (*Agenda Item 1.12*)

- To preserve the High Frequency bands for current users by opposing additional allocations of HF spectrum available for radio broadcasts (*Agenda Item 1.13*)

- To achieve an allocation recognizing the satellite detection of automatic identification system (AIS) transmitters on ships, gain safety recognition for AIS use in navigation, obtain an exclusive allocation of the maritime digital selective calling distress channel 70, and develop other provisions and measures that enhance maritime communications (*Agenda Item 1.14*)

- Because of existing domestic allocation decisions, the U.S. did not need to take a position with regard to unobjectionable proposals from other countries and regions regarding a secondary allocation to the amateur service in the 135.7-137.8 kHz band (*Agenda Item 1.15*)

- To ensure that the integrity of the Mobile Maritime Service Identities process is maintained and that there is flexibility for emerging automatic identification system applications (*Agenda Item 1.16*)

- To suppress a secondary allocation for non-geostationary feeder links around 1.4 GHz (*Agenda Item 1.17*)

- To avoid tightening power flux-density limits in the 17.7-19.7 GHz band for satellite systems using a highly inclined orbit ("HIO") and maintain the current power flux-density levels for existing U.S. HIO systems (*Agenda Item 1.18*)

- To prevent any change to the Radio Regulations intended to identify possibly global harmonized fixed-satellite service bands for the use of Internet applications (*Agenda Item 1.19)*

- To protect passive services such as space and Earth exploration, scientific research and meteorological satellite operations from harmful interference without unnecessarily hampering deployment and operation of commercial and government services today and in the future by limiting the imposition of overly stringent limits on those services' transmissions *(Agenda Item 1.20*)

- To ensure that appropriate measures remain in place to promote compatibility between the radio astronomy service and active space services (*Agenda Item 1.21)*

- To add for incorporation by reference ITU-R M.1642-1 – Methodology for assessing the maximum aggregate equivalent power flux-density at an aeronautical radionavigation service station from all radionavigation satellite service systems operating in the 1.164-1.215 GHz band and to insure that proposed modifications to the principles of incorporation by reference do not adversely impact U.S. interests (*Agenda Item 2*)

- To ensure that a review of previous WRC Resolutions and Recommendations and any resulting revisions, replacements, or abrogation thereof do not adversely affect U.S. interests, and in particular to prevent any change to the bringing into use of space stations in the broadcasting-satellite service, prior to the entry into force of agreements and associated plans for the broadcasting-satellite service (*Agenda Item 4*)

- To ensure that issues contained in the Radiocommunication Bureau Director's Report were resolved beneficially for the U.S. government and commercial spectrum users and that proposed regulatory changes improved ITU procedures (*Agenda Item 7.1)*

- To secure a place on the agendas for the next two conferences (WRC-11 and WRC-15) for proposed agenda items of particular importance to the U.S., to preclude problematic items from being included on future conference agendas, and, in general, to keep the number of items on those agendas manageable (*Agenda Item 7.2*)

2.3 Conference Preparatory Efforts

The U.S. Delegation's success at WRC-07 resulted in large part from thorough preparation directed toward producing strong and unified positions, crafting sound proposals, understanding the positions and objectives of other nations and regions, and building strong regional and global coalitions. Here at home, U.S. spectrum officials and industry experts worked to reconcile varying priorities and spectrum needs into consensus positions that eventually led to the U.S. proposals for WRC-07. These domestic preparations alone required a sustained four-year effort. In addition, many U.S. spectrum experts continuously took part in the work of the ITU-R Study Groups that drafted the technical bases for the Conference. These individuals and others also worked to advance U.S. priorities by participating in the preparatory efforts for the Americas region through CITEL. Still others kept abreast of the preparations going on around the globe by attending European, Asian, Arab, and African regional meetings. This section describes the effort that took place from the days following the conclusion of WRC-03 until the WRC-07 Delegation departed for Geneva.

2.3.1 Laying the Groundwork

As one of its final acts, WRC-03 adopted a Resolution containing the recommended agenda for the next conference, which provided the foundation for U.S. WRC-07 preparation. Immediately after WRC-03 ended, the Department of State led a group of more than 30 U.S. government and private sector participants to the first ITU Conference Preparatory Meeting for WRC-07 (CPM06-1) in Geneva. At that meeting, the U.S. participants joined other delegations to review the recently adopted agenda items for the next conference and to organize a work program which included assigning the agenda items to the Study Groups and Working Parties formal studies needed to inform the decisions at the upcoming WRC. Those studies, conducted by technical experts from various ITU member states and private sector members, formed the technical and regulatory underpinnings upon which WRC-07 decisions would be based.

(*The agenda for WRC-07 is attached as* ***Annex A*****.)**

Soon thereafter, NTIA and the FCC, in coordination with the Department of State, commenced two processes designed to ensure that conference preparation reflected the national interest. The NTIA managed an interagency process primarily focusing on the spectrum needs of national defense, homeland security, scientific research, space exploration, weather forecasting, and other important governmental functions. The FCC process sought to make certain that U.S. preparations met commercial spectrum needs and also incorporated input from the public, including state and

local governments, the public safety community, commercial telecomm providers, manufacturers, amateur radio enthusiasts, and other spectrum-reliant interests.

In addition, a group of top level officials from the FCC, NTIA, Department of State and several other federal agencies that have a major role in U.S. spectrum policy and WRC preparation formed a Principals Group that met five times between October 17, 2005 and October 17, 2007 to coordinate U.S. positions and strategies prior to WRC-07. This group consisted of Ambassador David A. Gross, Deputy Assistant Secretary of State for International Communications and Information Policy; John M.R. Kneuer, Assistant Secretary of Commerce for Communications and Information and Administrator of the National Telecommunication and Information Administration; Kevin J. Martin, Chairman of the Federal Communications Commission; John G. Grimes, Assistant Secretary of Defense for Networks and Information Integration/ CIO; and Shana Dale, Deputy Administrator of the National Aeronautics and Space Administration. Ambassador Gross led the meetings until the President appointed Ambassador Russell, who then took over the responsibility.

2.3.2 NTIA's Role and Preparation Activities

NTIA was responsible for managing the development and coordination of U.S. Government agency proposals for the Conference. NTIA received input from the federal agencies through the Radio Conference Subcommittee (RCS) of the Interdepartment Radio Advisory Committee (IRAC), which the NTIA chaired and in which the FCC participated as a liaison member. The RCS served as the principal forum for convening representatives from the federal agencies for WRC preparation. This group met monthly to discuss, plan, and propose regulatory and allocation changes to meet present and future government requirements in response to WRC-07 agenda items.

Shortly after the conclusion of WRC-03, the RCS established six working groups that met regularly from 2004 through 2005 to formulate preliminary views and develop initial proposals. With each working group responsible for a number of issues, the process covered the entire slate of WRC-07 agenda items. After reviewing and approving the RCS-generated proposals, NTIA forwarded them to the FCC for consultation. RCS and its working groups also reviewed and responded to FCC proposals shaped by the FCC's WRC-07 Advisory Committee (WAC) process. All draft preliminary views and proposals, once approved by NTIA, were posted on the NTIA website.

2.3.3 The FCC's Role and Preparation Activities

In keeping with its normal WRC preparatory process, the FCC chartered a WRC-07 Advisory Committee (WAC) in accordance with the Federal Advisory Committee Act (FACA). Nancy Victory, former Assistant Secretary of Commerce for Communications and Information and Administrator of the National Telecommunications and Information Administration, served as its chair. To ensure a transparent process with broad public participation, the FCC issued Public Notices soliciting comments and posted information on WRC-07 preparatory activities on its website. The WAC met 11 times at the FCC's Washington headquarters between January 30, 2004 and December 13, 2006. Based on preliminary views and proposals developed in its five Informal

Working Groups, the WAC made recommendations to the FCC on almost every agenda item. In addition to the WAC recommendations, the FCC took comments it received in response to the Public Notices in formulating its own draft positions and proposals.

Promoting effective coordination with the Executive Branch agencies remained an important FCC priority for WRC-07. In furtherance of that objective, the FCC participated as an observer in the proceedings of the RCS and placed RCS comments and proposals on Public Notice for Comment. Additionally, many federal government RCS participants took part as observers in the WAC and its Informal Working Groups. Upon formulating its own draft positions and proposals, the FCC worked closely with NTIA to resolve any differences and develop unified U.S. positions. Once their recommended WRC-07 proposals were finalized, the FCC and NTIA officially transmitted them to the Department of State for its consideration and submission to the ITU and, in some cases, to CITEL.

In recognition of the increasing impact of regional support on Conference outcomes, FCC and NTIA officials also continued to participate actively in CITEL's preparations, attended seven European and five Asian-Pacific regional preparatory meetings, and provided detailed reports on those meetings to the WAC and other federal government agencies. The reports proved valuable to the preparatory effort by enhancing U.S. understanding of foreign views, positions, and proposals.

2.3.4 The Department of State's Role

Like the NTIA and the FCC, the Department of State relied upon support from an Advisory Committee - the International Telecommunication Advisory Committee–Radiocommunication Activity (ITAC-R) - in carrying out its responsibilities for oversight and coordination of WRC-07 preparation. Chartered by the General Services Administration (GSA) to the Department of State as an Advisory Committee under the FACA, the ITAC-R reviewed and made recommendations regarding technical papers and proposals submitted as U.S. contributions and proposals to CITEL and the ITU. In addition, two ITAC-R National Committee meetings hosted by Department of State provided a forum for all interested parties to come together to discuss WRC-07 issues in a manner consistent with the FACA rules.

President Bush's January 2007 announcement of his intent to appoint Richard M. Russell Ambassador to the 2007 Conference brought a U.S. Head of Delegation on board significantly earlier than was the case for WRC-03. Although his tenure as U.S. Ambassador did not commence until May, 2007, becoming the U.S. Representative to WRC-07 in January enabled him to join fully in Department of State preparations. This accelerated and strengthened the U.S. preparatory effort and had a positive impact on the Delegation's performance at the Conference.

Soon after assuming his duties as U.S. Representative to the Conference, Ambassador Russell began assembling a small team of senior officials from Department of State, NTIA, FCC, Department of Defense, and NASA to assist in formulating and refining U.S. strategy and proposals before the full Delegation was formed. These individuals, known as the Core Delegation, would form an eventual leadership core for the full U.S. Delegation. He also recruited team members for a Core Staff to create an administrative structure for the U.S. Delegation and to manage and support Ambassadorial and Delegation activities leading up to and at the Conference.

Regular weekly meetings of these groups began in February, 2007, and continued until the Delegation's departure for Geneva.

The Department of State assisted in preparing Ambassador Russell for his duties by providing background materials and hosting regular briefings. Top federal officials in the Principals Group attended the first comprehensive briefing on January 22, 2007, which aided their high level interagency oversight of the ensuing WRC-07 preparations. As Conference preparations continued, this Principals Group was called upon to assist in resolving differences within the U.S. government that arose on particular WRC issues.

The Department of State provided support for the Ambassador's extensive pre-conference schedule of international outreach missions, beginning with the Ambassador's first trip to Geneva for the second ITU Conference Preparatory Meeting for WRC-07 (CPM-2) in February, 2007, and continued over the next eight months with visits to five continents to participate in regional WRC preparatory meetings and engage in bi-lateral discussions with officials from over 40 countries. The Department also arranged meetings for the Ambassador with foreign spectrum officials visiting the U.S. and assisted with CITEL's final regional preparatory meeting hosted by the U.S. in Orlando, Florida, in August 2007.

During each overseas visit, U.S. Embassies and Missions provided support for the Ambassador and his travel team. In addition, the U.S. Mission in Geneva expertly supported U.S. activities that took place in Geneva before the Conference. Mission staff also made arrangements and provided support during the Conference for the entire U.S. Delegation as well as for the many U.S. activities that took place.

2.3.5 Federal Agency Support for Pre-Conference International Outreach

Other federal agencies also provided critical support for pre-conference International Outreach. In addition to officials from the Department of State, NTIA, and the FCC, Core Delegation members from the Department of Defense and NASA often served on travel teams that accompanied the Ambassador. They played a key role in planning, logistics, and briefings for outreach trips. The Department of Defense arranged and defrayed the cost of diplomatic courtesies such as meeting refreshments, protocol gifts, and formal meals and receptions that the Ambassador hosted when abroad. These agencies and the National Oceanic and Atmospheric Administration were principal supporters of the CITEL preparatory meeting that the U.S. hosted in Orlando, Florida. Their contributions of advice, manpower, time, and financial backing were key factors in making U.S. outreach before the Conference both smooth and productive. The Conference could not have been a success for the U.S. without the concerted efforts of all these agencies.

The Federal Aviation Administration also assisted with U.S. preparation for WRC-07 by joining the NTIA and the FCC as participants in the working group of the International Civil Aviation Organization (ICAO), the international United Nations-affiliated agency tasked with the mission of providing an international framework for the safety of civil aviation. The agencies' participation in the ICAO preparatory process ensured that ICAO's positions closely aligned with U.S. objectives on agenda items involving aviation equities. Representatives from these and other agencies as well as members of the private sector also helped the U.S. to be well prepared for the

Conference by attending the preparatory conferences of regional organizations such as CEPT, APT, and ATU as observers.

(*Further information about the pre-conference international outreach efforts is set forth in* ***Annex B****.)*

2.3.6 Delegation Formation and Pre-Conference Preparations

The formation of a U.S. Delegation marked another important step in the Conference preparatory process. The delegate selection process began in March 2007 with publication in the *Federal Register* of a notice inviting applications from those interested in serving on the U.S. Delegation. Applications came in from April to July 2007, culminating with White House accreditation of a delegation. Shortly after its formation, the Delegation began meeting in Washington, D.C. as a body.

At Ambassador Russell's request, the second Delegation meeting was a full-day session devoted to delegate training coordinated by Dr. Darlene Drazenovich of the NTIA. Participants heard remarks from Ambassador Russell, Council of Economic Advisors Chairman Dr. Edward Lazear, FCC Chairman Kevin Martin, NTIA Administrator John Kneuer, and Assistant Secretary of Defense John Grimes. The session also featured panels on conference issues, procedures, protocol, and negotiating strategy. In addition, the United States ITU Association, a private, non-profit open U.S. industry forum for the discussion of issues and the development of views and proposals on ITU policy, hosted a WRC-07 workshop which many delegates attended on the day before the Delegation training session. The Delegation as a whole continued to meet until its departure to Geneva, and delegates participated in pre-conference preparations underway in various U.S. Committees and working groups.

(*A listing of all U.S. Delegates is set forth in* ***Annex C****. The U.S. Core Delegation Group members are listed in* ***Annex D*** *and the agenda for the Delegation education and training session is set forth in* ***Annex E****.*)

2.4 Development and Submission of Final U.S. Proposals

NTIA and the FCC finalized draft proposals to WRC-07 based on the priorities and objectives identified in their respective preparatory processes. After reconciling any diverging views or outstanding issues, NTIA and the FCC each made the accepted proposals available for examination and further consideration by the public by posting them on their respective WRC-07 websites. Following a final review process including input from the public, NTIA and the FCC jointly forwarded these WRC-07 proposals to the Department of State for submission to the ITU.

Prior to the Conference, the U.S. submitted a total of more than 140 specific proposals on 25 WRC-07 agenda items to the ITU. In addition, working through a consultation process with CITEL, the U.S. joined multiple CITEL Administrations in signing on to support 63 Inter-American Proposal documents which contained 419 individual proposals to the Conference. In many cases, the IAPs on which the U.S. was a signatory closely reflected positions in common with U.S. single-country proposals or contained modifications to address specific interests of other

CITEL states, thus making it possible for U.S. positions to become regional proposals. This information is summarized in the table below.

Total U.S. Single Country Proposals submitted to ITU	More than 140
Total U.S.-supported CITEL IAPs submitted to ITU	63
Total CITEL IAPs submitted to ITU	66
Total U.S.-supported CITEL individual proposals submitted to the ITU	413
Total CITEL individual proposals submitted to the ITU	419

The unprecedented number of IAPs and individual CITEL proposals on which the U.S. was a signatory in 2007 reflects tremendous strides forward in hemispheric cooperation, which continued to result in positive outcomes for the U.S. and neighboring members of CITEL at the Conference.

The U.S. proposals, accompanied by position papers and talking points, guided the U.S. Delegation's participation in Conference working group and committee sessions, as well as in negotiations with delegations from other administrations both before and during the Conference.

2.5 International Preparations

While the U.S. was completing its domestic preparations for WRC-07, important preparatory developments were taking place on an international scale.

2.5.1 Conference Structure

Following the practices of previous World Radiocommunication Conferences, an Informal Group for WRC-07, under the Chairmanship of Nabil Kisrawi of Syria (also Chairman of the Arab Group on Spectrum Management), convened for the first time in November 2004, and met six times between that date and the opening of WRC-07. This group, which consisted of several representatives from each of six regional and sub-regional organizations,[3] took on the task of facilitating regional preparations for WRC-07 and developing consolidated proposals for the Conference structure and leadership, including the Conference chairman. As the start of the

[3] The European Conference of Postal and Telecommunications Administrations (CEPT), the Inter-American Telecommunication Commission (CITEL), the Asia-Pacific Telecommunications Union (APT), the African Telecommunications Union (ATU), the Regional Commonwealth in the Field of Communications (RCC), and the Arab Spectrum Management Group.

Conference approached, the U.S. harbored concerns about the distribution of work between two of the Conference committees. Specifically, the U.S. supported a realignment of the specified agenda items assigned to each committee, so that an uneven workload would not overburden one of them, preventing timely completion of the work. The Informal Group devised proposed modifications to the committee structure that addressed these concerns and that ultimately were adopted by the Conference.

2.5.2 Conference Leadership

The Informal Group faced difficulties regarding agreement on a Conference chairman. Customarily, an individual from the country hosting a WRC serves as its chair; however, when the conference takes place in Geneva, a rotation among ITU regions is normally a factor in the chairman's selection. Divergent views were expressed concerning announced candidates and even the definition and application of the "principle of rotation." According to the rotation, the WRC-07 chairman was to come from the European region. When the proposed European candidate failed to garner widespread support, candidates from other regions quickly began to emerge. In the face of the fierce competition that developed for the position, the Informal Group was unable to make a recommendation, and the situation threatened to disrupt the orderly commencement of the Conference. The ITU's Secretary General called a meeting of the Heads of Delegation on the day before the Conference began, and through his masterful handling of the stalemate, the group reached consensus on an alternate European candidate, Mr. François Rancy of France, whom the Conference selected as Chairman by acclamation at its first plenary session.

Because of good preparation and substantial diplomatic outreach to CITEL members, Ambassador Russell was elected one of the six regional Vice Chairmen of the Conference without opposition. Vice-Chairmen are automatically included in all procedural and Informal Group discussions at the Conference, making it critical for the U.S. to hold this position.

The Informal Group encountered less difficulty in its efforts to produce a list of individuals to chair the various Conference committees. The Informal Group issued a proposed list of committee and working group chairmen prior to the Conference, and the heads of delegation met the day prior to the Conference to come to agreement in principle. Bearing in mind Nos. 63 and 74 inclusive of the General Rules of Conferences, Assemblies, and Meetings of the Union (Antalya, 2006) and the experience at previous conferences, committees, working groups, and sub-working groups and chairman thereof were established.

(*A listing of the committees, working groups, and sub-working groups and their respective chairmen is set forth in* ***Annex K****.)*

3.0 THE CONFERENCE

This section describes the U.S. Delegation's role at WRC-07 and highlights particular aspects of Delegation administration that helped to advance U.S. objectives. It also explains the dynamics present during the early days of the Conference and the challenges and opportunities the conference environment presented.

3.1 U.S. Delegation Organization, Activities, and Support

3.1.1 Organization and Role of the U.S. Delegation

When the Conference began on October 22, 2007, a U.S. Delegation of 157 was registered to participate, with Ambassador Richard M. Russell at its head. Approximately half of the delegates were U.S. government officials and members of the military who served as Government Advisors. Industry officials, consultants, and contractors who served as Private Sector Advisors made up the other half. In addition, a number of high-level government officials attended the Conference as Senior Government Advisors. Ambassador Russell named Richard C. Beaird of the Department of State, Edward Davison of the NTIA, and Alexander Roytblat of the FCC to serve as Delegation Vice Chairs, with Dr. Beaird serving as Alternate U.S. Representative to the Conference. A number of delegates also served in leadership positions as U.S. Delegation committee chairs, working group chairs, and agenda item spokespersons.

The U.S. Delegation met as a group each morning before the official WRC sessions began. In addition, the Ambassador met daily with the Vice Chairs and the Core Delegation. U.S. Delegation committees and working groups also met regularly throughout the Conference. The size of its Delegation and the depth and breadth of its experience and expertise ensured that the U.S. could cover every issue on the agenda and that the U.S. was represented at the many meetings that took place seven days a week, beginning in the morning and often continuing well into the evening.

(*A U.S. Delegation Organization Chart is set forth in* ***Annex F****. A list of U.S. Delegation committee and working party chairs, agenda item spokespersons, and members of the "Home Team" appears in* ***Annex G.***)

3.1.2 Facilities and Administrative Support at the Conference

Because it was clear well in advance that WRC-07 again would take place in Geneva, Switzerland, the Department of State -- working with the U.S. Mission in Geneva -- signed a contract and paid a deposit to the Geneva Conference Center to reserve a large room for the Delegation office and a smaller office for the Ambassador for the duration of the Conference. Located conveniently in a building adjacent to the Conference Center, the Delegation offices were set up to support a large working delegation for one month's time.[4] The Delegation secured the same large room that it

[4] The large room was divided so that part of the space could accommodate meetings of up to 30 persons. The remainder of the room contained computers with Internet access, four printers, a fax machine, a document shredder, and six telephones (including one IDD speaker phone). A copier, supply cabinet, and mailboxes were placed in the

used in WRC-03 and subdivided it to provide both meeting space for a group of up to 30 people and a Delegation workroom. Daily meetings of the entire Delegation took place in a more spacious location (Room B) in the basement of the nearby ITU headquarters. The U.S. also secured a meeting room in the ITU's Montbrillant Building for early morning meetings of the Core Delegation. Given the wide range of hotels in Geneva and many delegates' familiarity with the city, the U.S. decided against trying to place all the members of the Delegation in one hotel. The U.S. Mission in Geneva reserved blocks of rooms in the five hotels which were offered to members of the Delegation.

Executive Director of the State Department's Bureau of Economic, Energy and Business Affairs Joe Kenny visited Geneva a month before the Conference began in order to coordinate financial arrangements with the U.S. Mission for payment of certain expenses including the two State Department-funded representation events, a luncheon for the heads of all delegations and an evening reception at the residence of the Ambassador to the U.S. Mission in Geneva. In addition, a member of the Department of State's Office of International Conferences managed the Delegation office and assisted members of the Delegation. She was supported by staff from the U.S. Mission in Geneva as well as members of the Core Delegation. The State Department also supplied an IT specialist to assist with computer problems during the first week of the Conference and the Department of Defense provided organizational support.

The facilities met the needs of the Delegation. Computer support and provisioning of office supplies were very good. Most of the Delegation office supplies were shipped by the Department of State from Washington. This support level was instrumental in getting the Delegation's operations running effectively during the early days of the Conference.

3.1.3 Communications Support at the Conference

Telecom Resources. U.S. success depended on a well-informed and cohesive delegation, which at WRC-07 meant an electronically-connected delegation. Delegates found state-of-the-art electronic communication systems and devices indispensable for staying in close contact with each other, Delegation leadership and staff, with ITU and Conference officials, and with members of other delegations. Thus, U.S. Delegation members were expected to come to Geneva equipped with a laptop computer, cell phone, Blackberry, or comparable electronic device. The Department of Defense provided Blackberries and e-mail accounts for Ambassador Russell and several members of the Core Staff. The U.S. Mission in Geneva, the State Department, and members of the Home Team also assisted in arranging phone bridges for weekly press teleconferences and Home Team calls.

Internet Access. For WRC-07 delegates, keeping abreast of developments required Internet access. In keeping with recent ITU practices, WRC-07 officials relied on the ITU website to disseminate conference documents and schedules. Thus, Internet access became essential for staying informed of conference meeting times and developments. Many delegates also relied on the U.S. Delegation's internal website for access to up-to-date information and U.S. documents. Improved wireless broadband access in the ITU Conference Center's major meeting areas and

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hall. The Ambassador's office was also furnished with a computer, a printer, one IDD telephone and a lockable file cabinet.

high-speed Internet access in delegates' hotels facilitated use of laptops to access critical information as well as to report on developments, convey instructions to and from Delegation leadership, and communicate by e-mail or instant messaging. U.S. Delegation office workstations afforded additional Internet access to delegates and staff.

U.S. Delegation Website. As it had done for WRC-03, NASA hosted a U.S. Delegation website and provided web support. The website concept for WRC-07 was built upon the design used in 2003, with added features for safeguarding content. The 2007 website included lists of all U.S. documents pertaining to each agenda item, a regulated document posting and retrieval capability, a calendar of meetings and events, messaging capability, links to ITU and other websites, updates on the outreach program, and U.S. delegate information. To safeguard content on the site, access generally required generic passwords, with individual passwords needed to access certain sensitive or confidential information.

3.1.4 Country Outreach Program

The U.S. Delegation Country Outreach Program was a vital component of the U.S. effort in Geneva. Steps toward broader participation in a comprehensive outreach campaign began immediately following the U.S. Delegation's accreditation by the White House. Ambassador Russell appointed a Core Staff member who was well known by prospective delegates and had prior WRC experience to organize and lead the program. The principal objective for the WRC-07 U.S. Country Outreach Program was to mobilize other ITU member countries to support U.S. proposals and positions, coordinate on-going dissemination of pertinent information, and monitor various administrations' evolving views on items of interest to the U.S.

The program followed a team approach comprising 13 teams, of which 12 focused on regional or sub-regional breakouts of the ITU Member States, and one focused on international or interest-based organizations. The program leader oversaw the program's overall operations and acted as the liaison between the outreach teams and the Ambassador, Core Delegation, and agenda item spokespersons. In advance of the Delegation's arrival in Geneva, team leaders were appointed and delegates interested and available to participate were assigned to appropriate teams based upon their responses to a questionnaire soliciting information on language skills, work-related experience or interests, and personal connections with a particular region. Finalizing the outreach program structure and team assignments well in advance allowed for the outreach teams to hold preparation meetings prior to the Conference.

Once on the ground in Geneva, the U.S. Delegation immediately began its outreach effort. Each team leader quickly mobilized team members to determine whether delegates from assigned countries had arrived, identify heads of delegations, and report back. Having accurate information on a timely basis greatly facilitated planning outreach activities at the beginning of the Conference. The Outreach Program Lead's participation in the Ambassador's daily Core Delegation meetings also enhanced the exchange of information on up-to-the-minute status of key items of importance to the U.S., enabling Ambassador Russell and the Core Staff strategically to coordinate outreach event planning with substantive U.S. objectives as the Conference progressed.

Given the unpredictability of conference business, the outreach teams were vital in coordination of scheduled events and ad hoc meetings that the Ambassador and the U.S. Delegation hosted for members of other national delegations. Meetings between U.S. dignitaries serving as Senior Government Advisors and their foreign counterparts began the first day and continued through the last week of the Conference. In addition, three outreach receptions made possible through anonymous sponsorship contributions and organizational support from U.S. private sector entities ensured that representatives from every eligible country present at the Conference were invited to at least one U.S. event. With the representational sponsorship of Department of State, NASA, and the Department of Defense, the U.S. Delegation also hosted several focused receptions and dinners for selected foreign delegates. The Department of Defense provided additional representational support enabling Ambassador Russell to host a number of ad hoc working meals to discuss items of particular importance with small groups or individual heads of key delegations. For these ad hoc meetings in particular, the outreach teams played a critical role in facilitating foreign delegates' participation on very short notice. The result was an effective outreach program which allowed Ambassador Russell the opportunity to communicate with other administration leaders in a close and personal way, greatly helping to gather support for U.S. and CITEL positions.

*(A list of the leadership and members of the Country Outreach program is set forth in **Annex H**. and a list of U.S.-hosted outreach events at WRC-07 is set forth in **Annex I**.)*

3.1.5 NASA Information Booth

The ITU provided space in the Geneva Conference Center for information booths and exhibits sponsored by various governmental and private sector organizations. As it did for WRC-03, NASA developed and sponsored an information booth featuring a different aspect of the space science services during each of the first three weeks of the Conference. The first week featured "Space Science Providing Societal Benefits," which was intended to convey the benefits of remote sensing to the developed and developing nations. During the second week, the booth's theme was "Vision for Space Exploration," which highlighted NASA's exploration programs and coincided with the NASA-hosted U.S. reception featuring veteran astronaut Capt. Michael Lopez-Alegria. For the third week the theme "AeroTelemetry – AeroSafety" presented the value of aeronautical telemetry to aviation safety.

The booth was very popular, generating over 1500 visits during its operation. From the amount of information distributed, the discussions that occurred, and the positive comments received, the NASA exhibit succeeded in conveying a positive message on important issues at stake at the Conference by raising the profile of space science benefits and the importance of aeronautical telemetry.

3.1.6 U.S. Delegation Public Affairs Effort

Building on experience from previous WRCs, the U.S. Delegation to WRC-07 devised and executed a comprehensive and coordinated public affairs strategy designed to inform key constituencies and the general public about developments at the Conference and the achievements of the U.S. Delegation. The Delegation's media liaison began implementing the strategy well

before the Conference by coordinating press interviews with Ambassador Russell and inviting reporters in Washington to a press roundtable at the White House.

A new feature of the WRC-07 effort was the launch of a public website for the dissemination of information about the Conference and the U.S. Delegation. Throughout the Conference, this website, which was hosted on the Department of State's website as a separate entity from the internal U.S. Delegation website, continued to serve as a repository for press releases and announcements and facilitated the dissemination of press releases, announcements, and public documents so that reporters, interested stakeholders and the general public could retrieve the public information they needed without having to locate a U.S. Delegation staff member and request assistance to obtain information. A strong media relations effort continued in Geneva. In addition to keeping the U.S. media informed, the Delegation sought to increase international coverage of U.S. efforts at the Conference through greater interaction with the foreign press. The press staff of the U.S. Mission in Geneva assisted this undertaking by arranging a press conference on the WRC-07 opening day at the United Nations Palais des Nations and inviting Geneva-based members of the international press corps. The Ambassador also held a teleconference briefing for the press in the Delegation office during each of the second and third weeks of the Conference and a final press teleconference on the Conference's concluding day. Reporters from both U.S. and foreign press organizations participated either in person or by telephone. In addition, leadership of the constituent U.S. government agencies and departments who came to Geneva to fulfill their roles on the U.S. Delegation attended and participated in the first three teleconferences, and Argentina's Sergio Scarabino, Chairman of CITEL's WRC Preparatory Group, joined Ambassador Russell at the final U.S. press event.

In addition to organizing the press teleconferences and staffing all briefings, the media relations liaison took questions from reporters throughout the Conference and obtained verified and authorized responses from the Head of Delegation. Whenever feasible, the liaison pursued impromptu interview requests for reporters, particularly during the final hours of the Conference, when the decisions were being made that would define the outcome and results. The liaison also monitored press coverage and kept a clipping file that enabled the Ambassador and the Delegation to track the progress of media attention regarding the negotiations and the results of the Conference.

(*Links to press coverage of the U.S. at WRC-07 are included in* ***Annex J****.)*

3.2 Overall Conference Structure

Conference officials, committee chairmen, and committee vice-chairmen were selected to provide a balanced representation from the five ITU administration regions—Africa, the Americas, Asia, Eastern Europe and Western Europe—as well as from the Arab Group. The Chairman of the Conference was Mr. François Rancy (France) and there were six vice-chairs: Ambassador Richard M. Russell (United States), Mr. Anders Frederich (Sweden), H.E. Mr. Leonid Reimann (Russian Federation), Mr. Festus Yusuf Naira Daudu (Nigeria), Mr. Habeeb K. Al-Shankiti (Saudi Arabia), and Mr. Rabindra Nath Agarwal (India).

The Conference established seven committees, each of which was assigned specific agenda items. These committees and their chairmen were:

COM 1 (Steering Committee) — Mr. François Rancy (France)
COM 2 (Credentials Committee) — Mr. Sékou Coulibaly (Mali)
COM 3 (Budget Control Committee) — Mr. Carlos Merchán (Mexico)
COM 4 (Specified Agenda Items) — Mr. Marc DuPuis (Canada)
COM 5 (Specified Agenda Items) — Mr. Akira Hashimoto (Japan)
COM 6 (Future Agenda Items and Work Program — Mr. Albert Albandian (Armenia)
COM 7 (Editorial) — Mr. François Sillard (France)

In addition, the ITU provided staff and secretariat support for all Conference activities as follows:

Secretary of the Conference:	Dr. Hamadoun I. Touré, ITU Secretary General
Executive Secretary:	Mr. Jean-Paul Lovato
Administrative Secretary:	Mr. Idrissa Samake
Plenary Meeting and Committee 1 (Plenary and Steering):	Mr. Fabio Leite
COM 2 (Credentials):	Mr. Max Henri Cadet
COM 3 (Budget Control):	Mr. Raymond Chalandar Mr. Jean-Paul Lovato
COM 4: (Specified Agenda Items)	Mr. Wolfgang Frank
COM 5: (Specific Agenda Items)	Mr. Alexandre Vassiliev
COM 6 (Future Agenda and Work Program):	Mr. Philippe Aubineau
COM 7 (Editorial):	Mme Maria A. Pardell Perez

(*The WRC-07 committee structure, committee chairmen, and terms of reference are given in more detail in* ***Annex K.***)

3.3 Conference Dynamics

WRC-07 began on a positive note. Pre-conference apprehension caused by the Informal Group's inability to recommend a Conference Chairman suddenly lifted when ITU Secretary General Hamadoun Touré succeeded in breaking the stalemate on the day before the Conference started. The Conference quickly approved a compromise candidate, the well-respected spectrum expert and WRC veteran François Rancy of France, by acclamation.

With the chairmanship no longer in doubt, the important business of the Conference got underway. In his remarks at the opening ceremony, Secretary General Touré continued in a positive vein by announcing that the ITU Council had recently passed a balanced budget, averting a potential financial crisis and leading the ITU to the next WRC "through untroubled waters." In addition, he stressed the importance of the art of compromise and expressed great confidence in a successful outcome: "I have no doubt that, together, despite the very high issues that are at stake for this conference, we will succeed." Even on the most difficult agenda items, WRC-07 took the Secretary General's words on the importance of compromise and consensus to heart. The

delegates worked diligently to reach compromises, allowing the Conference to proceed to a final decision without entering into a voting process.

ITU Radiocommunication Bureau Director Valery Timofeev and WRC Chairman Rancy quickly set a "no nonsense" tone. They announced that to a greater extent than ever before, the Conference's Budget Committee would be assessing the financial impact of decisions on every agenda item. They also made known their intention to set early deadlines for the completion of committee work on various agenda items and to schedule regular work sessions into the evenings and during weekends from the onset of the Conference. The agenda items were grouped by the difficulty estimated in achieving consensus. Easily resolved items were scheduled to be completed in committee by the end of the second week; those more difficult, by the end of the third week; and those most difficult by the beginning of the fourth week. This aggressive framework ensured that the focus would be on those items where difficulties were expected. Aware that the decisions they faced could unleash the potential of impressive new technologies and shape the future of wireless communications, the delegates set to work with seriousness of purpose and an impressive sense of professionalism.

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4.0 OUTCOME OF THE CONFERENCE

This section explains in greater detail how the results of the Conference met U.S. objectives. To convey the dynamics at play during the Conference, the section is subdivided by committee, with the agenda items assigned to each committee enumerated and described accordingly. Changes to the Radio Regulations resulting from Conference action on these agenda items are set forth in The Provisional Final Acts of WRC-07, available at *http://www.itu.int/md/R07-WRC07-R-0001).*

4.1 COM 1 – Steering Committee

The Conference Chairman, Mr. François Rancy, chaired the Steering Committee, which was made up of the Conference vice-chairmen and the chairmen and vice-chairmen of each of the other committees. Ambassador Richard Russell was the U.S. spokesperson in COM 1, and Dr. Richard Beaird served as alternate spokesperson.

The principal role of the Steering Committee was to coordinate all matters connected with the smooth execution of work and to plan the order and number of Conference meetings, taking into account the Conference's resources. In practical terms, COM 1 served as a mechanism to support the Conference Chairman in successfully managing and concluding the work of each WRC. The U.S. objective in this committee was to achieve a successful WRC outcome within the predetermined schedule and budgeted resources. Those objectives were met through the successful conclusion of the Conference.

Steering Committee meetings were held each week during the Conference. In general, the discussions focused on the fundamentals of Conference scheduling and the support being offered by ITU staff. Frequently, the schedule of committee meetings or working group meetings as proposed by the ITU Secretariat was adjusted and coordinated in response to the demands of the work.

4.2 COM 2 – Credentials Committee

The Chairman of COM 2 was Mr. Sékou Coulibaly (Mali), and its Vice Chairmen were Mr. Joao Albernaz (Brazil), Mr. Viktor Burmistenko (Ukraine), and Mr. Maurice Ghazal (Lebanon). The U.S. spokesperson for COM 2 was Ms. Anne Jillson.

The U.S. objectives for this committee were to ensure the verification of the credentials of each of the delegations present at the Conference. The U.S. also sought to ensure that correct procedures were followed for transfers of power permitting one country's delegation to represent another country, and, in particular, that there were no issues with transfers of power to the U.S. from the Republic of the Marshall Islands and the Federated States of Micronesia.

At its first meeting, the Credentials Committee set up a working group to examine credentials in order to ensure that they met the standards outlined in Article 31 of the ITU Convention. The U.S. participated in the working group, which met twice under the leadership of Mr. Albernaz. The working group's reviews of credentials found a number of problems with certain credentials, and

the ITU Secretariat requested clarifications from these delegations and from their capitals. No political issues arose during the discussions.

The U.S. received a transfer of power from the Republic of the Marshall Islands, which was unable to send a delegation to the Conference. Because the Marshall Islands had lost its vote due to arrears in its payments to the ITU, the transfer allowed the U.S. only to sign the Final Acts of the Conference on the Marshall Islands' behalf, but not to exercise its right to vote. In addition, acting on behalf of the Marshall Islands, the United States made a declaration that it reserved for the Government of the Republic of Marshall Islands the right to make any declarations or reservations necessary to Marshallese interests should declarations or reservations made by other Member States jeopardize the proper operation of the telecommunication services of that Republic.

Separately, the U.S. sought a transfer of power to vote on behalf of the Federated States of Micronesia, whose delegation was not able to stay for the entire Conference. Upon agreement from the Micronesian delegation and with the assistance of ITU Secretariat personnel working with the Credentials Committee, a Conference document was prepared advising it of this transfer of powers. This is the first time that a country has obtained transfers of powers from two different countries -- one to sign the Final Acts and another to vote on all Conference issues that might come up for a vote.

Committee 2 reported to the Plenary that a final total of 150 countries were entitled to vote and to sign the Final Acts. Five countries present without the right to vote deposited satisfactory credentials and, therefore, obtained the right to sign the Final Acts. Another seven countries either did not deposit credentials or deposited credentials that were not in order. These countries could neither vote on nor sign the Final Acts.

4.3 COM 3 – Budget Control

The Chairman of COM 3 was Mr. Carlos Merchán (Mexico), and its Vice-Chairmen were Mr. Gulam Abdullayev (Azerbaijan), Mr. Mohamed Soliman (Egypt), and Mr. Feibo Xie (China). Mr. William Jahn was the U.S. spokesperson for COM 3.

The U.S. sought to ensure that the Conference finished its work within budget, considered the financial consequences of its decisions, and determined their effect on the ITU budget for 2008-2009 and 2009-2010 budgetary periods.

The Conference completed its work 37,000 Swiss francs (CHF) under budget, primarily because of the reduced cost of interpretation, although the budget control committee estimated 5.6 million CHF of financial consequences. The Radio Regulations Board (RRB) will analyze the potential financial implications that could arise from the implementation of Resolution **80** (**Rev. WRC-07**) and inform the Council at its 2008 session, through the Director of the Radiocommunication Bureau (BR) of the results of its analysis. The Director of the Radiocommunication Bureau confirmed that there were no funds in the 2008-2009 budget for implementation of the WRC decisions. Thus, to the extent that costs cannot be addressed through efficiencies, they will need -

funding either from the ITU reserve account, by transfer of funds from other budget categories, or by delaying their implementation.

Because this was the first WRC to effectively consider the budgetary implications of the decisions and Resolutions adopted, discussions concerning funding necessarily took place. The decision of how to fund the implementation costs was left to the Council and to the chairmen of Committees 3 and 4 to explore options for reducing the financial consequences of the Conference decisions. Lost revenues resulting from discontinuance of two maritime publications produced 3.880 of the 5.6 million CHF of identified consequences. The committee chairmen recommended, and the Conference agreed, that the discontinuance of the publications be delayed 21 months until the end of the budgetary period, thus reducing the loss of revenue to 1.940 million CHF. Prior to the 2008 Council meeting, the BR will confirm the cost implications of the conference decisions and whether existing resources can cover them. Considering that this was the first ITU conference to actually determine and take into account the financial consequences of its decisions, the Conference handled the matter very well, thus achieving U.S. objectives.

4.4 COM 4 – Specified Agenda Items

The Chairman of COM 4 was Mr. Marc DuPuis (Canada), and its Vice-Chairmen were Mr. Naser Al Rashedi (United Arab Emirates), Dr. George Drossos (Greece), and Mr. Olabode Sunday Oroge (Nigeria). The U.S. spokespersons for COM 4 were Dr. Darlene Drazenovich and Mr. Dante Ibarra. The Committee dealt with the following issues:

4.4.1 Upgrading radiolocation service and extending primary allocation to Earth exploration and space research (Agenda Item 1.3)

Agenda Item 1.3 is comprised of two distinct issues:

- Consider upgrading the radiolocation service (RLS) to primary allocation status in the bands 9000-9200 MHz and 9300-9500 MHz; and
- Consider extending the Earth exploration-satellite service (EESS) (active) and space research service (SRS) (active) allocations in 9500-9800 MHz by as much as 200 MHz.

U.S. Objectives: The United States supported the following proposals under Agenda Item 1.3 to the Conference:

- Upgrade the radiolocation service to primary status in the bands 9000-9200 MHz and 9300-9500 MHz with a footnote giving the radionavigation service priority over the radiolocation service in both frequency bands in order to protect the safety of life nature of many systems operating in the radionavigation service, especially as technology evolves in both services.

- Allocate an additional 200 MHz of spectrum to the Earth exploration-satellite service (EESS) (active) and the space research service (SRS) (active) in the frequency band 9300-9500 MHz. This will provide 500 MHz of contiguous spectrum (9300-9800 MHz).

- Suppress Resolution **747 (WRC-03)**, because the studies requested in it had been accomplished.

Activities and Accomplishments: The United States successfully achieved its objectives for this agenda item.

The upgrade of the radiolocation service to primary status in the 9000-9200 MHz and 9300-9500 MHz was widely supported. The application of a footnote to provide the radionavigation service priority over the radiolocation service also had widespread support, except from European Conference of Postal and Telecommunications (CEPT) Administrations. CEPT did not support the requirement for a footnote, believing that it placed the radiolocation service at a disadvantage if a future non-radar system operating in the radionavigation service were deployed and was found to be incompatible with the radiolocation service. Compromise text supported the need for a footnote and provided priority only to radar systems operating in the radionavigation service. All interested administrations eventually agreed to the compromise, and the Conference adopted the footnote. The U.S. was satisfied with the compromise and resulting text of the footnote, since the upgrade would not adversely impact its radionavigation systems.

There was significant support for extending the EESS (active)/SRS (active) allocation, on a primary basis, into the 9300-9500 MHz band for 500 MHz of contiguous spectrum (9300-9800 MHz). A small number of administrations proposed extending the allocation into 9800-10,000 MHz rather than 9300-9500 MHz. Additionally, CEPT proposed an allocation in the 9800-9900 MHz band, in addition to a 200 MHz extension in the 9300-9500 MHz, providing a total extension of 300 MHz (600 MHz of contiguous spectrum). Most administrations at WRC-07 took the position that the CEPT proposal was outside the scope of the agenda item and did not support an additional 100 MHz allocation. Ultimately, the EESS (active) and SRS (active) extension was adopted by the Conference in the 9300-9500 MHz band on a primary basis with a footnote protecting the radionavigation and radiolocation services. The Conference also allocated 100 MHz (from 9800-9900 MHz) for these purposes on a secondary basis, also on condition that it not create interference to or seek protection from stations in the fixed services to which the band is allocated on a secondary basis.

In conclusion, with the adoption of the above issues by the Conference, the suppression of ITU R Resolution **747** (**WRC-03**) was enacted.

4.4.2 Frequency-related matters for the future development of IMT 2000 and systems beyond IMT 2000 (Agenda Item 1.4)

This agenda item, which held the key to future worldwide deployment of advanced terrestrial wireless services known as international mobile telecommunications ("IMT"), was one of the most highly-visible and contentious on the WRC-07 agenda. Its main purpose was to make additional spectrum available for wireless broadband on a harmonized worldwide basis. Seven specific bands were under consideration for possible identification: (1) 410-430 MHz; (2) 450-470 MHz; (3) 470-806/862 MHz (including the "700 MHz band" that will soon make spectrum available as a result of the U.S. digital television transition); (4) 2300-2400 MHz; (5) 2700-2900 MHz; (6) 3400-4200 MHz (the C Band); and (7) 4400-4990 MHz.

Two additional issues also arose in connection with this issue. First, there was a hotly-contested pre-conference dispute over what technologies and services would be included as IMT technologies. This matter threatened to come up at the Conference but was resolved to U.S. satisfaction by including WiMax in IMT just before WRC-07 began. In addition, the Conference was asked to consider measures to encourage worldwide deployment of mobile-satellite Service systems with an ancillary terrestrial component (MSS ATC).

U.S. Objectives:

A. In the matter of the services and technologies to be given IMT status, the U.S. favored a more expansive approach that permitted as many new technologies and services as possible to be deployed as IMT. The U.S. also sought to have this issue resolved through a separate ITU working party process rather than by the Conference.

B. On the issue of spectrum identification for IMT, the U.S:

- Supported identification of a portion of the 470-806/862 MHz band known as the "700 MHz band" (698-806 MHz) for IMT;
- Strongly opposed either global or regional identification of the 3400-4200 MHz "C-band";
- Sought to maintain No Change (*i.e.*, no identification for IMT) in bands 410-430 MHz. 2300-2400 MHz, 2700-2900 MHz, and 4499-4990 MHz; and
- Did not object to identification of the 450-470 MHz band as long as there was recognition of other (non-IMT services in this band, particularly public safety.

C. The U.S. supported a non-binding Recommendation by the Conference that had the effect of encouraging deployment of MSS ATC but that did not mandate studies capable of causing undue delay or otherwise impeding MSS ATC deployment.

Activities and Accomplishments: Through a compromise that overcame divisions within the Conference, the U.S. achieved its goals in all three areas at issue in Agenda Item 1.4. Consistent with U.S. objectives, the Conference: (1) adopted measures opening the way for worldwide deployment of WiMax and other advanced terrestrial wireless services in the 700 MHz band; (2) declined to identify the C-band for IMT either globally or regionally; and (3) took action encouraging deployment of MSS ATC in a non-binding recommendation that was acceptable to the U.S.

A. The difficult deliberations over which technologies and services would be given IMT status continued almost up to the start of the Conference but concluded successfully just before WRC-07 began. In the months preceding the Conference, a separate ITU working group attempted to determine whether WiMax and other advanced services could be included within the IMT designation. When that process failed to open IMT to as wide an array of new technologies and services as the U.S. had supported, the issue went before the ITU Radio Assembly (RA), which ruled in favor of the U.S. and other proponents of an expansive approach. The RA's action prevented the matter from coming up in the Conference and avoided a lengthy debate that could well have diverted substantial time and resources from other pressing Conference business.

B. With the IMT status issue having been settled before the Conference, the delegates immediately turned to the task of identifying spectrum for IMT. It soon became evident that making a generous swath of globally harmonized spectrum available would be difficult because the candidate bands often were already in use or were targeted for specific future use by operations which varied from country to county or region to region. At an early informal meeting of Regional Group leaders, the Conference Chairman recommended that this item be accomplished through an approach based on trade-offs and linkage of bands in a comprehensive package. The concept received mixed reviews from delegates, but it was obvious that the bands could not be approved individually. Moreover, it was unclear which bands ultimately would make it into the package and under what conditions.

Consistent with the U.S. opposition to IMT identification of the 410-430 MHz band, the Conference quickly eliminated the 410-430 MHz and 2700-2900 MHz bands from further consideration. The Conference showed little interest in identifying the 4400-4990 MHz band but acceded to one member state's request and waited until later in the Conference to dispose of that band. The most widely supported bands were the 450-470 MHz band (which the U.S. did not support due to its use for public safety and disaster relief) and the 2300-2400 MHz band. They were quickly sent to drafting groups to develop appropriate text for identification with little controversy.

The Conference was deeply divided over identification of the 700 MHz band and the 3400-4200 MHz C-band. While there was strong support for the 700 MHz band from the U.S. and some other countries in Region 2, the band was fiercely opposed by European CEPT countries. Although countries in other regions -- and even a few CITEL countries -- were not adamantly opposed to identifying the 700 MHz band in the future, they were reluctant to commit to it until after their national television systems had converted to digital. When it looked as though a stalemate was in the offing, CITEL emerged as the regional leader that brought the Conference to consensus.

The U.S. and other countries first formed a nucleus within CITEL to develop a compromise plan providing for identification of the 700 MHz band on a phased-in basis, with: (i) approval by each country's administration upon completion of its digital transition; and (ii) subject to coordination with its neighboring countries. Consistent with U.S. objectives, the plan did not provide for either worldwide or regional identification of the C-band, but addressed the matter by permitting individual countries to opt in to identification through a country footnote mechanism. After gaining unified support for the plan within CITEL, the CITEL countries reached out to their colleagues from countries which were reluctant to support identifying of the 700 MHz band mainly because of timing. The CITEL alliance also sought support from countries that recognized the advantages of an opt-in approach to identification of the C-band. Eventually, the compromise plan gained enough support to overcome CEPT's staunch opposition, and the Conference achieved consensus on the following outcomes:

- <u>700 MHz band</u>: Allocation to mobile service on a primary basis and identification of 700 MHz band for IMT in the Americas region (Region 2); identification of 790 MHz and above for Regions 1 and 3; identification of the 700 MHz through a country footnote in China, South Korea, India, Japan, New Zealand, and Singapore This approach, which included the phased-in country approval and coordination conditions of the compromise

plan, opened the way for IMT in the 700 MHz band in countries in other regions, including those comprising a market of three billion consumers. This outcome also was beneficial for both the imminent U.S. digital television transition and the auction of the 700 MHz spectrum being vacated by analog broadcasting.

- C-band: Consistent with U.S. objectives, the Conference did not identify the C-band on either a world-wide or regional basis, but allowed country footnotes by Region to identify parts of the C- band for IMT as provided in the compromise plan. This outcome protects the continued operation of approximately 160 satellites that currently use C-band frequencies to provide essential and critical services to consumers. These satellites as well as many that are under construction represent a global investment in excess of $40 billion.

- 450-470 MHz and 2300-2400 MHz specific bands: The Conference also identified the 450-470 MHz and 2300-2400 MHz bands for IMT with protections for the U.S. and Canada, which use the 450-470 MHz band for public safety networks, use the 2300-2400 MHz band for aeronautical mobile service for telemetry, and also intend to use parts of the 2310-2360 band for broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting. The U.S. modified associated Resolutions and, jointly with Canada, introduced two Declarations to the Final Acts of WRC-07 in order to ensure that the IMT identifications in these bands will not impede existing or planned operations. (The U.S./Canadian statements are set forth in ***Annex L***, *U.S. Declarations and Reservations.*)

C. Although the U.S. had not submitted a proposal on this subject prior to the Conference, the U.S. saw an opportunity to secure Conference recognition for MSS ATC systems as the Conference progressed. Accordingly, the U.S. Delegation decided to propose a draft recommendation that could be used as a guideline for administrations wishing to implement MSS-terrestrial systems. Once again, CITEL members' support helped bring the matter to a successful conclusion. The non-binding Recommendation providing guidance for countries wishing to implement MSS ATC will serve as an important endorsement for international deployment of MSS ATC systems. Moreover, language in the Recommendation inviting the ITU-R to conduct studies was sufficiently flexible to meet with U.S. objectives.

4.4.3 Harmonized spectrum for aeronautical telemetry (*Agenda Item 1.5*)

This agenda item addressed the rapidly growing demand for aeronautical flight test telemetry spectrum. There is a large and growing shortfall in spectrum that is necessary to conduct aeronautical telemetry. The shortfall is due to rapidly increasing telemetry data rates associated with the testing of new technologies. The shortfall is exacerbated by the loss of telemetry spectrum diverted to other than telemetry applications.

U.S. Objectives: The U.S. objectives for this agenda item were to obtain recognition in the Radio Regulations that use of the 4400-4940, 5925-6700 and 5091-5150 MHz bands for aeronautical mobile telemetry (AMT) under certain technical and operation restrictions could be accomplished without disruption to existing incumbent services. The United States sought to obtain global recognition of the 5091-5150 MHz band for use by AMT and, at a minimum, Region 2 use of the bands 4400-4940 and 5925-6700 MHz, with particular importance placed on gaining at least a

footnote permitting AMT use, including Canada, Mexico, and the United States, which would facilitate future bilateral coordination of telemetry operations with incumbent services and systems in these important border countries.

Activities and Accomplishments: The U.S. fully achieved its objectives of obtaining additional spectrum to support the growing demand for AMT used for flight testing within the United States. WRC-07 addressed several issues in making additional spectrum available for use under the aeronautical mobile service for aeronautical telemetry for flight-testing. Importantly, the United States was allowed, by agreement of the meeting, to examine spectrum already allocated to the mobile service on a primary basis under *Issue 1* of Resolution **230 (WRC-03)**, which governed WRC-07 examination of bands for AMT. This agreement avoided a contentious discussion on whether such existing primary mobile service bands were outside the scope of the agenda item, an issue that potentially could have derailed United States objectives under this agenda item. Under *Issue 3*, additional primary mobile service allocations were examined for potential use for AMT. *Issue 2* (examination of possible upgrades to existing secondary allocations to the mobile service) and *Issue 4* (examination of bands above 16 GHz for possible use by AMT) received no attention or action at the WRC, which was consistent with the Conference Preparatory Meeting (CPM02-07) Report and U.S. objectives.

Early in discussions at WRC-07, it was apparent that there was a regional solution to the agenda item that could be supported by virtually all administrations and which met United States objectives. The compromise, which was essentially a regional solution, entailed the use of the bands 4400-4940 and 5925-6700 MHz bands only in Region 2; use of the band 5150-5250 MHz in Region 1 only; and use of the band 5091-5150 MHz in all three ITU-R Regions. The regional solution was made viable when it became evident that the number of countries in Region 1 that would use the band 5150-5250 MHz would be limited to Europe and some African countries (that would likely do little, if any flight testing), thus limiting potential aggregate interference to uplinks used by mobile-satellite service (MSS) systems in the 5091-5250 MHz band. WRC-07 ultimately allocated the bands 4400-4940 and 5925-6700 MHz to Region 2 (with the addition of Australia in Region 3 for the 4400-4940 MHz band only), 5091-5150 MHz globally, and 5150-5250 MHz to Region 1 (with exception of the Arab Group administrations but with the inclusion of Brazil in Region 2). Noteworthy in the process of obtaining favorable WRC-07 action relative to making bands available in Region 2 for AMT was the crucial and extensive cooperation that the United States received from Canada throughout the WRC-07 regional preparations (e.g., the Organization of American States/CITEL meetings) and during the WRC-07 itself.

This outcome directly benefits U.S. commercial and defense aerospace interests while protecting incumbent services in the bands within Region 2. The ease with which this agenda item was addressed at WRC-07 was a direct reflection of the hard work and difficult discussions that preceded the WRC-07 in ITU-R Working Party 8B and the outreach efforts prior to WRC-07 between the United States and interested administrations.

4.4.4 Additional spectrum to support modernization of civil aviation communication systems (*Agenda Item 1.6*)

This agenda item addresses two ITU-R Resolutions (Resolutions **414 (WRC-03)** and **415 (WRC-03)**) and four issues related to the aeronautical mobile (R) service and modernization of civil

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aviation telecommunications systems. Issues A to C relate to additional allocation of spectrum for AM(R)S in parts of the bands between 108 MHz and 6 GHz. Issue D relates to use of current satellite frequency allocations to meet aeronautical requirements to support the modernization of civil aviation telecommunication systems, especially those in developing countries, paying particular attention to those radio frequencies that could be used to support both ICAO Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) systems and other non-aeronautical telecommunication services.

U.S. Objectives: Under this agenda item the U.S. sought:

- No change to allocations in the band 108-108 MHz (in order to protect the FM radio band);
- Aeronautical mobile (R) service (AM(R)S) allocations in the 960-1164 MHz, 5000-5030 MHz and 5091-5150 MHz bands; and
- Suppression of Footnote No. 5.198.

Activities and Accomplishments The U.S. was largely successful in reaching its goals at WRC-07 regarding Agenda Item 1.6.

The U.S. succeeded in obtaining additional protection for adjacent-band FM radio broadcasting from aeronautical communication applications from 108-117.975 MHz. Considerable support from other administrations for making more generic the existing limitations on AM(R)S to navigation and surveillance applications led to a compromise. It made the AM(R)S allocation above 112 MHz more generic and provided additional protection to the broadcast service operating below 108 MHz by restricting the existing AM(R)S allocation in 108-112 MHz to only the international standard ground based augmentation system (in United States called the local area augmentation system (LAAS) which had already shown compatibility with the broadcasting service. With that adjustment, the U.S. was able to agree on the change above 112 MHz.

Regarding the 960-1164 MHz band, the U.S. goal was to restrict the allocation to 960-1024 MHz. However, due to considerable support for extending the allocation all the way to 1164 MHz, the compromise reached allocates the full 960-1164 MHz band, but restricts use of the 1024-1164 MHz portion until all compatibility studies with the aeronautical radionavigation and radionavigation satellite services are complete.

At the outset of the Conference there was approximately an equal split between countries supporting the proposed 5000-5030 MHz band allocation, and those opposing it. The balance shifted during the Conference. The delegates reached a compromise deferring a decision until WRC-11 and permitting continued study of the band within the ITU-R in the interim. Thus, the possibility remains for development of equipment capable of operating on those frequencies should they be made available at WRC-11.

The U.S. also was fully successful in achieving its goals for the 5091-5150 band and the suppression of Footnote No. 5.198. All ITU-R regional groups came to an early consensus on this frequency band and suppression of the footnote.

It also should be noted that the Conference adopted two additional measures under Agenda Item 1.6. The first provided an allocation in the 5091-5150 MHz band to support systems providing secure and confidential radiocommunication intended for systems used in response to unlawful interruption of aircraft operations. The second added a Recommendation to the Radio Regulations giving guidance to developing countries on civil aviation use of very small aperture terminals (VSAT) operating in the fixed-satellite service. This latter item was a result of requests from a number of African states and considered it a high priority to the African administrations. The United States, Canada, and the United Kingdom played key roles in helping draft acceptable text for adoption by WRC-07.

4.4.5 Protection of terrestrial services from satellite interference (*Agenda Item 1.9*)

This agenda item addressed the following band sharing and interference issues involving terrestrial and satellite services in frequency bands from 2500-2690 MHz:

A. Necessary Power Flux-Density Limits. WRC-03 recognized the need to review the technical, operational, and regulatory provisions applicable to the space services' use of the 2500-2690 MHz band in order to facilitate sharing with current and future terrestrial services. To that end, the first ITU Conference Preparatory Meeting for WRC-07 (CPM06-1) established a joint task group (JTG 6-8-9) to conduct studies on this issue. The JTG 6-8-9 developed a methodology for estimating the satellite pfd values required to protect terrestrial services.

B. Mobile-Satellite Service. The 2500-2520 MHz band is allocated to MSS (space-to Earth) paired with MSS (Earth-to-space) allocation in the 2670-2690 MHz band and is one of the key bands for WiMax deployment around the world. In general, co-frequency sharing between MSS and terrestrial services has been found to be difficult by the ITU-R studies. The agenda item proposed a new regulatory provision that would limit MSS downlinks in the 2500-2520 MHz band to national and regional systems only.

C. Transitional Services. In order to ensure protection of terrestrial services in the 2500-2690 MHz band, it was necessary to address transitional measures associated with the revised pfd limits in Article 21. Specifically, it was necessary to define the date of entry into force of the new power limits, as well as the revised footnotes to Article 5, and to define which satellite network filings would be subject to the new pfd limits in the Radiocommunication Bureau's processing of filings under Articles 9 and 11 of the Radio Regulations.

U.S. Objectives: The underlying U.S. objective for this agenda item was to ensure prompt implementation of the maximum possible protection from interference for current and future domestic advanced terrestrial wireless services in the 2500-2690 MHz band. Specifically, the U.S. sought the following Conference action:

A. Modification of power flux-density limits in Table 21-4. The U.S. proposed pfd limits to facilitate FSS, BSS, and MSS sharing with current and future terrestrial services in the 2500-2690 MHz band and to provide necessary safeguards for the terrestrial (FS and MS) systems in the band. The proposed modification also would provide regulatory certainty to satellite services by

making a defined set of pfd limits known and by eliminating the requirement for extensive coordination with uncertain outcome.

B. Adoption of a new footnote to Article 5 of the Radio Regulations that would limit the use of the 2500-2520 MHz band by the mobile-satellite service to national and regional systems. Restricting MSS to national and regional systems would further facilitate sharing between MSS and terrestrial services.

C. Adoption of a new Resolution stipulating that such limits would apply to the satellite systems for which complete notification information had been received by the Radiocommunication Bureau after 17 November 2007 (final day of WRC-07) for systems brought into use after 31 December 2008 (i.e., transitional regulatory measures).

Activities and Accomplishments: The U.S. achieved its primary objective, ensuring protection from interference for its domestic terrestrial services, and thereby facilitating successful deployment of WiMax and other advanced terrestrial wireless services in the U.S. and around the world.

Several administrations from the Asia-Pacific region which have satellite operations in the band considered current pfd levels as appropriate for sharing between space services (mainly BSS) and terrestrial services. Accordingly, they opposed U.S. efforts and advocated No Change to the pfd levels in Article 21. CITEL supported both the pfd limits and the transitional measures consistent with the U.S. proposal and also proposed to suppress the MSS allocations in the 2500-2520 and 2670-2690 bands in Region 2. CEPT proposed new pfd limits in Article 21 as hard limits for all satellite services in 2500-2690 MHz. CEPT also proposed that the new limits should apply to all satellite networks which were not notified by the end of WRC-07 and brought into use by December 31, 2008. In addition, CEPT proposed to remove application of Footnote No. 9.19 to the BSS band, so that terrestrial stations need not coordinate with BSS receiving earth stations located on the territory of another administration.

After difficult discussion, the Conference adopted the following compromise, which was acceptable to the U.S. and consistent with all U.S. objectives:

- Suppress mobile-satellite service allocation in bands 2500-2535 MHz and 2655-2690 MHz in Region 1 and Region 2. As there is no U.S. domestic MSS allocation in these bands, this action is consistent with U.S. objectives to protect terrestrial services in the band 2500-2690 MHz.
- Revise the power flux-density limits applicable to the broadcast-satellite service and fixed-satellite service in the band 2500-2690 MHz. Apply the same pfd limits to the mobile-satellite service in the band. The revised pfd limits range from -136 dB (W/m^2) to -125 dB (W/m^2) depending on the angle of arrival. These revised pfd limits are consistent with U.S. objectives, providing even greater protection to terrestrial services than the United States originally proposed. (i.e., -122/-136dB (W/m^2).
- Apply the revised pfd limits to all satellite frequency assignments in the band (coordination and notification filings) that were received by the Bureau after 14 November 2007 (before the end of WRC-07). This transitional approach to the revised satellite pfd limits

eliminates any uncertainty of possible interference to the terrestrial services from satellites that may be deployed in the future.

- Allow mobile satellite networks to continue to provide services in Japan and India under the old pfd limits regime but only for operation limited to within national boundaries. The operation of these satellites poses no problem for terrestrial services in the U.S. because the visibility/service area of these satellites is confined to well outside U.S. territory.
- Allow the following ten broadcast satellite networks to continue to provide services under the old pfd limits regime. These satellite networks are not visible from the United States territory and therefore have no potential for causing interference to the terrestrial services:
    - Two from Arabsat (ARABSAT 5A at 30.5E and ARABSAT 5B at 26E);
    - Three from China (CHINASAT-MSB4 at 115.50 E, CHNBSAT at 113E, CHNBSAT at 119E);
    - Three from India (INSAT-2 at 74E, INSAT-2 at 83E, INSAT-2 at 93.5E); and
    - Two from Indonesia (INDOSTAR at 107.7E, INDOSTAR at 118E).

4.4.6 Review of sharing criteria for protection of terrestrial broadcasting and non-broadcasting service from broadcasting-satellite service networks and systems (*Agenda Item 1.11*)

This agenda item considered the possibility of broadcasting-satellite service operation in the band 620-790 MHz. That band currently is extensively used by terrestrial television broadcasting stations around the world. In addition, the U.S. and other administrations have invested substantially in the transition from analog to digital television broadcasting and in the introduction of new terrestrial fixed and mobile services in this band. Given these circumstances, it was important that the band not be encumbered with additional satellite signals.

Under this agenda item, the Conference considered whether to allow the introduction of additional satellite systems in the band (Method A) or to restrict such operation to currently operating satellites (Method B). Two possible subsets of Method A were identified, one specifying hard limits and one requiring explicit agreement by administrations.

U.S. Objectives: The U.S. sought to ensure protection of domestic terrestrial (television broadcasting and non-broadcasting) use of the 620-790 MHz band. Thus, the U.S., along with CITEL, supported Method B, which specifically proposed: (a) suppression of RR No. 5.311, thereby eliminating the BSS allocation from the frequency band (as well as the associated Recommendation **705** and Resolution **545**); and (b) development of a draft new Resolution to allow existing BSS systems in the frequency band to continue to operate.

Activities and Accomplishments: The Delegation's efforts were highly successful in that the results were in full agreement with the U.S. position. COM 4 considered this agenda item in conjunction with Agenda Items 1.4 and 1.9. Proposals for all three agenda items were aligned in their goal of ensuring the protection of the terrestrial services in the band by not providing for additional BSS systems.

Although some participants were uneasy about completely removing BSS from the band by suppressing RR No. 5.311, the Conference worked out a compromise that satisfied all concerns. The essential elements of the compromise were:

- Suppressing sharing criteria for the satellite and terrestrial services;
- Suppressing Resolution **545** (**WRC-03**)on technical and regulatory procedures;
- Modifying RR No.5.311, i.e., replacing the current text with text stating that this was suppressed by WRC-07 – this footnote allowed satellite operation subject to certain requirements set forth in Recommendation **705** and Resolution **545** (**WRC-03**);
- Adding a Resolution to permit continuation of existing satellite operations; and
- Modifying Appendix 5 Table 5-1 as a consequence of the above actions.

4.4.7 Additional High Frequency (HF) spectrum for broadcasting, changes to maritime channeling plans and review of allocations affecting other Services (*Agenda Item 1.13*)

This agenda item was a compilation of four agenda items submitted to the last conference. These included a potential Broadcasting Service allocation (Resolution **544**), Adaptive Fixed and Mobile Services regulatory review (Resolution **729**), Maritime Mobile regulatory review for introduction of data exchange services (Resolution **351**), and review of all allocations between 4-10 MHz.

U.S. Objectives:

The U.S. objectives appear below, listed by sub-issue:

- To oppose any additional allocation to the broadcasting service in the 4-10 MHz band and to suppress the Broadcasting Service Resolution (**544**);
- To suppress the adaptive Fixed and Mobile Services Resolution (**729**) and secure a future agenda item to study required regulatory changes for the introduction of wideband (greater than 3 kHz) advanced HF systems;
- To modify the Maritime Mobile Service Resolution (**351**) and secure a future agenda item to re-align Appendix 17 for maritime mobile issues;
- To include a footnote in maritime mobile frequency bands to allow digital signals on channels designated for analog only; and
- To support no change to the Radio Regulations for the review of all allocations.

Activities and Accomplishments: Even though several of the issues presented by this agenda item proved to be highly contentious, the U.S. succeeded in attaining its principal objectives. The U.S. had a strong position going into the Conference, with most regional groups supporting opposition to further allocations for the broadcasting service and its goals regarding adaptive systems and review of allocations. Although there was more limited support for U.S. positions on the wideband advanced HF systems future agenda item and the maritime mobile Resolution, the U.S. nonetheless achieved an acceptable outcome.

A. Broadcasting Service Allocation. All of the regional groups, except for CEPT, supported a position of no allocation for the broadcasting service allocations. The U.S. was able to form a coalition of the regional groups opposed to the CEPT position of allocating additional spectrum with additional sharing between fixed and mobile services to accommodate the additional allocations. The U.S. kept the coalition together in opposition to the CEPT proposals by maintaining contact with the regional groups and calling coalition meetings after every committee

or working group meeting that addressed the broadcasting service allocations**.** Discussions continued without resolution into the third week of the Conference, as CEPT persisted in its refusal to accommodate the majority view despite several informal meetings of the heads of delegation to help resolve this issue. Informal discussion between the Conference Chairman and regional representatives finally produced a Resolution, and CEPT allowed the majority view to go forward. The Conference made no additional allocation to the broadcasting service, nor did it prepare a future agenda item for either the next conference or the following conference. As part of a compromise, the U.S. agreed to a stand-alone resolution that would study how efficiencies could be gained in the broadcasting service.

B. Adaptive Fixed and Mobile Services. All regional groups supported the U.S. position that no change to the Radio Regulations was required to introduce adaptive systems. Although the U.S. proposal for a future agenda item to study changes to the Radio Regulations for introduction of wideband HF systems was discussed, Committee 4 could not reach agreement on the issues. The item was held up until the second week when it was transferred to Committee 6, which had responsibility for future agenda items. It was approved during the final week of the Conference as part of the package deal arranged on the future agenda items. The wide-bandwidth issue was complementary to the overall U.S. NOC position on the agenda item. The increasing use of wide-bandwidth systems, documented in ITU-R work, was an effective argument to use when opposing increased broadcast allocations. The upward trend in wide-bandwidth use introduced the idea that a potential future increase in fixed and mobile HF demand could drive up interference risks and should therefore be studied for regulatory changes as a future agenda item.

C. Maritime Mobile Service. There were two distinct issues under this item. The first was the need to change the channeling plan (Appendix 17) to allow worldwide interoperability of digital systems on ships. The second was whether to make the channeling plan changes at this WRC or have a future agenda item for the following conference. Most administrations agreed that the channeling plan required changes, but the timing became very contentious. Also, although the majority of administrations and regional groups had proposals to modify only the 4-10 MHz portion of the channeling plan, CEPT insisted that changes must be made to the entire plan. The U.S. had proposed to keep the channeling plan unchanged at this Conference and to include modification as part of the future agenda item. The U.S. also proposed footnotes to the Radio Regulations that would allow data exchange services such as e-mail to use digital (Duplex Radiotelephony) channels in the meantime. During the discussions CEPT took a hard-line stance, and based on work by the U.S. Delegation, most of the regional groups ended up supporting the U.S. approach over their original submissions. As the stalemate on the channel plan continued through the second week of the Conference, modifications to the channeling plan or any change to the non-channelized maritime mobile frequencies in regard to the maritime mobile Radio Regulations (Appendix 17) or the frequencies contained in them were ruled to be outside the scope of the agenda item. Although the U.S. failed to get favorable action on this matter at WRC-07, there was broad agreement to make the requested changes at WRC-11, and the matter secured a place on that conference's agenda.

D. Review of Allocations. Proposals to the Conference addressing this issue sought changes only to the amateur allocations. The U.S. crafted its position based on the understanding that any allocations to be made outside of the three Resolutions tied to this agenda item were outside the

scope of the agenda. During the course of discussions, those regional groups that had originally supported CEPT proposals to allocate a portion of spectrum to the amateur service changed their position to align with the U.S. This left CEPT isolated, and as part of the U.S. compromise in the third week, CEPT agreed to go along with the majority view.

4.4.8 Global Maritime Distress and Safety System (GMDSS) and maritime VHF (*Agenda Item 1.14*)

This agenda item involved two maritime issues: (1) completion of GMDSS procedures in the Radio Regulations; and (2) improved efficiency in the VHF maritime bands.

U.S. Objectives: The U.S. objective was to achieve an allocation recognizing the satellite detection of automatic identification system (AIS) transmitters on ships, gain safety recognition for AIS use in navigation, obtain an exclusive allocation of the maritime digital selective calling distress Channel 70 without guard bands, develop provisions allowing recreational boaters to travel to cooperating administrations such as Canada without special radio licenses, and secure final completion of operating provisions for distress and safety maritime communications, encompassing both modern GMDSS and existing radiotelephone systems.

Activities and Accomplishments: The Conference took action consistent with all U.S. objectives, even though almost three dozen sub-working group sessions were necessary to complete the work involved in this item. The U.S. fully achieved its goals regarding the allocation recognizing AIS transmitters on ships, an exclusive allocation of the maritime digital selective calling distress channel, provisions governing licensing for recreational boaters, and completion of operating provisions for distress and safety maritime communications. While the Conference accorded safety recognition for navigation use of AIS only with respect to its search and rescue function, there will be an opportunity to accomplish the remaining aspect of the U.S. goal under the port and ship safety agenda at WRC-11. The Conference also removed the historic, over 100 year old, 500 kHz allocation for distress and calling using Morse telegraphy, made famous after the Titanic casualty in 1912. The band was reallocated to maritime radiotelegraphy because of changes in the International Maritime Organization treaty eliminating use of Morse telegraphy as a Safety of Life at Sea requirement.

4.4.9 Secondary allocation to amateur service (*Agenda Item 1.15*)

This agenda item sought to secure a secondary allocation to amateur service in the frequency band 135.7-137.8 kHz.

U.S. Objectives: Because the U.S. had already declined to adopt the requested allocation nationally due to Power Line Carrier (PLC) use of this frequency segment, it resolved to accept the Conference outcome on this agenda item. Moreover, the U.S. did not need to advocate NOC because the proposals for use of the band from other administrations and regions were not objectionable.

Activities and Accomplishments: The outcome of this agenda item was consistent with U.S. interests. Nearly all regional groups had expressed a desire to grant this allocation, with only the

Arab regional group supporting NOC. The Conference accommodated both views on this agenda item by adopting a worldwide secondary allocation except in nine countries in North Africa and the Middle East identified by a footnote. Another footnote to the allocation stipulated that stations are not to exceed a maximum radiated power level and shall not cause harmful interference to stations of the radionavigation service.

4.4.10 Maritime Mobile Services (MMSIs) (Agenda Item 1.16)

Two issues were involved: (1) sufficiency of Maritime Identification Digits (MIDs), "country codes" necessary for MMSIs; and (2) updating the Article 19 provisions for MMSIs to include such new applications as automatic identification system (AIS) use on search and rescue aircraft and aids to navigation. Conference Preparatory Meeting text included two options for incorporation into Article 19: (a) direct detailed incorporation; and (b) incorporation of the relevant provisions of ITU-R Rec. M.585-4 by reference.

U.S. Objectives: The U.S. objective was to ensure that the integrity of the MMSI process was maintained and that flexibility existed for emerging AIS applications by avoiding the need for a future MMSI WRC agenda item whenever a new AIS application evolved. MMSI integrity is necessary due to its application in maritime distress alerting and locating, intership and vessel traffic service navigation safety, and maritime domain awareness.

Activities and Accomplishments: The U.S. was very successful in convincing the majority of delegates to align their position on this subject with CITEL's views. There was consensus that sufficient MID resources exist for all administrations. The Conference agreed to the CITEL-supported approach of incorporating ITU-R Rec. M.585-4 by reference, allowing flexibility for future AIS technology. While one administration made a counterproposal that the Conference did not adopt, it served a positive purpose of persuading CEPT and other delegations of the need for maintaining flexibility in defining the MMSI structure. MMSI designations/formats for search and rescue aircraft, aids-to-navigation, and vessels associated with a parent craft were accomplished.

4.5 Committee 5 – Specified Agenda Items

The Chairman of Committee 5 was Mr. Akira Hashimoto of Japan, and its Vice-Chairmen were Mr. Mustapha Bessi (Morocco), Mr. Erik H. Jörol (Norway), and Mr. Evgheni Sestacov (Moldavia). The U.S. COM 5 spokesperson was Ms. Cecily Holiday. The Committee dealt with the following issues:

4.5.1 Review of footnotes (Agenda Item 1.1)

This is a standing agenda item intended to clear out unnecessary country footnotes from the Radio Regulations as directed by Resolution **26** (**Rev. WRC-97**). The agenda item does not include proposals requesting modifications to country footnotes involving frequency bands that are being substantively treated under other WRC-07 agenda items.

U.S. Objectives: The U.S. objective was to ensure no adverse impact on allocations or services of interest to the U.S. as a result of countries' making proposals other than deleting their names from the Article 5 footnote.

Activities and Accomplishments: There were over 200 proposals to WRC-07 to modify country names in footnotes contained in the Radio Regulations. These contributions proposing addition, modification, or suppression of footnotes or consequential changes did not cause concerns for the U.S. As a result, the U.S. objective of not allowing any footnote modifications which would negatively impact U.S. systems was achieved.

4.5.2 Protection of passive services from interference caused by active services in the same Bands (Agenda Items 1.2)

This agenda item involved three issues:

A. The needs of future weather satellites for an additional 100 MHz to support increased data rate requirements originating from high resolution Earth observation sensors.

B. Sharing between passive remote sensing satellite systems for Earth observation and meteorology and fixed and mobile communication systems in the band 10.6-10.68 GHz.

C. Sharing between passive remote sensing satellite systems for Earth observation and meteorology and fixed and mobile communication systems in the band 36-37 GHz.

U.S. Objectives:

A. The U.S. sought to obtain a worldwide extension of the existing allocation to the meteorological satellite (MetSat) service in the 18.1-18.3 GHz band by 100 MHz into the18.0-18.1 MHz band.

B. The U.S. sought to gain additional protection for important passive remote sensing Earth observation systems without placing an undue burden on the existing fixed and mobile service systems that are already operating in the band 10.6-10.68 GHz. The U.S. operates many important applications such as cellular telephone backhaul links and vital links to oil rigs, and these could not be adversely impacted.

C. The U.S. sought to gain protection for important passive remote sensing Earth observation systems without placing an undue burden on future fixed and mobile service systems that may someday operate in the 36-37 GHz band.

Activities and Accomplishments:

A. While the U.S. and CITEL had proposed a worldwide 100 MHz extension in the 18.0-18.1 MHz band, U.S. objectives were nevertheless fully met by the regional allocations on which the Conference ultimately settled. Although there was widespread support for a MetSat extension of 100 MHz, the regions were divided as to which band should be allocated. Specifically, Region 1

(Europe, Africa, and the Middle East) and Region 3 (Asia) proposed an extension into the 18.3-18.4 GHz band and opposed the U.S. proposal, which would result in overlap with the broadcast-satellite plan for those regions. The band favored by Region 1 and Region 3 also presented problems for the U.S. and CITEL, because it would overlap the band designated for high density applications of the fixed-satellite service (HD-FSS) and create numerous coordination problems for both MetSat and FSS operators in Region 2. These concerns were eliminated when the Conference crafted a solution extending the MetSat allocation into the 18.0-18.1 GHz band in Region 2 and into the 18.3-18.4 GHz band only in Regions 1 and 3.

B and C. The Conference outcome on issues B and C fully met the U.S. objectives of protecting passive services without placing an undue burden on existing and future operations in the bands under consideration. In order to achieve a successful result on these issues, the Conference had to negotiate a compromise involving both Agenda Item 1.2 and the related Agenda Item 1.20. This entailed a large outreach effort during the end of the third week of the Conference to gain support for an overall compromise on these agenda items.

For the 10.6-10.68 GHz band under Issue B, the Conference acted to retain the existing mandatory power limit on the fixed and mobile services and the removal of the antenna restriction. This benefits both the communications services and the passive remote sensing systems because it allows for the terrestrial communications services to use high gain, more directive antenna systems which will actually reduce some of the interference from these systems into the remote sensing systems. In addition, the more stringent recommended limits that administrations are urged to comply with to the maximum extent possible should, over time, further reduce interference into the passive remote sensing systems using this band without creating a burden on important existing communications systems.

For the 36-37 GHz band, there are now mandatory emission limits on the fixed and mobile communications services in this band to protect passive sensors. However, future U.S. fixed and mobile communication systems should be able to meet these limitations, thus protecting both the remote sensing systems gathering vital environmental data and ensuring the ability of future telecommunications to operate in this band.

4.5.3 Sharing between mobile-satellite service (MSS) (Earth-to-space) and space research service (SRS) (passive) and between MSS and mobile services (*Agenda Item 1.7*)

The U.S. radio astronomy community has plans to use the band 1668-1668.4 MHz for SRS (passive), and some non-U.S. commercial satellite providers also plan to use this band for MSS operations. Without an adequate protection mechanism in place, it was very likely that the SRS (passive) would suffer harmful interference from the MSS. Therefore, it was important for the U.S. to ensure that an adequate protection mechanism is in place for the protection of the SRS (passive).

In the U.S. the band 1670-1675 MHz currently is being used for terrestrial fixed and mobile operations. Sharing studies within the ITU-R have concluded that in general sharing between the MSS and the terrestrial mobile is not feasible. Therefore, it is important for the U.S. to ensure that

the terrestrial fixed and mobile operations (existing and future operations) in the U.S. are not unduly constrained by the MSS in this band.

U.S. Objectives: The U.S. objective for this Agenda Item was to ensure that the SRS (passive) operations in the band 1668-1668.4 MHz are adequately protected from the MSS operations in this band and the that terrestrial fixed and mobile operations in the U.S. are not unduly constrained by the MSS in the band 1668.4-1675 MHz.

Activities and Accomplishments: The U.S. was successful in securing the adoption of a coordination procedure to ensure that the mobile-satellite service (Earth-to-space) and the space research service (passive) in the band 1668-1668.4 MHz are adequately protected. Specifically, the Conference adopted the coordination procedure based on frequency overlap and the MSS mobile earth station (MES) power spectral density and eirp spectral density as the coordination trigger. The coordination trigger values for the MES power spectral density and eirp spectral density are -2.5 dBW/4kHz and -10 dBW/4kHz, respectively.

With respect to the terrestrial fixed and mobile operations in the U.S. in the band 1668.4-1675 MHz, the U.S. also was successful in the adoption of Resolution **744**, allowing the fixed and mobile services to operate in the U.S. without any constraints. The Conference agreed to limit the mobile allocation in this band to transportable radio-relay systems, with the exception of the territories of the United States and Canada, which will be allowed to continue fixed and mobile operations without any constraints. This exception is reflected in the modified resolves of Resolution **744**. With respect to the transportable radio-relay systems, these systems will be required to limit eirp spectral density in the GSO arc to -27 dBW/4kHz. This eirp spectral density will be implemented in two phases. Before January 1, 2015 a soft limit will be imposed, after January 1, 2015, this soft limit will be converted to a hard limit.

4.5.4 Studies on technical sharing and regulatory process for high altitude platform systems (HAPS) (*Agenda Item 1.8*)

This agenda item sought to increase countries' access to high altitude platform systems (HAPS) and to identify a global HAPS band.

U.S. Objective: The U.S. objective for this agenda item was to increase country access to HAPS (high altitude platform airships and balloons) and to identify a global HAPS band by modifying resolutions that allow access to HAPS for those countries operating in the proposed frequency bands. The primary goal of the U.S. was to identify a common frequency band that could be used globally.

Activities and Accomplishments: The U.S. achieved its objectives for this issue. The Conference identified a common 300 MHz segment of the 28 GHz band for HAPS use at 27.9-28.2 GHz. This will ensure that manufacturers of HAPS equipment may sell the same equipment on a worldwide basis.

4.5.5 Review of regulatory procedures and associated technical criteria of the fixed-satellite service Plan (*Agenda Item 1.10*)

This agenda item considered the regulatory procedures and associated technical criteria of Appendix 30B. Appendix 30B was adopted in 1988 as an allotment plan to guarantee in practice, for all countries, equitable access to the geostationary-satellite orbit in the frequency bands of the fixed-satellite service (FSS) covered by this Appendix. While the plan has been in force for some 18 years, little use has been made of the precious spectrum (1600 MHz) regulated by this Appendix, particularly as compared to the other bands allocated globally to the FSS. WRC-07 sought to revise the Appendix 30B procedures and technical specifications in order to account for: (1) experience with the fixed-satellite service plan that guarantees access to spectrum by all countries seeking to satisfy their fixed-satellite service requirements; (2) new technological developments; and (3) requirements of new ITU member states coming into being since 1988.

U.S. Objectives: The U.S. had several important objectives under this agenda item. In particular, the U.S. sought to preserve the regulatory rights of the "existing systems" (*i.e.*, the FSS satellite networks that were registered prior to the adoption of the Appendix 30B plan in 1988). There were at least two U.S. satellite networks in that category. The U.S. also proposed to reduce the overly lengthy processing time involved in the conversion of countries' allotments under the plan into the actual frequency assignments to be used by the satellite networks. Additionally, the U.S. proposed to modify the Appendix 30B procedures to optimize the accessibility and utilization of FSS spectrum resources worldwide. Finally, the U.S. sought to avoid initiation of a major replanning effort that would require large expenditures by administrations and satellite operators and would consume significant resources of the ITU BR.

Activities and Accomplishments: The U.S. Delegation was successful in achieving its primary objectives under this agenda item. Working with partners in CITEL, Europe, and Asia-Pacific region, following difficult and lengthy negotiations, the U.S Delegation succeeded in: (i) preserving the rights of the "existing system;" (ii) streamlining the procedures applied under Appendix 30B, thereby reducing the processing-time for satellite networks to be implemented under this plan; and (iii) updating the plan's procedures to comport with economic realities of the satellite services in the 21st century. In addition, because of the excellent progress made, it was possible to avoid a burdensome major replanning of Appendix 30B.

4.5.6 Changes to ITU Radio Regulation procedures involving coordination and notification procedures for satellite networks and other matters (Agenda Item 1.12)

The Conference reviewed approximately 25 provisions in the Radio Regulations with a view toward solving difficulties encountered by administrations in the application of the Radio Regulations, correcting deficiencies, simplifying or updating the procedures, and transforming Rules of Procedure into regulatory text. This summary addresses four issues that were of significant importance to the United States:

A. A longstanding requirement for the Radiocommunication Sector to wait six months after receiving advance publication information (API) for satellite networks requiring coordination before receiving the accompanying coordination request information (CR/C). An IAP proposed to

eliminate the waiting period, which many administrations viewed as creating an implementation advantage based on timing, satellite orbital placement, and the overall number of API submissions made. Specifically, administrations filing large numbers of APIs spanning a wide range of orbital positions and spectrum appeared to gain a regulatory implementation advantage over administrations submitting fewer APIs.

B. The ITU had accorded different treatment for specific and general cases of coordination involving aircraft stations and ground-based earth stations. While a specific precedent in the Radio Regulations applied a 500 km pre-determined coordination distance to specific cases of coordination enumerated in Table 10 of Appendix 7 to the Radio Regulations, the Table did not include specific cases.

C. Whether submission of certain data elements should be necessary for satellite service applications.

D. Whether particular Radio Regulation footnotes should be modified to take into account a BR decision clarifying the coordination procedure involving radionavigation-satellite service systems and networks.

U.S. Objectives: In both a CITEL IAP and its own single-country proposal, the U.S. sought to have the Conference adopt the following specific changes to the Radio Regulations:

A. Eliminate the six month waiting period between BR receipt of API and CR/C.

B. Modify Table 10 of Appendix 7 of the Radio Regulations to include general cases of coordination involving ground-based earth stations and aircraft terrestrial stations, and thereby to afford those general cases with the same pre-determined coordination distance that applies to specific cases.

C. Modify Appendix 4 to the Radio Regulations dealing with satellite service applications in order to make submission of certain data elements mandatory.

D. Modify certain Radio Regulation footnotes to take into account a BR decision clarifying the coordination procedure involving radionavigation-satellite service systems and networks.

Activities and Accomplishments:

A. The Conference made positive progress toward rectifying a problem in the BR process relating to satellite networks. Although WRC-07 did not arrive at a consensus solution to eliminate or minimize the procedure's potential advantage for some administrations, the Conference set the stage for future consideration of additional methods or approaches to address the situation.

B. The U.S. was successful in obtaining modifications to the RR affording general cases of coordination the same pre-determined coordination distance as specific cases. The U.S. will benefit from having a more stable and certain coordination environment that is based on a widely-accepted coordination distance.

C. The U.S. was successful in modifying Appendix 4 of the Radio Regulations dealing with characteristics of service applications to make mandatory at the time of Advance Publication, certain data elements that were optional in the case of non-GSO satellites not subject to coordination. The U.S. was also successful in modifying Appendix 4 to using the "no-column" approach to facilitate the filing of active and passive sensors.

D. The Conference modified Footnote No. 5.328B to: (1) make it clear that the application of the coordination procedure in Nos. 9.7, 9.12, 9.12A and 9.13 to radionavigation-satellite service (RNSS) (space-to-space) systems and networks is only with respect to other RNSS (space-to-space) systems and networks in the bands 1215-1300 MHz and 1559-1610 MHz; and (2) limit the application of Resolution **610** (**WRC-03**) to transmitting space stations. In addition, No. 5.329A was modified to clarify that the term "other systems" in the footnote refers to the radionavigation-satellite service (space-to-Earth) and that "services" refers to services other than the radionavigation-satellite service.

In addition, Colombia, Indonesia, Pakistan, Uruguay, and Vietnam requested satellite extensions under this agenda item. The Conference granted these extensions or, in the case of Vietnam and Pakistan, authorized the RRB to take future action if conditions specified by WRC-07 occur. The U.S. was a signatory to a CITEL IAP supporting the extension requests of Colombia and Uruguay, and the other extensions present no problem.

4.5.7 Review of ITU-R studies on compatibility between fixed-satellite service and other service including Little LEO feeder links (*Agenda Item 1.17*)

This agenda item addressed the need for protection of fixed services in all Regions from non-geostationary networks in the fixed-satellite service using the frequency bands around 1.4 GHz pursuant to a secondary conditional allocation adopted at WRC-03. Specifically, WRC-03 adopted a Resolution (Resolution **745**) providing that additional allocations for the fixed-satellite service (FSS) on a secondary basis in bands 1390-1392 MHz and 1430-432 MHz in the Earth-to-space and space-to-Earth directions, respectively, for non-GSO satellite systems in the MSS with service links operating below 1 GHz should not be used until ITU-R studies were completed and reported to WRC-07.

U.S. Objective**:** In light of the lack of continuing interest in this band by service providers, to secure Conference action suppressing (eliminating) both the secondary conditional allocation and the measure conferring protection on other services in the band.

Activities and Accomplishment: Consistent with the U.S. objective, the Conference eliminated the allocation and associated protection measure.

4.5.8 Power flux-density limits to protect fixed service from non-GSO fixed-satellite service using highly inclined orbits (HIOs) (*Agenda Item 1.18*)

This agenda item considered whether the existing power flux-density (pfd) limits found in Article **21**, Table 21-4 are adequate to protect the fixed service in the 17.7-19.7 GHz band from the non-geostationary fixed-satellite service using Highly Inclined Orbits (HIO).

U.S. Objectives: The U.S. currently operates one HIO system in the band and has several satellite filings in the ITU for future HIO systems. These currently operating and planned systems could have been affected by any pfd limit modification. The U.S. position for this agenda item was No Change (NOC) to the Table 21-4 pfd limits. This position was based on the results of studies carried out in the ITU-R, which clearly showed that the current pfd limits are adequate to protect the fixed service. Additionally, the U.S. supported the suppression of Resolution **141 (WRC-03)**. The U.S. proposal to the Conference was subordinated to a CITEL Inter-American Proposal for No Change. Another U.S. objective, although not contained in the U.S. proposal, was to prevent any new pfd limits from applying to the current operating HIO system or to any follow-on or a replacement of this HIO system. This exemption was justified by ITU-R studies demonstrating that this system did not cause harmful interference into the fixed service.

Activities and Accomplishments: U.S. objectives were satisfied through a compromise. Coming into the Conference, the U.S. and CITEL faced considerable opposition to the No Change position. Regional groups – CEPT, APT, ATU, RCC, SADC and the Arab Group – all submitted proposals supporting modifications to the pfd limits in Table 21-4 ranging from new pfd masks consisting of -125/-110 dBW/m^2/MHz to -123/-110 dBW/m^2/MHz pfd levels at the 0° to 5° lower elevation angle. Mexico submitted a proposal supporting the use of operational characteristics rather than such altered pfd limits. The only agreement between the regional groups was to suppress Resolution **141 (WRC-03)**. After introduction of documents in Working Group 5C, a drafting group was formed to deal specifically with the agenda item.

The drafting group, WG 5C-AI 1.18, discussed how modifying the pfd limits would impact the non-GSO FSS HIO systems, and conversely, how not changing the limits would impact the fixed service. After this discussion, several administrations declared their support for No Change, but additional discussions brought no further shifts in positions. The chairman of the drafting group then convened an informal group consisting of several members from each of the regional groups.
It was evident early on that there would not be sufficient support to carry a No Change position in plenary. Accordingly, the U.S. entered discussions on how far the pfd level should be modified. After much discussion, the informal group agreed on a pfd level of -120 dBW/m2/MHz at 0° to 3° and kept the rest of the pfd mask unchanged from the CEPT proposal. CEPT was concerned about the date of entry into force of the new pfd mask and an agreement was reached establishing that date as October 22, 2007. Agreement was quickly reached at the working group level on the issue of exempting the operating U.S. HIO system, and a draft resolution was produced keeping the pfd limits for this system and possible follow-on systems at the current levels of -115/-105 dBW/m^2/MHz. Upon objection from several administrations, the parties agreed to limit any future exemption to only one system which would be a replacement for the current U.S. system. Still another objection to the compromise was eliminated when the parties agreed to modify the table, new footnotes, and language of the draft resolution to eliminate use of the term “non-GSO” in conjunction with the term “highly inclined orbits.” This new resolution and table text cleared Committee 5 and was approved at plenary with minor editorial changes to the new footnotes. The date of entry into force was modified to November 16, 2007.

The final outcome of the Conference for this agenda item was to modify the pfd limits in Article **21**, Table 21-4 for FSS using HIO in the 17.7-19.7 GHz band for which complete coordination or notification was received by the BR after November 16, 2007. Additionally, Resolution **141 (WRC-03)** was suppressed. This result satisfied the U.S. objective of exempting the current U.S. operating and future follow-on HIO systems from the new pfd limits. Although the U.S. objective of No Change was not achieved, the new pfd limits along with the modified shape of the pfd mask will allow non-GSO HIO systems to effectively use the band 17.7-19.7 GHz.

4.5.9 Spectrum requirement for global broadband satellite systems (*Agenda Item 1.19*)

This agenda item was proposed at WRC-03 through the Arab League on behalf of the International Telecommunication Satellite Organization (ITSO), as a means to bridge the "digital divide." The purported objective of this AI was to identify globally harmonized fixed-satellite service (FSS) frequency bands for broadband Internet applications via satellite.

U.S. Objectives: The U.S objectives were to have no change to the Radio Regulations and to oppose attempts to identify FSS bands for broadband satellite through means such as opt-in footnotes. The U.S. viewed linkage of this agenda item with equitable access to orbital resources as unnecessary, because existing satellites and equitable access to build and launch a satellite in the planned bands already afforded equitable access to the service. In addition, the U.S. sought to counter proponents' attempts to raise standardization as an argument. Such an issue is more appropriately addressed in the ITU-T because the ITU-R is not a standardizing body.

Activities and Accomplishments: This agenda item concluded successfully for the U.S. Coming into the WRC, proposals from all six regional groups, including the Arab League countries, supported NOC. At the Conference, six additional national and multi-national input documents were attributed to this AI, all of which also proposed NOC. As a result, this AI was put on a fast track to the plenary, which adopted NOC with little discussion at its fourth meeting (October 31. 2007). The only other action taken related to this AI was to update Resolution **143** "*Guidelines for the implementation of high-density applications in the fixed-satellite service in frequency bands identified for these applications*" by adding ITU-R S.1783.

This agenda item was intended to provide developing countries with inexpensive and readily available access to broadband satellite service. Many administrations found identification of globally harmonized FSS bands for satellite Internet applications unnecessary. For the most part, FSS frequency bands already are harmonized globally and regionally, and there are no regulatory impediments to providing Internet via satellite in the existing FSS bands. Further, requiring that an entire satellite band be dedicated to Internet applications in order to access specific frequency bands would discourage rather than encourage the development of the FSS. Identifying satellite spectrum bands for this express purpose also could lead to a quasi-satellite plan, to which the U.S. and many other administrations would strongly object. If deliberations on this agenda item had gone in the direction that its proponents had wanted, the Conference easily could have been mired in a difficult debate pitting developed countries against developing ones. Nevertheless, the sentiment behind this AI may not disappear with the conclusion of WRC-07 and could spring up again in a future WRC or in a different international forum.

4.5.10 Protection of passive services from interference caused by active services in adjacent Bands (*Agenda Item 1.20*)

This item considered regulatory measures to protect five frequency bands allocated to the Earth exploration-satellite service (EESS) (passive) for satellite remote sensing (1400-1427 MHz, 23.6-24 GHz, 31.3-31.5 GHz, 50.2-50.4 GHz and 52.6-54.25 GHz) from unwanted emissions from allocations in adjacent or nearby frequency bands. The main options under consideration focused on imposing power limits on the active services likely to cause interference.

U.S. Objectives: The U.S. objective was to provide protection for the EESS (passive) allocations without placing undue burdens on the existing or future operation of the active services.

Activities and Accomplishments: The U.S. succeeded in meeting its objectives for this agenda item and related AI 1.2. As work began on this agenda item, administrations were divided on appropriate power limits to meet the needs of passive and active services. With some countries seeking hard limits and others (including the U.S.) favoring a more flexible approach, it became apparent that reaching consensus would take some compromise. Meanwhile, work was also moving forward on Agenda Item 1.2, which dealt with *in-band* protection of the EESS (passive) allocations at 10.6-10.68 GHz and 36-37 GHz. The U.S. recognized that looking at the two agenda items as a package and taking a band-by-band approach toward fashioning appropriate regulatory measures might lead to a resolution that could take the wide-ranging assortment of conditions and requirements of the many administrations into account.

After the United States and several aligned administrations reached agreement on a solution with their counterparts in the principal opposing countries, they approached other countries to gather wider support for the compromise. As a result, the compromise document was approved with little difficulty at the Working Party and Committee levels, and the plenary approved the document on the first reading.

This outcome met the U.S. objectives for both Agenda Items 1.20 and 1.2. Specifically for Agenda Item 1.20, the Conference took action fully consistent with U.S. objectives in imposing non-mandatory limits on active services in the bands below 31 GHz, with one exception.. The exceptional band has one limit which is currently in force and can be met by current systems, and a future stricter limit which has been found acceptable to the single U.S. licensee for its forthcoming systems. The limits adopted for the bands above 31 GHz, although mandatory, also should not unduly burden operation of active services because the limits are less stringent, compliance dates have been extended, and certain grandfathering rights are available.

Among the delegations, the outcome was regarded as a good compromise that addressed the needs of administrations on both sides of the debate. In addition, completion of work on passive service issues in Agenda Items 1.20 and 1.21 marks a major milestone in efforts to address unwanted emissions in the *Radio Regulations* that dates back to the 1979 World Administrative Radio Conference.

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4.5.11 Compatibility between radio astronomy service and the active services (*Agenda Item 1.21*)

Satellite systems and radio astronomy stations operate in adjacent frequency bands and nearby frequency bands. Considered as a band pair, several of these pairs were under study in Resolution **740** (**WRC-03**) to determine if there was any possibility of detrimental interference between the two types of systems. The WRC intended to add some of these band pairs to Resolution **739** for the purposes of consultation. These consultations would be between administrations operating satellite systems, and the operators of the radio astronomy station when the interference trigger level developed in the study was exceeded.

U.S. Objectives: The U.S. sought to include all band pairs for which studies were completed into Res. **739** and to complete this agenda item by suppressing Resolution **740** on the condition that all successfully studied band pairs were incorporated. The U.S. had concerns with one band pair which included the Global Positioning System (GPS). In this specific band pair, the U.S. believed that any inappropriate trigger levels developed for satellite systems could unduly constrain the GPS. Additionally, the U.S. had concerns about keeping this agenda item unresolved and open until the next conference because of disagreements over trigger threshold level values.

Activities and Accomplishments: U.S. objectives regarding this agenda item were fully achieved. Of the two special concerns, the band pair that contained GPS had a compromise solution which established appropriate trigger values for both Geosynchronous orbit (GSO) and Non-GSO satellite systems (NGSO). However, the future GLONASS system will use only the GSO trigger levels for both GSO and NGSO satellites.

4.5.12 Report of the Director of the Radiocommunication Bureau (*Agenda Item 7.1*)

This agenda item considered the report of the Director of the Radiocommunication Bureau (BR). The document reported on the activities of the Radiocommunication Sector since WRC-03, proposed modifications to the Radio Regulations on any difficulties or inconsistencies encountered in the application of the Radio Regulations, proposed changes to update outdated provisions, and proposed changes to the Radio Regulations consequential to the review of specific Rules of Procedure. Additionally, special elements in the report addressed such specific issues as Resolution **80 (WRC-2000)**, **"**Due Diligence in Applying the Principles Embodied in the Constitution," which related to the question of equitable access to the satellite orbits and spectrum resources.

U.S. Objectives: As its overall objective, the U.S. sought modification of the Radio Regulations only when a change improved or clarified the procedures or rules. Additionally, the U.S. opposed any modifications that could negatively impact U.S. interests. With respect to Resolution **89**, the U.S. sought to maintain a constructive environment of cooperation within the Americas and to retain a stable regulatory environment for satellite services.

Activities and Accomplishments: Overall, the U.S. met its objectives. The Director's Report identified a number of provisions that the BR had difficulty applying and provided suggested changes. All of these suggested changes pertain to Articles 5 and 11 and Appendices 30 and 30A of the Radio Regulations. The Conference adopted many changes in the RR to correct simple

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typos, incorrect country codes, and other errors. More substantive changes reflected previous Rules of Procedures from the RRB and changes were made to No 2.1, Article 5, and Appendix 4. The Conference also corrected outdated provisions in Article 5 and Appendices 25 and 26 and tasked the Bureau with updating references to Resolutions throughout the RR when editing the final version of the Final Acts for WRC-07. This would improve the consistency and readability of the RR.

Many of these suggested changes were necessary to provide better clarity to the RR. Some proposed changes, however, were substantive and could have had negative consequences for U.S. interests. In such cases, it was preferable to leave the provisions unchanged. In this respect, the U.S. was successful in ensuring that no change was made that could have had a negative impact on U.S. interests.

For special actions, the U.S. did not support adding a definition of Highly Elliptical Orbit (HEO) satellite system to the Radio Regulations, because doing so could relegate HEOs to a lower class of non-geostationary orbit systems. The U.S. supported using an ITU-R Recommendation to provide the description of a HEO system and the Conference agreed with this action.

The Conference also took into account the studies carried out in accordance with Resolution **951 (Rev. WRC-07)** and considered whether the international regulatory framework required modification to more readily absorb new technologies. Finding it unnecessary to change the current Radio Regulations, which are flexible enough to support future technologies, the U.S. supported a No Change option. Options supported by other administrations included revising the service definitions, converging services (e.g., the fixed and mobile services), or undertaking a large-scale revision of the regulatory framework. Because no agreement could be reached and many felt the subject required much more study, the Conference deferred the issue until WRC-11. Finally, the Conference made acceptable modifications to Appendices 30 and 30A and to Resolution **80 (WRC-2000)**.

4.6 COM 6 – Future Agenda Items and Work Program

The Chairman of COM 6 was Mr. Albert Nalbandian (Armenia), and its Vice-Chairmen were Mr. Hameed Al-Qattan (Kuwait), Mr. Jacques Edane Nkwele (Gabon), and Mr. Reiner Liebler (Germany.) The U.S. COM 6 spokesperson was Mr. Frank Williams. The Committee dealt with the following issues:

4.6.1 Incorporation by Reference (Agenda Item 2)

This agenda item examined the revised ITU-R Recommendations incorporated by reference in Volume 4 of the Radio Regulations, as communicated to the WRC by the Radiocommunication Assembly. The purpose of the agenda item was to decide whether or not to update the corresponding references. It was important to verify that the references are correct and that they apply the Radio Regulations correctly.

U.S. Objectives: The main U.S. objective was to add an incorporation by reference to ITU-R M.1642-1. This discusses the methodology for assessing the maximum aggregate equivalent

power flux-density at an aeronautical radionavigation service station from all radionavigation-satellite service systems operating in the 1164-1215 MHz band.

This addition to Vol. 4 would require consequential changes to Res. **609** and Rec. **608**, in order to reference the revised Recommendation. In addition, a modification to No. **5.328A** would be required, as Res. **609** is incorporated by reference in this Footnote.

The U.S. objectives also included a review of a proposed modification to the principles of incorporation by reference, annexed to Resolution **27**. This modification would allow the incorporation by reference of an ITU-R Recommendation that is referenced through a WRC Resolution.

Activities and Accomplishments: The U.S. met its objectives on this agenda item. WRC-07 added Recommendation ITU-R M.1642-2 to Vol. 4 of the RR, as a newer version of M.1642-1 was available immediately prior to the Conference. The Conference accepted the consequential changes to Res. **609**, Rec. **608,** and No. **5.328A.** The Conference also reminded that Resolutions **608**, **609** and **610** were considered as restricted text, due to the sensitivity of their negotiations. However, the Conference allowed editorial modifications to Res. **609**, in order to reference M.1642-2. The Conference also adopted the modification to Res. **27**. This modification allows the incorporation by reference of ITU-R Recommendations through references in WRC Resolutions.

4.6.2 Review of Resolutions and Recommendations (Agenda Item 4)

Agenda Item 4 called for a review of previous WRC Resolutions and Recommendations in accordance with Res. **95**, with a strict view to their possible revision, replacement, or abrogation.

U.S. Objectives: The U.S. had completed a comprehensive review of previous WRC Resolutions and Recommendations and produced a list including suppressions, no changes, and editorial modifications. The criteria for suppression were based on completed or expired actions or studies. This list was submitted to the Conference as a single-country U.S. proposal.

The U.S. also supported a CITEL IAP for No Change to Res. **33** (Bringing into use of space stations in the broadcasting-satellite service, prior to the entry into force of agreements and associated plans for the broadcasting-satellite service).

Separately, the U.S. had considered a modification to Res. **222** - Use of the bands 1525-1559 MHz and 1626.5-1660.5 MHz by the mobile-satellite service. Eventually, a joint U.S./Canada proposal modifying Res. **222** was submitted under Agenda Item 7.2, calling for urgent studies.

In general, Res. **95** is explicit in that modifications to Resolutions or Recommendations, submitted under Agenda Item 4, should not lead to new or future Agenda Items. Thus, the U.S. objective was to ensure that any modification that could lead to a future Agenda Items would be appropriately addressed under Agenda Item 7.2.

Activities and Accomplishments: Action taken on the agenda items and issues considered in COM 6 was consistent with U.S. objectives.

As in Agenda Item 2, COM 6 decided to forward to COM 4 and COM 5 those Resolutions and Recommendations (developed through the U.S. list and other contributions) associated with on-going Agenda Items, as some texts may be further updated as a result of these Agenda Items. The list was adopted by the Conference, unless modified through another Agenda Item.

The Conference agreed to a No Change to Res. **33**. WRC 07 concluded that any change would inadvertently modify in mid-course the coordination and notification procedures applicable to certain filings still currently in process within the ITU.

The Conference forwarded a number of modifications for consideration under Agenda Item 7.2. One example deals with Res. **63** on Industrial, Scientific and Medical (ISM) devices. Substantial modifications to Res. **63** were submitted, in accordance with Res. **95**, on behalf of one regional group and supported by additional administrations. The intent of these modifications was to replace Res. **63** to address Short Range Devices, and would seek the suppression of Res. **952** on UWB. More importantly, the revised Resolution would seek an Agenda Item for WRC-2011.

The Conference agreed that modifications (similar to those of Res. **63**) are not in conformity with Res. **95**, and may not be addressed under Agenda Item 4. Consideration of Res. **63** (as modified) and other similar modifications are more appropriate under Agenda Item 7.2, and would be weighed relative to other proposals submitted under the same Agenda Item.

Similarly, modifications proposed by the U.S./Canada to Res. 222 were addressed under Agenda Item **7.2**.

The Delegation was able to limit the proposed modifications and discussions to focus on the application of Res. **95**. Once this principle was applied, this agenda item was limited to a clean-up of previous Conference Resolutions and Recommendations.

The list and table contributed by the U.S., consistent with the CPM format, was used to progress this work. A compiled list, indicating the suppressions, no changes and modifications, was approved by the Conference.

4.6.3 See 4.5.12 Report of the Director of the Radiocommunication Bureau (Agenda Item 7.1)

4.6.4 Agenda for the 2011 World Radiocommunication Conference (Agenda Item 7.2)

Agenda Item 7.2 deals solely with developing Resolutions containing the recommended agenda for the next two conferences (i.e., WRC-11 and WRC-15). The candidate agenda items come primarily from administration and regional proposals into the Conference, but also consider other sources such as the Resolution from the previous conference (WRC-03) and the plenipotentiary conference. At WRC-07 there were more than 100 contributions dealing with AI 7.2.

U.S. Objectives: The U.S. had several proposals for this agenda item. They included both proposed agenda items the U.S. sought to have addressed at future conferences and future agenda items proposed by other administrations that it wished to suppress or modify. As an underlying

goal, the U.S. sought to keep future conference agendas limited to a manageable number of timely and significant items.

Activities and Accomplishments: The U.S. accomplished its objective of having all its proposed future agenda items included on the agendas for WRC-11 and WRC-15. In addition, the U.S. prevailed in having the Conference either modify or suppress proposed future agenda items that the U.S. viewed as most problematic.

The work of Agenda Item 7.2 during this Conference was difficult. Complications arose when the drafting group started to determine which proposals had sufficient support to be added to the list to go forward. This work depended entirely on regional positions. The method of work of CITEL in this situation made it difficult to develop positions on proposals as conditions changed during the meetings. Nevertheless, the U.S. managed to gain CITEL support on its proposals which provided sufficient support to be added to the final list.

In particular, the following agenda items proposed by the United States are on the agenda for the next conference:

- UAS spectrum (1.3): *to consider spectrum requirements and possible regulatory actions, including allocations, in order to support the safe operation of unmanned aircraft systems (UAS)*;
- New digital technologies for the maritime mobile service (1.9): *to revise frequencies and channeling arrangements of Appendix 17 to the Radio Regulations in order to implement new digital technologies for the maritime mobile service*;
- Operation of safety systems for ships and ports (1.10): *to consider revisions to the Radio Regulations, including spectrum requirements and allocations, related to operation of safety systems for ships and ports*;
- Primary allocation to the space research service (Earth-to-space) within the band 22.55-23.15 GHz (1.11): *to consider a primary allocation to the space research service (Earth-to-space) within the band 22.55-23.15 GHz*;
- Protection of the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations (1.12): *to protect the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations*;
- HF radar allocations (1.15*): to consider possible allocations in the range 3-50 MHz to the radiolocation service for oceanographic radar applications*; *and*
- 15 GHz radar allocations (1.22): *to consider a primary allocation to the radiolocation service in the band 15.4-15.7 GHz.*

The U.S. was successful in modifying two WRC-11 agenda items from other regions. In both cases, the range of spectrum under consideration was reduced to minimize the exposure to spectrum overlap with critical government and commercial systems.

For WRC-15 the United States successfully added an agenda item to review the use of the band 5091-5150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-GSO mobile-satellite service). In addition, No 5.444A was modified to change the date when no

new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite service systems from 2012 to 2016 to allow time for WRC-15 to deal with the matter.

Agenda items that may pose complications to United States objectives for the next conference include, among others, those associated new MSS spectrum between 4 and 16 GHz, studies associated with the fixed services in the 71 to 238 GHz band, and the addition of HAPs gateways near 6 GHz. (*The agenda for WRC-11 is included in **Annex M**.)*

4.7 COM 7 – Editorial

The Chairman of COM 7 was Mr. François Sillard (France) and its Vice-Chairmen were Mr. Nabil Kisrawi (Syria), Prof. Les Barclay (United Kingdom), Mr. Celestino Menendez Argüelles (Spain), and Mr. Yingsheng Tao (China). The U.S. spokesperson for COM 7 was Mr. Franz Zichy.

The U.S. objective was to ensure the contents of the English documents reviewed by the editorial committee (COM 7) concurred with the official French documents. Over the course of the last three weeks of the WRC, the editorial committee met daily to review documents that were approved and submitted by Committees 4 through 6. A number of inconsistencies were found between the French to English translations. To ensure technical contents and agreed text did not change through translation, U.S. delegates directly involved with specific documents were asked to participate while the document was reviewed by the editorial committee. U.S. delegates in COM 7 also had to remain vigilant in ensuring that committee members' efforts to make grammatical or stylistic changes did not alter the substance or intent of the text, which often reflected a delicate balance achieved through negotiation.

COM 7 spent many late hours and sometimes worked into the early mornings and on weekends to review a total of 33 documents. Because International Telecommunication Union translation services were unable to maintain pace with the volume of documents approved by the various committees, the editorial committee was disbanded in order that the remaining documents could be forwarded more rapidly in time for the scheduled final plenary.

4.8 U.S. Declarations and Reservations

At the end of the Conference, the United States entered declarations and reservations that are set forth in ***Annex L***.

4.9 Political Issues

The Conference was relatively free of political friction. Although two political issues that are often raised at ITU conferences resurfaced at WRC-07, skillful management by Conference leadership prevented them from developing into full-blown controversies. In one situation, Israel and the Palestinian Authority averted more widespread political conflict by reaching an agreement addressing the Palestinian Authority's orbital allotments for future satellites and recognizing its need for spectrum to develop wireless services. The other issue involved a WRC committee report concerning a Cuban proposal that did not mention the U.S. but was clearly intended to curtail

certain U.S. broadcasting operations. When the report was adopted by the Plenary, the U.S. Delegation made a statement disassociating from certain report language. The matter ended with entry of the U.S. statement, a Cuban response, and a copy of the report into the minutes of the Plenary and no further Conference action. The U.S. is satisfied that its interests are fully protected by its statement and the manner in which the issue was resolved.

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5.0 KEY FACTORS IN MEETING U.S. OBJECTIVES

This section highlights several factors that that played an exceptionally critical role in the successful outcome of the Conference for the U.S. Given the prevailing dynamics of WRC-07, perhaps the single most important factor in achieving U.S. objectives was the unflagging U.S. commitment to promoting cooperation and solidarity among the delegations of the Americas region. The U.S. effort contributed to a stronger, unified, and more effective CITEL at a time in WRC history when regional organizations played a greater role in key Conference decision-making than ever before. CITEL's leadership in devising and promoting a compromise plan ultimately paved the way for consensus when the Conference appeared to be dangerously deadlocked on one of the agenda's most highly visible issues.

The U.S. Delegation's expertise and the thoroughness of every aspect of its preparation also proved to be a major contributing factor to U.S. success. With strong Delegation leadership, individuals from over a dozen federal government departments and agencies and from throughout the private sector became the cohesive and effective team that accomplished all major U.S. goals. The extensive outreach effort leading up to and during the Conference also proved invaluable in placing the U.S. in a strong position for the negotiations. Finally, a well-conceived and executed U.S. media relations effort resulted in effective communication of U.S. positions, proposals, and accomplishments.

5.1. Commitment to Promote Cooperation and Establish Cohesiveness within CITEL

Early in its preparatory process for WRC-07, the U.S. made increased cooperation with its neighbor countries within CITEL a major priority. To this end, the U.S. intensified its participation in CITEL preparatory meetings and hosted the final CITEL preparatory session in Orlando, Florida. In addition, Ambassador Russell devoted substantial pre-conference time and travel to bi-lateral meetings in the Americas region. Moreover, the CITEL leadership and delegates from CITEL member countries were among the colleagues with whom Ambassador Russell and the U.S. Delegation consulted most closely and most frequently at the Conference. Ambassador Russell not only hosted CITEL in Florida and visited Canada, Brazil, and Argentina, but also made a special late trip to Mexico to solidify the relationship with that U.S. neighbor. Canada, Brazil, Mexico, and Argentina formed the critical working group that allowed CITEL to take a unified position on IMT at the Conference. CITEL was the only region with a unified approach.

All of these efforts proved extremely beneficial when WRC-07 gave regional organizations an even greater role in Conference decision-making than ever before. At many important meetings of the Informal Group and the working groups dealing with key agenda items, individual countries could only negotiate through their regional organizations. This approach altered the dynamics of the Conference and limited the effectiveness of traditional coalition-building strategies. In this environment, the role of CITEL, as the Americas' regional organization, became critical. The time and effort invested in strengthening ties within this organization paid huge dividends, as CITEL led the effort resulting in adoption of a compromise on IMT deployment, one of the most important accomplishments of WRC-07. CITEL was widely viewed as the most unified and well-organized delegation at the Conference. With continued emphasis on hemispheric cooperation and

a sufficient resource base to support the effort, CITEL will be poised to continue its leadership role at future conferences.

5.2 Depth of U.S. Delegation Expertise and Thoroughness of Its Preparatory Effort

5.2.1 The Delegation

One of the greatest strengths of recent U.S. participation in World Radiocommunication Conferences has been the ability to field a large delegation of individuals with extensive expertise and experience in engineering, science, law, and diplomacy. At WRC-07, the U.S. Delegation's depth and breadth in knowledge and talent once again were unsurpassed. Many of the individuals who served as delegates had also shouldered responsibility for keeping the U.S. preparatory effort alive during the years between conferences. These individuals provided the continuity and institutional knowledge that were critical to U.S. success. Through their active involvement and leadership roles on ITU study groups, their participation as observers at regional preparatory conferences, and their travels far and wide, Americans from the federal government and the private sector gained the insight and established the relationships that ultimately enabled the U.S. to anticipate and prepare for virtually every contingency that arose. In the interval between WRC-03 and WRC-07, U.S. experts serving as Delegation committee chairs, sub-committee chairs, agenda item spokespersons, and agenda item experts put forth a remarkable four-year effort. They were instrumental in producing the impressive package of U.S. proposals, position papers, and talking points that served as the basis for favorable Conference outcomes. At the Conference, through grueling sessions that sometimes went round-the-clock, delegates worked tirelessly, with professionalism and remarkably good humor. Without question, the successful performance of the 2007 U.S. Delegation exemplifies the very best in interagency cooperation and demonstrates how successfully the public and private sector can work together.

5.2.2 Delegation Leadership

For the most part, the U.S. entrusts its preparations for each WRC to a U.S. interagency coalition without a fixed structure or resource base. While this relatively loosely configured enterprise serves the U.S. remarkably well for much of the period between WRCs, the group's efforts become more difficult as the upcoming conference draws closer. During the final stages of U.S. WRC preparation, activity both at home and abroad intensifies, demanding greater focus and significant resources. At this point, the diffuse components of the effort must begin to coalesce into a unified delegation with a more defined structure, a more predictable resource base, and, above all, an official leader.

The U.S. was fortunate to have its leadership in place earlier in the process for WRC-07 than for the previous conference. After President Bush appointed Richard M. Russell to serve as U.S. Representative to the Conference and Head of Delegation on January 4, 2007, Russell quickly became involved in U.S. preparation and took steps to assemble a team of advisors and a staff to manage and support activities leading up to the Conference. Having the Head of Delegation on board in January afforded more time to plan and conduct outreach efforts and to incorporate the information and insight gleaned from bi-lateral discussions into the development of U.S. conference proposals.

The custom of giving the person heading the U.S. Delegation the rank of Ambassador also was advantageous and should continue. It underscored the importance that the U.S. places on the work of World Radiocommunication Conferences, commanded special respect from other countries' delegations, and expedited the Ambassador's access to top officials of ITU Member States with whom the U.S. held bi-lateral meetings before and at the Conference. In addition, the complex and unique interagency process followed for U.S. WRC participation is made easier when the Delegation's leader has had high level experience in the federal government, has worked on interagency endeavors, and also has previous international experience. Ambassador Russell, as a sitting Senate-confirmed member of the Administration, brought the authority necessary to coordinate this multi-agency effort.

5.3 Effective Outreach Effort

An energetic and carefully targeted U.S. outreach campaign was critical in opening the channels of communication that enabled the U.S. to achieve favorable outcomes at the Conference. Moreover, getting an early start in the planning enabled the U.S. to make the most productive use of its time and resources and to obtain valuable information and insights soon enough to include them in its proposals and strategies for the Conference. The importance of holding face-to-face meetings with key foreign officials before the Conference began cannot be overemphasized. Although the Ambassador's travel schedule was strenuous, the U.S. willingness to have one-on-one discussions with foreign officials in their own capitals or at multi-national meetings in their own regions was an important show of respect that cemented friendships and established alliances that endured throughout the Conference.

The outreach events and meetings that the U.S. hosted at the Conference also yielded substantial benefits. The U.S. hosted events ranging from large receptions attended by the head of every delegation and one or more additional guests from their respective countries to dinners for a smaller number of guests from a single country or region. The opportunities these events afforded U.S. delegates to meet with their counterparts from around the globe in an informal setting often facilitated productive exchanges in WRC working groups and other meetings. In addition, it was important for the Ambassador to be able to host impromptu working lunches, dinners, and coffee breaks with groups of delegation heads or regional officials as warranted by Conference developments. The Delegation members and team leaders for the Country Outreach Program were critical in making these events and meetings successful.

The outreach effort also had a direct and very significant impact on attainment of U.S. objectives at the Conference. It should be noted, however, that the international travel and Conference activities essential to an effective outreach program require substantial support. Each core agency that contributed funds, personnel, and other resources to this effort deserves the nation's recognition and gratitude. The private sector also provided support for outreach, and a number of private sector advisors were among the most effective members of the U.S. country outreach teams. For this, they also deserve acknowledgement and appreciation.

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5.4 Media Relations Effort

An effective public affairs strategy and a well-executed media relations effort also were important factors in the U.S. Delegation's success. Early appointment of an experienced media liaison officer enabled the Delegation to implement a comprehensive public affairs strategy and to begin cultivating good working relationships with the press well in advance of the Conference. Consistent use of clear and compelling message points proved effective in promoting U.S. positions and enlisting the support of other delegations. In addition, these efforts enhanced cohesiveness and unity within the U.S. Delegation and the U.S. effort overall, enabled the Head of Delegation to monitor and determine the outflow of information from and about the Delegation, and supported U.S. international outreach and messaging.

WRC-07 generated an unprecedented level of favorable press coverage to a broad audience both within the U.S. and worldwide. In addition to comprehensive trade press coverage by telecommunications-oriented publications, mainstream media covered the Conference, both on-site in Geneva and remotely, through teleconference bridges to press briefings. As a result, reports of the Conference – particularly at the climactic end of the final week – were carried by multiple international news wire services, including the Associated Press and Reuters, as well as by important and widely read industry publications such as *Communications Daily* and *TRDaily*. The final week reports were picked up and run by multiple U.S.-based and international newspapers, such as the *New York Times*, the *International Herald-Tribune*, and the *San Jose Mercury News*.

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6.0 CONCLUSION

WRC-07 was a great success for the U.S. This success was achieved through aggressive outreach first to the Americas and then to partnering nations around the world. The U.S. agenda not only benefitted American industries and consumers and the U.S. government, but it ultimately will serve the interests of consumers around the world. In terms of technology, the delegates acted decisively to broaden the scope of opportunity for development and implementation of new terrestrial broadband systems embodied in the promise of IMT services. Faced with competing interests and tenaciously pursued positions, the Conference reacted largely by opening doors (for example, to the 700 MHz band) rather than by closing them.

The defining theme of the Conference may well be found in the word *balance*. WRC-07 successfully balanced the needs of terrestrial and satellite and broadcasting industries – all of which were straining for new spectrum access opportunities. Even as it promoted new commercial spectrum uses, the Conference also preserved a careful balance between industry and the many vital government spectrum uses, including for earth science, space exploration, disaster relief, and security. WRC-07 clearly understood that a balance among all beneficial uses of spectrum is the key for societies and individuals to fully pursue their human potential.

Even so, the Conference also demonstrated how difficult this balancing act has become. In the first decade of this new century, the burgeoning technological activity of our age is creating real strains on the global Table of Allocations and strains on the delegates' capability to resolve contentious issues. Viewed from this perspective, the ability of WRC-07 to reach balanced resolutions – honoring its tradition of consensus and avoiding a series of divisive votes – represents a real victory. The U.S. Delegation can take pride in having worked hard, along with the other delegations, in reaching consensus conclusions up and down the entire agenda. As in years past, the U.S. brought to the WRC an experienced and broad-based delegation, led and backed by a decisive government contingent with effective winning strategies. These strategies were honed through a deliberative, consultative, and thorough preparation process, which drew in the expertise of industry and government. This is the hallmark of the U.S. preparatory process, and it withstood the crucible of WRC-07 and resulted once again in real benefits to the country.

It is now imperative to look toward the future and the international discussions that are unfolding toward WRC-11. It seems apparent that the world is on the cusp of a new era of spectrally efficient and advanced technologies, such as software defined radio (SDR) and cognitive radio systems (CRS). By building "intelligence" and flexibility into devices and networks, these technologies could well revolutionize the way spectrum is used and shared among different systems and services. Meanwhile, convergence is blurring the lines between previously distinct services and markets. The challenge is how to facilitate this revolution while preserving the level of spectrum accessibility that companies and governments have come to expect – and will surely demand in the future.

In order to continue its role as a global facilitator of spectrum use, the ITU must address these technological challenges and reexamine the legacy regulatory processes it has built up over previous decades. It must do this, perhaps, in record time. How can the ITU adapt to a new paradigm, as it develops, and how can the U.S. help lead and guide that change? The experience

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of WRC-07 indicates that, in fact, the U.S. is well positioned to provide that leadership, because of the inherent strength of its diversity. The U.S. industry and government invests a great deal of time and resources in the ITU-R study group process, which is inherently collaborative. Moreover, U.S. policy is to celebrate diverse viewpoints, encouraging a profusion of business plans, academic pursuits, and research and development initiatives. In an era in which technological exploration, dialogue, and experimentation are more important than ever, the United States has proven again and again that dynamism and debate trump planning and codification every time.

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ANNEX A: WRC-07 AGENDA

RESOLUTION 1227
(approved at the eighth Plenary Meeting)

Agenda for the World Radiocommunication Conference (WRC-07)

The Council,

noting

that Resolution 802 of the World Radiocommunication Conference (Geneva, 2003):

a) resolved to recommend to the Council that a world radiocommunication conference be held in 2007 for a period of four weeks;

b) recommended its agenda, and invited the Council to finalize the agenda and arrange for the convening of WRC-07 and to initiate as soon as possible the necessary consultation with Member States,

resolves

to convene a World Radiocommunication Conference (WRC-07) in Geneva (Switzerland) from 8 October to 2 November 2007[1] with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC-03 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action with respect to the following items:

1.1 requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, in accordance with Resolution **26 (Rev.WRC-97)**;

1.2 to consider allocations and regulatory issues related to the Earth exploration-satellite (passive) service, space research (passive) service and the meteorological satellite service in accordance with Resolutions **746 (WRC-03)** and **742 (WRC-03)**;

1.3 in accordance with Resolution **747 (WRC-03)**, consider upgrading the radiolocation service to primary allocation status in the bands 9 000-9 200 MHz and 9 300-9 500 MHz and extending by up to 200 MHz the existing primary allocations to the Earth exploration-satellite service (EESS) (active) and the space research service (SRS) (active) in the band 9 500-9 800 MHz without placing undue constraint on the services to which the bands are allocated;

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1 Note from the Secretariat: Following a decision of the Council in 206, the dates of WRC-07 were changed to 22 October to 16 November 2007.

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1.4 to consider frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 taking into account the results of ITU-R studies in accordance with Resolution **228 (Rev.WRC-03)**;

1.5 to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry, in accordance with Resolution **230 (WRC-03)**;

1.6 to consider additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)** and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution **415 (WRC-03)**;

1.7 to consider the results of ITU-R studies regarding sharing between the mobile-satellite service and the SRS (passive) in the band 1 668-1 668.4 MHz, and between the mobile-satellite service and the mobile service in the band 1 668.4-1 675 MHz in accordance with Resolution **744 (WRC-03)**;

1.8 to consider the results of ITU-R studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.35 GHz and 31-31.3 GHz in response to Resolution **145 (WRC-03),** and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution **122 (Rev.WRC-03)**;

1.9 to review the technical, operational and regulatory provisions applicable to the use of the band 2 500-2 690 MHz by space services in order to facilitate sharing with current and future terrestrial services without placing undue constraint on the services to which the band is allocated;

1.10 to review the regulatory procedures and associated technical criteria of Appendix **30B** without any action on the allotments, the existing systems or the assignments in the List of Appendix **30B**;

1.11 to review sharing criteria and regulatory provisions for protection of terrestrial services, in particular the terrestrial television broadcasting service, in the band 620-790 MHz from broadcasting-satellite service networks and systems, in accordance with Resolution **545 (WRC-03)**;

1.12 to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks" in accordance with Resolution **86 (WRC-03)**;

1.13 taking into account Resolutions **729 (WRC-97)**, **351 (WRC-03)** and **544 (WRC-03)**, to review the allocations to all services in the HF bands between 4 MHz and 10 MHz, excluding those allocations to services in the frequency range 7 000-7 200 kHz and those bands whose allotment plans are in Appendices **25**, **26** and **27** and whose channelling arrangements are in Appendix **17**, taking account of the impact of new

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modulation techniques, adaptive control techniques and the spectrum requirements for HF broadcasting;

1.14 to review the operational procedures and requirements of the Global Maritime Distress and Safety System (GMDSS) and other related provisions of the Radio Regulations, taking into account Resolutions **331 (Rev.WRC-03)** and **342 (Rev.WRC-2000)** and the continued transition to the GMDSS, the experience since its introduction, and the needs of all classes of ships;

1.15 to consider a secondary allocation to the amateur service in the frequency band 135.7-137.8 kHz;

1.16 to consider the regulatory and operational provisions for Maritime Mobile Service Identities (MMSIs) for equipment other than shipborne mobile equipment, taking into account Resolutions **344 (Rev.WRC-03)** and **353 (WRC-03)**;

1.17 to consider the results of ITU-R studies on compatibility between the fixed-satellite service and other services around 1.4 GHz, in accordance with Resolution **745 (WRC-03)**;

1.18 to review pfd limits in the band 17.7-19.7 GHz for satellite systems using highly inclined orbits, in accordance with Resolution **141 (WRC-03)**;

1.19 to consider the results of the ITU-R studies regarding spectrum requirement for global broadband satellite systems in order to identify possible global harmonized fixed-satellite service frequency bands for the use of Internet applications, and consider the appropriate regulatory/technical provisions, taking also into account No. **5.516B**;

1.20 to consider the results of studies, and proposals for regulatory measures if appropriate regarding the protection of the EESS (passive) from unwanted emissions of active services in accordance with Resolution **738 (WRC-03)**;

1.21 to consider the results of studies regarding the compatibility between the radio astronomy service and the active space services in accordance with Resolution **740 (Rev.WRC-03)**, in order to review and update, if appropriate, the tables of threshold levels used for consultation that appear in the Annex to Resolution **739 (WRC-03)**;

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution **27 (Rev.WRC-03)**;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

4 in accordance with Resolution **95 (Rev.WRC-03)**, to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

6 to identify those items requiring urgent action by the Radiocommunication Study Groups in preparation for the next world radiocommunication conference;

7 in accordance with Article 7 of the Convention:

7.1 to consider and approve the Report of the Director of the Radiocommunication Bureau:

– on the activities of the Radiocommunication Sector since WRC-03;

– on any difficulties or inconsistencies encountered in the application of the Radio Regulations; and

– on action in response to Resolution **80 (Rev.WRC-2000)**;

7.1 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution **803 (WRC-03)**,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and the Special Committee on Regulatory/ Procedural Matters and to prepare a report to WRC-07,

instructs the Secretary-General

1 to make all the necessary arrangements, in agreement with the Director of the Radiocommunication Bureau, for the convening of the Conference;

2 to communicate this resolution to international and regional organizations concerned.

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ANNEX B: U.S. PRE-CONFERENCE INTERNATIONAL OUTREACH

Location/ Dates	Meetings
Geneva, Switzerland 19 – 23 February 2007	**Second ITU Conference Preparatory Meeting (CPM II)** Richard M. Russell and U.S. CPM Delegation participated. Russell met with ITU Secretary-General, Radiocommunication Bureau Director, Chairman of WRC-07 Informal Group, and other ITU officials and CPM delegates.
Washington, D.C. 16 March 2007	**Bi-lateral meeting** Richard M. Russell and U.S. Core Delegation Members met with Senior Officials of Industry Canada -- Spectrum, Information Technologies and Telecommunications (SITT), Spectrum Engineering Branch, and International Telecommunications and Policy Coordination.
Berlin, Germany 12 – 13 April 2007	**Bi-lateral meeting** Richard M. Russell, Ambassador David A. Gross, Meredith Atwell Baker (Deputy Assistant Secretary for Communications and Information and Deputy National Telecommunications and Information Administration Administrator, Department of Commerce), and members of U.S. Core Delegation met with: • Director General for Information and Communication Technology, Media, Post and senior officials of the Federal Ministry of Economics and Technology • President of BNetzA (Federal Network Agency)
Paris, France 16 – 17 April 2007	**Bi-lateral meetings** Richard M. Russell, Ambassador David A. Gross, Meredith Atwell Baker, and members of U.S. Core Delegation met with: • Chief of Technologies and Information Society, the President of the French Telecommunications and Posts Regulation (ARCEP), and the Director-General of the French National Frequency Agency • American Chamber of Commerce in France
London, England 15 May 2007	**Bi-lateral meetings** Richard M. Russell and U.S. Core Delegation Members met with: • Director and staff members of Department of Trade and Industry • Michael Goddard, Spectrum and International Policy, and senior staff of Office of Communications (Ofcom) • Intellect (trade association for U.K. high tech industry)

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Location/ Dates	Meetings
Brussels, Belgium 16 May 2007	**Meetings with IGOs** Richard M. Russell and U.S. Core Delegation Members met with: • Members of NATO Frequency Management Subcommittee • Director General, European Union Directorate of Energy and Transport • Director General, European Commission Directorate for Information Society
Prague, Czech Republic 17 – 18 May 2007	**Bi-lateral meetings** Richard M. Russell and U.S. Core Delegation Members met with: • Deputy Director of International Relations for Czech Telecommunications Office and senior departmental officials • Czech telecom industry officials
Nairobi, Kenya 5 – 8 June 2007	**ITU Forum on Telecommunication Regulation in Africa** Ambassador Richard M. Russell addressed the Forum and attended sessions and events along with U.S. Core Delegation Members. Participants from 25 African countries and seven European and Asian countries and ITU officials based in Africa and at ITU headquarters in Geneva attended the Forum. **Bi-lateral meetings** Ambassador Russell and U.S. Core Delegation Members met with: • Minister of Communications, Kenya, and Ministry officials • Director General of Communications Commission of Kenya • Secretary General of the Telecomm Agency of Cote d' Ivoire • Technical Director of the Agency for Regulation of Telecommunication and Post for Senegal • Executive Director of the Uganda Communications Commission • Director General of the Ministry of Communication and New Technologies of Mali
Cairo, Egypt 10 June 2007	**Bi-lateral Meetings** Ambassador Richard M. Russell and U.S. Core Delegation Members met with: • Executive President, National Telecom Regulatory Authority of Egypt (NTRA) • Head of Egyptian Delegation to WRC-07 • American Chamber of Commerce in Egypt

Location/ Dates	Meetings
Dubai, United Arab Emirates 11 -12 June 2007	**Gulf Coast Cooperation Council Meeting** Ambassador Richard M. Russell and U.S. Core Delegation Members met with senior spectrum officials from Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. Ambassador Russell also met with Mohammed Al Ghanim, Director of the UAE Regulatory Authority
Tokyo, Japan 11 July 2007	**Bi-lateral Meetings** Ambassador Richard M. Russell and U.S. Core Delegation Members met with: • Director General for Technology Policy and senior officials from the Ministry of Internal Affairs and Communications • American Chamber of Commerce in Japan (ACCJ)
Beijing, China 13 July 2007	**Bi-lateral Meetings** Ambassador Richard M. Russell and U.S. Core Delegation Members met with: • Vice Minister of Information Industry and senior Ministry officials • American Chamber of Commerce of China
Busan, Korea 15- 18 July 2007	**5th Meeting of the Asia-Pacific Telecommunity (APT) Conference Preparatory Group for WRC-2007 (APG2007-5)** Ambassador Richard M. Russell, U.S. Core Delegation Members, and U.S. officials serving on CITEL delegation attended the conference and related events. Participants included over 400 officials representing 33 ITU member states from the Asia-Pacific region and countries from other regions. **Bi-lateral Meetings** • Director General and senior officials of the Radio Broadcasting Strategy Planning Bureau of South Korea's Ministry of Information and Communication • Individual meetings with senior officials from : Australia, India, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Thailand, and Vietnam • Meeting with officials from the Regional Commonwealth in the field of Communications (RCC), representing 11 former Soviet republics in the Commonwealth of Independent States

Location/ Dates	Meetings
Orlando, Florida 31 July – 3 August 2007	**10th Meeting of the Permanent Consultative Committee II – Radiocommunications Including Broadcasting of CITEL** The U.S. hosted this final CITEL preparatory meeting before WRC-07. Ambassador Russell addressed the Conference, in which over 150 officials from CITEL's 35 member states participated. Throughout the meeting, Ambassador Russell and U.S. Core Delegation members had in-depth meetings with the following countries, either individually or in small groups: Argentina, Brazil, Canada, Colombia, Costa Rica, Dominican Republic, Guatemala, Honduras, Mexico, Panama, Peru, Uruguay, and Venezuela.
Ottawa, Canada 13 – 14 August 2007	**Bi-lateral meeting** Ambassador Richard M. Russell and U.S. Core Delegation Members met with the Director, Spectrum Engineering Branch (and Head of the Canadian delegation to WRC-07) and senior officials of the Spectrum, Information Technologies and Telecommunications (SITT) of Industry Canada.
Buenos Aires, Argentina 26 – 28 August 2007	**Bi-lateral meeting** Ambassador Richard M. Russell and U.S. Core Delegation Members met with the Secretary of Communications and senior officials of the National Telecommunications Commission of Argentina.
Brasilia, Brazil 28 – 30 August 2007	**Bi-lateral meeting** Ambassador Richard M. Russell and U.S. Core Delegation Members met with: • President, Brazilian National Telecommunications Agency (ANATEL) • Joao Carlos Albernaz, Head, Technical Unit, and officials of the ANATEL
Geneva, Switzerland 4 – 7 September 2007	**ITU Council Meeting** The ITU Council meets periodically in the interval between Plenipotentiary Conferences to discuss broad telecommunication policy issues and ensure the smooth day-to-day running of the Union. Ambassador Richard M. Russell\ and a U.S. delegation of 19 officials including U.S. Core Delegation Members participated n this meeting and met with senior ITU officials as well as representatives of some of the 46 member states who would also be serving on their national delegations to WRC-07.
Moscow, Russia 10 September 2007	**Bi-lateral Meeting** Ambassador Richard M. Russell and U.S. Core Delegation Members met with senior officials of the Ministry of Information Technologies and Communication of the Russian Federation

Location/ Dates	Meetings
Mexico City, Mexico 5 October 2007	**Bi-lateral Meetings** Ambassador Richard M. Russell and U.S. Core Delegation Members met with: • Director de Asuntos Internacionales, and officials of the Subsecretaria de Comunicaciones • Director General de Regulacion "B" and officials, Comision Federal de Telecommunicaciones • Director Tecnico, and officials, Telecomunicaciones de Mexico • Senior engineer of SENEAM

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ANNEX C: MEMBERS OF THE U.S. DELEGATION TO WRC-07

U.S. REPRESENTATIVE

Ambassador Richard M. Russell
Department of State

VICE CHAIR AND ALTERNATE REPRESENTATIVE

Dr. Richard C. Beaird
Department of State

VICE CHAIRS

Mr. Edward Davison
National Telecommunications and Information Administration
Department of Commerce

Mr. Alexander Roytblat
Federal Communications Commission

SENIOR GOVERNMENT ADVISORS

Ms. Paige Atkins
Director, Defense Spectrum Organization
Defense Information Systems Agency
Department of Defense

Ms. Meredith Baker
Deputy Assistant Secretary for Communications and Information
Department of Commerce

Lt. General Charles Croom
Director
Defense Information Systems Agency
Department of Defense

Mr. William Gerstenmaier
Associate Administrator for Space Operations
National Aeronautics and Space Administration

Mr. John Grimes
Assistant Secretary of Defense for Networks and Information Integration
Department of Defense

Ambassador David A. Gross
United States Coordinator
International Communications and Information Policy
Department of State

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Mr. John M.R. Kneuer
Assistant Secretary for Communications and Information and Administrator,
National Telecommunications and Information Administration
Department of Commerce

Mr. John Lussier
Deputy Chief Information Officer
Department of the Navy
Department of Defense

Dr. Scott Pace
Associate Administrator for Program Analysis and Evaluation
National Aeronautics and Space Administration

Mr. Mark Paese
Director, Operations Division
National Oceanic and Atmospheric Administration
Department of Commerce

Mr. Victor Sparrow
Acting Director, Spectrum Management
Office of the Assistant Secretary of Defense for Networks and Information Integration
Department of Defense

Ms. Deborah Taylor Tate
Commissioner
Federal Communications Commission

Mr. Badri Younes
Deputy Associate Administrator
Space Communications and Navigation Office
National Aeronautics and Space Administration

GOVERNMENT ADVISORS

Mr. Michael Biggs
Federal Aviation Administration

Mr. J. Peter Blais
Department of Defense

Mr. Paul Blais
Department of Defense

Ms. Fiona Bowden-Smith
U.S. Mission Geneva

Mr. Charles Breig
Federal Communications Commission

Ms. Gelma Bruce
Department of State

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Dr. Andrew Clegg
National Science Foundation

Dr. Darlene Drazenovich
National Telecommunications and Information Administration
Department of Commerce

Mr. James Ennis
Department of State

Mr. Robert Farr
Department of State

Mr. Glenn Feldhake
National Aeronautics and Space Administration

Mr. David Franc
National Oceanic and Atmospheric Administration
Department of Commerce

Mr. Robert Frazier
Federal Aviation Administration

Ms. Sally Gadsden
Department of State

Ms. Merri Jo Gamble
Department of Justice

Dr. Tomas Gergely
National Science Foundation

Mr. David Gilmour
U.S. Mission Geneva

Mr. John Giusti
Federal Communications Commission

Mr. Charles Glass
National Telecommunications and Information Administration
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Mr. Michael Glover
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Mr. Jerry Hamilton
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Department of Commerce

Mr. Joseph Hersey
United States Coast Guard

Mr. Joseph Hill
Federal Communications Commission

Mr. Chris Hofer
National Telecommunications and Information Administration
Department of Commerce

Mr. Cecily Holiday
Department of State

Mr. Dante Ibarra
Federal Communications Commission

Mr. Stevan Jovancevic
Department of Defense

Mr. Alex Kavetsky
Department of Defense

Mr. Thomas Kidd
Department of Defense

Ms. Nicole Lamanna
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Mr. Jonathan Little
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Ms. Wendy Lubetkin
U.S. Mission Geneva

Mr. Tan Ly
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Ms. Susan McDonald
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National Aeronautics and Space Administration

Mr. Alfredo Mistichelli
United States Coast Guard

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Mr. Donald Nellis
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Ms. Jade Nester
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Mr. Larry Olson
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Mr. Franz Zichy
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Mr. John Zuzek
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PRIVATE SECTOR ADVISORS

Mr. Jose Albuquerque
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Mr. Stephen Baruch
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Ms. Kimberly Baum
Motorola

Mr. Donald Brittingham
Verizon Wireless

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Mr. Mike Chartier
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Ms. Cecily Cohen
NOKIA Inc.

Mr. Jerry Conner
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Ms. Giselle Creeser
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Ms. Christine DiLapi
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Mr. J. Robert Dockemeyer
Delphi Corporation

Mr. Darrell Ernst
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Mr. Richard Evans
Mobile Satellite Ventures, LP

Mr. Ron Ferguson
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Mr. William Gamble
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Mr. John Gilsenan
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Mr. Brian Grose
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Mr. Benito Gutierrez-Luaces
ASRC Management Services

Mr. Peter Hadinger
Northrop Grumman Space Technology

Mr. Hau Ho
Northrop Grumman Space Technology

Mrs. Suzanne Hutchings Malloy
ICO Global Communications

Mr. Kris Hutchison
Aviation Spectrum Resources, Inc.

Mr. Walter Ireland
American Radio Relay League

Mr. Daniel Jablonski
Johns Hopkins University Applied Physics Laboratory

Mr. Edward Jacobs
ASRC Management Services

Mr. William Jahn
ASRC Management Services

Mr. James Jameson
Aerospace Corporation

Mr. Donald Jansky
Jansky-Barmat

Mr. Stan Jenkins
Boeing Company

Ms. Anne Jillson
ASRC Management Services

Mr. William Keane
Duane Morris LLP

Mr. Abdolmajid Khalilzadeh
INTELSAT

Mr. Kim Kolb
ASRC Management Services

Mr. Robert Leck
Perot Systems Government Service Science and Technology

Mr. Roger LeClair
LeClair Telecommunications

Mr. Harvey Liszt
National Radio Astronomy Observatory

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Mr. Jaime Londono
SES Americom

Mr. William Luther
ASRC Management Services

Mr. Michael Lynch
Nortel Networks

Ms. Jennifer Manner
Mobile Satellite Ventures L.P.

Mr. Leslie Martinkovics
Verizon Communications

Mr. Raafat Nasser
ITT Industries

Mr. David Pierce
ITT Industries

Mr. Mark Racek
Ericsson, Inc.

Mr. Brian Ramsay
MITRE

Ms. Joslyn Read
SES-NewSkies

Mr. David Reed
SCITOR

Mr. Larry Reed
ASRC Management Services

Mr. Alan Renshaw
Danna Corporation

Ms. Walda Roseman
CompassRose International

Ms. Amy Sanders
Alcatel-Lucent

Mr. Steven Sharkey
Motorola

Mr. Jon Siverling
American Radio Relay League

Mr. Thomas Sullivan
Sullivan Telecommunications Associates

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Ms. Shayla Taylor
TT&C

Mr. Thomas Tycz
Goldberg, Godles, Weiner & Wright

Mr. Francis Urbany
Urbany Associates

Mr. Thomas Walsh
Boeing Company

Mr. Stephen Ward
Danna Corp.

Ms. Jennifer Warren
Lockheed Martin

Mr. Thomas Wasilewski
Qualcomm

Mr. Frank Weaver
Boeing Company

Mr. David Weinreich
Globalstar LLC

Dr. Charles Wende
ASRC Management Services

Mr. Jack Wengryniuk
DIRECTV

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ANNEX D: U.S. CORE DELEGATION

Name	Organization
Ambassador Richard M. Russell	Department of State
Richard C. Beaird	Department of State
Edward Davison	NTIA
Alexander Roytblat	FCC
John Alden	Freedom Technologies
Jerry Conner	ITT Consulting for DOD
Darlene Drazenovich	NTIA
John Giusti	FCC
Donna Gregg	OSTP/EOP
Vernita Harris	NTIA
Cecily Holiday	Department of State
Anne Jillson	Department of State
William Luther	ASRC for NASA
Steven Mirmina	NASA
Kathryn O'Brien	FCC
Ralph Puckett	DOD
Joan Rolf	OSTP/EOP
John Schnitker	Department of State
Wayne Whyte	NASA
Frank Williams	Department of State
Lily Zeleke	Department of the Air Force
John Zuzek	NASA

ANNEX E: Agenda for U.S. Delegation Education and Training

U.S. WRC-07 Delegation Meeting

September 20, 2007, 8:30 AM to 5:00 PM
The Boeing Company
Conference Room 160 (First Floor)
1200 Wilson Blvd., Arlington, VA

Meeting called by:	**Ambassador Richard M. Russell**
Facilitators:	**Darlene Drazenovich, Don Jansky, Alex Roytblat**
Attendees:	**All U.S. WRC-07 Delegates**
For newer WRC delegates recommend attending:	**19 September, 1:00 PM – 5:00 PM, WRC 101 at the Boeing Company, 1200 Wilson Blvd., sponsored by USITUA as a ramp-up to WRC-07**

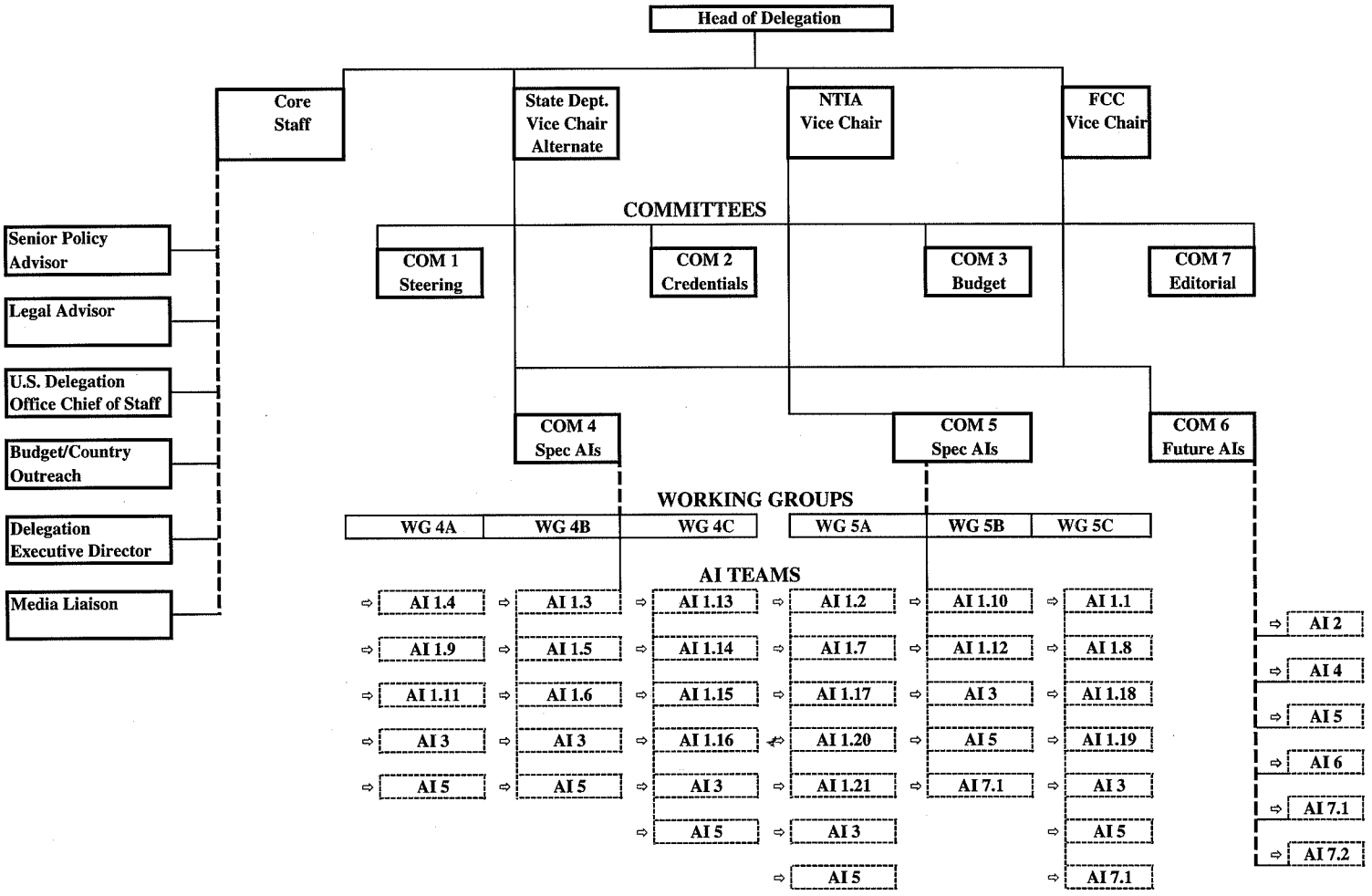
----- Program Schedule -----

		Start Time
Registration		**0830**
Coffee and Baked Goods*		
Period 1		**0900**
Welcome Remarks	**Ambassador Richard M. Russell**	
Introduction to the Program	**Darlene Drazenovich**	
Remarks by the Federal Communications Commission	**Chairman Kevin Martin**	
WRC Issues Discussion	**Alex Roytblat**	
Coffee Break		**1030**
Period 2		**1045**
Remarks by the National Telecommunications and Information Administration	**Assistant Secretary John Kneuer**	
Rules of Procedures	**Chair: Audrey Allison** **Panelists: Brandon Mitchell, Charles Glass**	
Introduction of Guest Speaker **Chairman of the Council of Economic Advisors**	**Ambassador Russell** **Dr. Edward P. Lazear,**	**1200**
*Lunch Break**	**ALL**	**1230**

WRC Issues Discussion (continued)	**Alex Roytblat**	
Period 3		**1400**
Remarks by the Assistant Secretary of Defense for Networks and Information Integration and Department of Defense Chief Information Officer	**Assistant Secretary** **John G. Grimes**	
Negotiations	**Chair: Don Jansky** **Panelists: Ed Davison, Cecily Holiday, and Tom Tycz**	
Coffee Break		**1530**
Period 4		**1545**
Delegation Administration	**Donna Gregg**	
Outreach Program	**Lily Zeleke**	
Public Affairs	**John Alden**	
Period 5		
Customs and Courtesies	**Chair: Jack Wengryniuk** **Panelists: Jose Albuquerque, Charles Glass, Don Jansky, Raafat Nasser, Alex Roytblat, LiChing Sung, Lily Zeleke**	**1630**
Concluding Remarks	**Ambassador Russell**	

Other Information	
Resource persons:	**Rhonda E. Schwartz (Boeing)**
Special notes:	***Donations accepted for baked goods for morning session. Lunch will be catered at the cost of $10.00 per person, contact Darlene Drazenovich.**

ANNEX F: U.S. Delegation Organization



ANNEX G: U.S. Delegation Leadership, Committee Chairs, Spokespersons, and Home Team

Administration

Head of Delegation	Amb. Richard M. Russell
Vice Chair and Alternate Representative	Richard C. Beaird
NTIA Vice Chair	Edward Davison
FCC Vice Chair	Alexander Roytblat
Media Relations	John Alden
Senior Policy Advisor to Amb. Russell	Donna Gregg
Delegation Executive Director	Anne Jillson
Legal Advisor	Steven Mirmina
Delegation Office Chief of Staff	Joan Rolf
Country Outreach Lead	Lily Zeleke

Committee Chairs

Steering (COM 1)	Richard M. Russell
Credentials (COM 2)	Anne Jillson
Budget (COM 3)	William Jahn
Specified Agenda Items (COM 4)	Dante Ibarra, Darlene Drazenovich
Specified Agenda Items (COM 5)	Cecily Holiday
Future Agenda Items and Work Program (COM 6)	Frank Williams
Editorial (COM7)	Franz Zichy

Working Group Leaders	**FCC**	**NTIA**
WG4A	Larry Olson	Brandon Mitchell
WG4B	Dante Ibarra	Brandon Mitchell
WG4C	Dante Ibarra	Charles Glass, Joe Hersey
WG5A	Sankar Persaud	Rob Haines
WG5B	Allen Yang	Chris Hofer
WG5C	Joe Hill	LiChing Sung

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Spokespersons

Paul Blais	AI 1.10
Charles Breig	AI 1.4
Andrew Clegg	AI 1.21
Jerry Conner	AI 1.18
Dave Franc	AI 1.3
Bob Frazier	AI 1.6
Tom Gergely	AI 1.21
Charles Glass	AI 1.13
Vernita Harris	AI 1.1, 7.1
Joe Hersey	AI 1.14
Joe Hill	AI 1.10
Chris Hofer	AI 1.12
Dante Ibarra	AI 1.6
Stevan Jovancevic	AI 1.17
Alfredo Mistichelli	AI 1.16
Fred Moorefield	AI 1.5
Paul Najarian	AI 2, 3, 4, and 5
Larry Olson	AI 1.11
Sankar Persaud	AI 1.7
Ralph Puckett	AI 1.4
Alexander Roytblat	AI 1.9
LiChing Sung	AI 1.19
Frank Williams	AI 7.2
Allen Yang	AI 1.15
John Zuzek	AI 1.2
Rob Haines	AI 1.20

Home Team

Helen Domenici	FCC
Jamie Ennis	Department of State
Amb. David Gross	Department of State
Francis Gutierrez	FCC
Edward Jacobs	Department of Defense
Michael Kozak	NSC
Keith Loken	Department of State
Caleb McCarry	Department of State
Doreen McGirr	Department of State
Karl Nebbia	NTIA
Kathryn OBrien	FCC
Jonathan Shrier	NSC
Ken Turner	Department of Defense

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Vice Chair and Alternate Representative	Richard C. Beaird
NTIA Vice Chair	Edward Davison
FCC Vice Chair	Alexander Roytblat
Media Relations	John Alden
Senior Policy Advisor to Amb. Russell	Donna Gregg
Delegation Executive Director	Anne Jillson
Legal Advisor	Steven Mirmina
Delegation Office Chief of Staff	Joan Rolf
Country Outreach Lead	Lily Zeleke

Committee Chairs

Steering (COM 1)	Richard M. Russell
Credentials (COM 2)	Anne Jillson
Budget (COM 3)	William Jahn
Specified Agenda Items (COM 4)	Dante Ibarra, Darlene Drazenovich
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Working Group Leaders	**FCC**	**NTIA**
WG4A	Larry Olson	Brandon Mitchell
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WG5A	Sankar Persaud	Rob Haines
WG5B	Allen Yang	Chris Hofer
WG5C	Joe Hill	LiChing Sung

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Spokespersons

Paul Blais	AI 1.10
Charles Breig	AI 1.4
Andrew Clegg	AI 1.21
Jerry Conner	AI 1.18
Dave Franc	AI 1.3
Bob Frazier	AI 1.6
Tom Gergely	AI 1.21
Charles Glass	AI 1.13
Vernita Harris	AI 1.1, 7.1
Joe Hersey	AI 1.14
Joe Hill	AI 1.10
Chris Hofer	AI 1.12
Dante Ibarra	AI 1.6
Stevan Jovancevic	AI 1.17
Alfredo Mistichelli	AI 1.16
Fred Moorefield	AI 1.5
Paul Najarian	AI 2, 3, 4, and 5
Larry Olson	AI 1.11
Sankar Persaud	AI 1.7
Ralph Puckett	AI 1.4
Alexander Roytblat	AI 1.9
LiChing Sung	AI 1.19
Frank Williams	AI 7.2
Allen Yang	AI 1.15
John Zuzek	AI 1.2
Rob Haines	AI 1.20

Home Team

Helen Domenici	FCC
Jamie Ennis	Department of State
Amb. David Gross	Department of State
Francis Gutierrez	FCC
Edward Jacobs	Department of Defense
Michael Kozak	NSC
Keith Loken	Department of State
Caleb McCarry	Department of State
Doreen McGirr	Department of State
Karl Nebbia	NTIA
Kathryn OBrien	FCC
Jonathan Shrier	NSC
Ken Turner	Department of Defense

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ANNEX H: U.S. Country Outreach Teams

Country Outreach Leader: Lily Zeleke

Team/ Countries	Team Leader and Members
North/ Central Americas: Belize, Canada, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua Panama	**Team Leader** Jonathan Siverling **Team Members** Charles Glass, Dante Ibarra, Stan Jenkins, Don Nellis, Mike Lynch
South America : Argentina, Bolivia, Chile, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay,Venezuela	**Team Leader:** Giselle Creeser **Team Members** Bob Dockemeyer, Cecily Holiday, Tom Gergely, Alan Renshaw, Shayla Taylor, Tom Walsh, Benito Gutierrez-Luaces
Caribbean: Antigua and Barbuda, Bahamas, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago	**Team Leader:** Audrey Allison **Team Members** Jose Albuquerque, Brooks Cressman, Alex Kavetsky, Steve Baruch, Paul Blais, Tom VonDeak
Northern Europe: Denmark , Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom	**Team Leader:** Ed Jacobs **Team Members** Ed Davison, Chris Hofer, Stan Jenkins, Mark Racek, Brian Ramsay Jack Wengryniuk
Western Europe: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland, Turkey, Vatican City State	**Team Leader:** Joe Cramer **Team Members** Kim Baum, Rob Haines, Dante Ibarra, Stan Jenkins, Bob Leck, Brian Grose, Franz Zichy

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Team/ Countries	Team Leader and Members
Southern Europe : Andorra Bosnia and Herzegovina, Croatia, Cyprus, Greece, Italy, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Macedonia	**Team Leader:** Bill Gamble **Team Members** Darlene Drazenovich, Don Jansky, Stevan Jovancevic, Kim Kolb, Jim Mentzer, Dave Weinreich
Eastern/Central Europe: Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Moldova, Poland, Romania, Russian Federation, Tajikistan, Turkmenistan, Ukraine Uzbekistan	**Team Leader:** John Alden **Team Members** Dave Franc, Merri Jo Gamble, Dan Jablonski, Jennifer Manner, Jade Nester, Alex Roytblat, John Zuzek
Middle East and North Africa: Afghanistan, Algeria, Bahrain, Egypt, Israel, Iraq, Jordan, Kuwait, Lebanon Mauritania, Morocco, Oman, Qatar Saudi Arabia, Libya, Sudan, Tunisia, United Arab Emirates, Yemen	**Team Leader:** Paul Najarian **Team Members** Jerry Conner, Ken Keane, Leslie Martinkovics, Raafat Nassar, Tom Sullivan, Ron Ferguson
Anglophone Africa: Botswana, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Rwanda, Sierra Leone, Somali, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe	**Team Leaders:** Glenn Feldhake and Walda Roseman **Team Members** Brandon Mitchell, Fred Moorefield, Dave Reed, Steve Mirmina

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Team/ Countries	Team Leader and Members
Francophone Africa: Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Republic of the Congo, Cote d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Gabon, Guinea, Guinea-Bissau, Madagascar, Mali, Mozambique, Niger, Sao Tome and Principe, Senegal, Seychelles, Togo	**Team Leader:** Jennifer Warren **Team Members** Mindel de la Torre, Katherine Green, Bill Luther, Tom Tycz, Frank Weaver, John Gilsenan, Donna Gregg
Pacific/ Oceania: Australia, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Sri Lank, Tonga, Tuvalu, Vanuatu, Maldives	**Team Leader:** Amy Sanders **Team Members** Darrell Ernst, Kris Hutchison, Bill Jahn, David Pierce, Brian Ramsay, Tom VonDeak
Asia: Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Japan, Korea (Republic of), Lao People's Republic, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Thailand, Vietnam	**Team Leader:** LiChing Sung **Team Members:** Vernita Harris, Hau Ho, Roger LeClair, Tan Ly, Lewis Vaughn, Walt Ireland

International/ Affiliate Organizations and Interest Groups	
Team Leader: Don Jansky Aeronautical: Bob Frazier, Mike Biggs Amateur: Jonathan Siverling AMT: Darrell Ernst Broadcasting: Larry Olson Maritime: Joe Hersey	Meteorological/ Weather: Dave Franc, Franz Zichy NATO: Pete Blais Radio Astronomy: Tom Gergely RNSS: Lewis Vaughn Space Science: Wayne Whyte, John Zuzek

ANNEX H: U.S. Country Outreach Teams

Country Outreach Leader: Lily Zeleke

Team/ Countries	Team Leader and Members
North/ Central Americas: Belize, Canada, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua Panama	**Team Leader** Jonathan Siverling **Team Members** Charles Glass, Dante Ibarra, Stan Jenkins, Don Nellis, Mike Lynch
South America : Argentina, Bolivia, Chile, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay,Venezuela	**Team Leader:** Giselle Creeser **Team Members** Bob Dockemeyer, Cecily Holiday, Tom Gergely, Alan Renshaw, Shayla Taylor, Tom Walsh, Benito Gutierrez-Luaces
Caribbean: Antigua and Barbuda, Bahamas, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago	**Team Leader:** Audrey Allison **Team Members** Jose Albuquerque, Brooks Cressman, Alex Kavetsky, Steve Baruch, Paul Blais, Tom VonDeak
Northern Europe: Denmark , Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom	**Team Leader:** Ed Jacobs **Team Members** Ed Davison, Chris Hofer, Stan Jenkins, Mark Racek, Brian Ramsay Jack Wengryniuk
Western Europe: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland, Turkey, Vatican City State	**Team Leader:** Joe Cramer **Team Members** Kim Baum, Rob Haines, Dante Ibarra, Stan Jenkins, Bob Leck, Brian Grose, Franz Zichy

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Team/ Countries	Team Leader and Members
Southern Europe : Andorra Bosnia and Herzegovina, Croatia, Cyprus, Greece, Italy, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Macedonia	**Team Leader:** Bill Gamble **Team Members** Darlene Drazenovich, Don Jansky, Stevan Jovancevic, Kim Kolb, Jim Mentzer, Dave Weinreich
Eastern/Central Europe: Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Moldova, Poland, Romania, Russian Federation, Tajikistan, Turkmenistan, Ukraine Uzbekistan	**Team Leader:** John Alden **Team Members** Dave Franc, Merri Jo Gamble, Dan Jablonski, Jennifer Manner, Jade Nester, Alex Roytblat, John Zuzek
Middle East and North Africa: Afghanistan, Algeria, Bahrain, Egypt, Israel, Iraq, Jordan, Kuwait, Lebanon Mauritania, Morocco, Oman, Qatar Saudi Arabia, Libya, Sudan, Tunisia, United Arab Emirates, Yemen	**Team Leader:** Paul Najarian **Team Members** Jerry Conner, Ken Keane, Leslie Martinkovics, Raafat Nassar, Tom Sullivan, Ron Ferguson
Anglophone Africa: Botswana, Eritrea, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Rwanda, Sierra Leone, Somali, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe	**Team Leaders:** Glenn Feldhake and Walda Roseman **Team Members** Brandon Mitchell, Fred Moorefield, Dave Reed, Steve Mirmina

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Team/ Countries	Team Leader and Members
Francophone Africa: Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Republic of the Congo, Cote d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Gabon, Guinea, Guinea-Bissau, Madagascar, Mali, Mozambique, Niger, Sao Tome and Principe, Senegal, Seychelles, Togo	**Team Leader:** Jennifer Warren **Team Members** Mindel de la Torre, Katherine Green, Bill Luther, Tom Tycz, Frank Weaver, John Gilsenan, Donna Gregg
Pacific/ Oceania: Australia, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Sri Lank, Tonga, Tuvalu, Vanuatu, Maldives	**Team Leader:** Amy Sanders **Team Members** Darrell Ernst, Kris Hutchison, Bill Jahn, David Pierce, Brian Ramsay, Tom VonDeak
Asia: Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Japan, Korea (Republic of), Lao People's Republic, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Thailand, Vietnam	**Team Leader:** LiChing Sung **Team Members:** Vernita Harris, Hau Ho, Roger LeClair, Tan Ly, Lewis Vaughn, Walt Ireland

International/ Affiliate Organizations and Interest Groups	
Team Leader: Don Jansky Aeronautical: Bob Frazier, Mike Biggs Amateur: Jonathan Siverling AMT: Darrell Ernst Broadcasting: Larry Olson Maritime: Joe Hersey	Meteorological/ Weather: Dave Franc, Franz Zichy NATO: Pete Blais Radio Astronomy: Tom Gergely RNSS: Lewis Vaughn Space Science: Wayne Whyte, John Zuzek

ANNEX I: U.S.-Hosted Outreach Events

DATE	EVENT
23 Oct. 2007	WRC Women's Breakfast (InterContinental)
23 Oct. 2007	Evening Reception for Delegates from Region 1 (Europe and Africa) (InterContinental)
24 Oct. 2007	Luncheon Reception for Heads of all Member State Delegations and Leadership of ITU and WRC (Vieux Bois)
25 Oct. 2007	Dinner for Delegation Leaders from Africa (Hotel Epsom)
25 Oct. 2007	Luncheon with Gulf Coast Cooperation Council (Hotel President Wilson)
26 Oct. 2007	United States Telecommunications and Training Institute Luncheon (Vieux Bois)
26 Oct. 2007	Evening Reception for Delegates from Region 2 (the Americas) (InterContinental)
29 Oct. 2007	Evening Reception at U.S. Geneva Mission Ambassador's Residence for Leadership of WRC, ITU, and Various Delegations
31 Oct. 2007	Evening Reception for Delegates from Region 3 (Asia/Oceania) (InterContinental)
1 Nov. 2007	NASA Evening Delegates Reception featuring U.S. Astronaut Michael Lopez-Alegria (InterContinental)
5 Nov. 2007	Dinner for Delegation Leaders from Asia/ Oceania (Edelweiss)
6 Nov. 2007	Dinner for Delegation Leaders from North Africa and Arab States (Hotel Epsom)
7 Nov. 2007	Dinner for RCC Delegation Leaders (Hotel Epsom)
8 Nov. 2007	Dinner for CEPT Delegation Leaders (Cent Suisse)

ANNEX J: U.S. WRC-07 DELEGATION PRESS COVERAGE

SELECTED ARTICLES

Brewin, Bob. "The battle for spectrum." Federal Computer Week 12 March 2007.

"Russell: U.S. Making Progress on IMT, Other Issues Ahead of WRC-07, but More Work Necessary." TR Daily 15 June 2007.

Kirby, Paul. "U.S. Making Progress on Positions for WRC-07, Delegation Chief Says." TR Daily 19 Sept. 2007.

Bender, Adam. "Advanced Mobile Wireless is U.S. Focus at WRC." Comm Daily 12 Oct. 2007.

Brewin, Bob. "What's Brewin: Let the Spectrum Games Begin." GovernmentExecutive.com 15 Oct. 2007.

Jordans, Frank. "WiMax Gets Nod As Wireless Standard." Associated Press 19 Oct. 2007.

Silva, Jeffrey. "WiMax supporters score win ahead of WRC Technology included in family of advanced wireless technologies." RCR 20 Oct. 2007.

"WiMax set to rule 3G world." Economic Times, India 20 Oct. 2007.

"Countries mull making room for digital television." Reuters 22 Oct. 2007.

Billquist, Scott. "Advanced Mobile Services a Top Priority at WRC, But Clash With Broadcast Plan." Communications Daily 23 Oct. 2007.

New, William. "U.S. Wants Action on Broadband Interference." Technology Daily 23 Oct. 2007.

Billquist, Scott. "Satellite Digs in at WRC to Keep C-Band." Communications Daily 25 Oct. 2007.

"Convergence of views between the US and the GCC, says US official." Kuwait News Agency 25 Oct. 2007.

Billquist, Scott and Weaver, Heather Forsgren. "WRC Seen Unlikely to Consider Three Bands for IMT." Communications Daily 26 Oct. 2007.

Billquist, Scott. "Americas Unite on Frequencies for IMT; Tough Talks Ahead." Communications Daily 9 Nov. 2007.

"The U.S.A. and Europe Faced by the Use of Frequency Band." EFE (Spanish News Agency). 9 Nov. 2007.

Kirby, Paul. "Tough Negotiations Remain for IMT Item at WRC-07, Chief of U.S. Delegation Says." TR Daily 9 Nov. 2007.

O'Brien, Kevin J. "Mobile-phone operators vie for UHF spectrum." International Herald Tribune 12 Nov. 2007.

Billquist, Scott. "New WRC Allocation Backed for Aeronautical Earth Exploration Satellites." Communications Daily 14 Nov. 2007.

Jordans, Frank. "TV Spectrum Opening for Wireless Devices." Associated Press 15 Nov. 2007.

Billquist, Scott. "Globally Harmonized Frequencies for IMT Agreed at WRC." Communications Daily 16 Nov. 2007.

McInnis, Laura. "Radio spectrum division seen spurring innovation." Reuters 16 Nov. 2007.

Shannon, Victoria. "After Global Agreement, Companies May Bid Higher at Wireless Auction in U.S." nytimes.com 19 Nov. 2007.

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ANNEX K: WRC-07 ORGANIZATIONAL STRUCTURE

Listed below are the Committees, Working Groups, and Sub-working Groups with their respective chairmen and terms of reference. Chairmen from the U.S. are so indicated.

Committee 1 – Steering Committee – Chairman: Mr François Rancy

Terms of reference:
To coordinate all matters connected with the smooth execution of work and to plan the order and number of meetings, avoiding overlapping wherever possible in view of the limited number of members of some delegations (No. 67 of the General Rules).

Committee 2 – Credentials Committee – Chairman: Mr Sékou Coulibaly

Terms of reference:
To verify the credentials of delegations and to report on its conclusions to the Plenary Meeting within the time specified by the latter (No. 68 of the General Rules).

Committee 3 – Budget Control Committee – Chairman: Mr Carlos A. Merchan

Terms of reference:
To determine the organization and the facilities available to the delegates, to examine and approve the accounts for expenditure incurred throughout the duration of the Conference, and to report to the Plenary Meeting the estimated total expenditure of the Conference, as well as an estimate of the financial implications (No. 488 of the Convention) that may be entailed by the execution of the decisions taken by the Conference (Nos. 71 to 74 of the General Rules).

Committee 4 – Specified agenda items – Chairman: Mr Marc Dupuis

Terms of reference:
On the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, taking account of the decisions of WRC-03, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action with respect to the following items:

WORKING GROUP 4A – Chairman: Dr Alan Jamieson

Sub-Working Group to deal with Agenda item 1.4 (SWG 4A-1.4)
Chairman: Ms Mindel De La Torre, USA

Sub-Working Group to deal with Agenda item 1.9 (SWG 4A-1.9)
Chairman: Mr John Lewis

Sub-Working Group to deal with Agenda item 1.11 (SWG 4A-1.11)
Chairman: Mr Christoph Dosch

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WORKING GROUP 4B – Chairman: Mr John Mettrop

Sub-Working Group to deal with Agenda item 1.3 (SWG 4B-1.3)
Chairman: Mr Terry Richards

Sub-Working Group to deal with Agenda item 1.5 (SWG 4B-1.5)
Chairman: Mr Martin Weber

Sub-Working Group to deal with Agenda item 1.6 (SWG 4B-1.6)
Chairman: Mr Michael Biggs, USA

WORKING GROUP 4C – Chairman: Mr Pekka Länsman

Sub-Working Group to deal with Agenda item 1.13 (SWG 4C-1.13)
Chairman: Mr Pekka Länsman

Sub-Working Group to deal with Agenda items 1.14 and 1.16 (SWG 4C-1.14/1.16)
Chairman: Mr Stephen Ward, USA

Sub-Working Group to deal with Agenda item 1.15 (SWG 4C-1.15)
Chairman: Mr Suneil Kanjeekal

Ad hoc Group to deal with Agenda item 7.1 (AHG4C-7.1(MMSIs, Call_Signs))
Chairman: Mr Trond Olsen

Committee 5 – Specified agenda items – Chairman: Dr Akira Hashimoto

Terms of reference:
On the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, taking account of the decisions of WRC-03, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action with respect to the following items:

WORKING GROUP 5A – Chairman: Mr Nasser Bin Hammad

Sub-Working Group to deal with Agenda item 1.2 (SWG 5A-1.2)
Chairman: Mr Vincent Meens

Sub-Working Group to deal with Agenda item 1.7 (SWG 5A-1.7)
Chairman: Mr Masatoshi Ohishi

Sub-Working Group to deal with Agenda item 1.20 (SWG 5A-1.20)
Chairman: Mr Vincent Meens

Sub-Working Group to deal with Agenda item 1.21 (SWG 5A-1.21)
Chairman: Dr Tomas E. Gergely, USA

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WORKING GROUP 5B – Chairman: Mr. Jack Wengryniuk, USA

Sub-Working Group to deal with Agenda item 1.10 (SWG 5B-1.10)
Chairman: Mr Per Hovstad

Sub-Working Group to deal with Agenda item 1.12 (SWG 5B-1.12)
Chairman: Mr Larry Reed, USA

Sub-Working Group to deal with Agenda item 7.1* (SWG 5B-7.1)
Chairman: Mr Alexandre Vallet

WORKING GROUP 5C – Chairman: Mr J.J. Massima-Landji

Sub-Working Group to deal with Agenda item 1.8 (SWG 5C-1.8)
Chairman: Mr Jong Min Park

Sub-Working Group to deal with Agenda item 1.18 (SWG 5C-1.18)
Chairman: Mr Stephen Baruch, USA

Committee 6 – Future agenda and work programme – Chairman Albert Nalbandian

WRC-07 Agenda items 2 and 4 (Group 6-1 (IbR & Res. 95))
Chairman: Ms. Vernita Harris, USA

WRC-07 Agenda item 2 (IbR)
Coordinator: Ms Shayla Taylor, USA

Resolution 951 (WRC-03) – Options to improve the international spectrum regulatory framework (Group 6-2 (Res. 951))
Chairman: Ms Lilian Jeanty

Recommendation 723 (WRC-03) – Spectrum usage and operational characteristics of electronic news gathering systems
Coordinator: Mr Roger Bunch

Consideration of the technical parameters for the possible planning of the broadcasting-satellite service in the band 21.4-22 GHz in Regions 1 and 3
Coordinator: Mr Yoshio Tachioka

Technical aspects of use of terrestrial optical free-space telecommunications
Coordinator: Mr Nabil Kisrawi

Incorporation of GE06 coordination and notification data in Appendix 4 of the Radio Regulations – Resolution 2 (RRC-06)
Coordinator: Mr David Barrett

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* Relevant parts.

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WRC-07 Agenda item 7.2 (Group 6-3 (WRCs 11 & 15))
Group 6-3 (WRCs 11 & 15) Chairman: Mr Albert Nalbandian

Committee 7 – Editorial – Chairman François Sillard

Terms of reference:
To perfect the form of the texts to be included in the Final Acts of the Conference without altering the sense, for submission to the Plenary Meeting (Nos. 69 and 70 of the General Rules).

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ANNEX L: U. S. Declarations and Reservations

76

Original: English

For the United States of America:

1 The United States of America refers to Article 32, section 16(2), of the International Telecommunication Convention (Geneva, 1992), as amended by the Plenipotentiary Conference (Kyoto, 1994), and notes that in considering the Final Acts of the World Radiocommunication Conference (Geneva, 2007), the United States of America may find it necessary to make additional declarations or reservations. Accordingly, the United States of America reserves the right to make additional declarations or reservations at the time of deposit of its instruments of ratification of these revisions of the Radio Regulations.

2 The United States shall not be deemed to have consented to be bound by revisions to the Radio Regulations adopted at this conference without specific notification to the International Telecommunication Union by the United States of America of its consent to be bound.

3 The United States of America reiterates and incorporates by reference all declarations and reservations made at prior world administrative radiocommunication conferences and world radiocommunication conferences.

77

Original: English

For the United States of America and Canada:

The United States of America and Canada state that, in application of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) pertaining to the use of the 450-470 MHz band, they intend to make use of applications in the mobile service and fixed service, including public safety networks, in the 450-470 MHz band, as appropriate, which will preclude its use for terrestrial International Mobile Telecommunications (IMT).

78

Original: English

For the United States of America and Canada:

The United States of America and Canada refer to footnote number 5.394 of Article 5 of the Radio Regulations concerning the use of the 2 300-2 390 MHz band in the United States and the 2 300-2 400 MHz band in Canada and state that, in application of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) in those bands, the aeronautical mobile service for telemetry has priority over other uses by the mobile services. Furthermore, in conformity with additional allocations specified in footnote number 5.393 of Article 5 of the Radio Regulations in the 2 310-2 360 MHz band, the United States of America and Canada state that, in application of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) in the band 2 310-2 360 MHz, they intend to use parts of this band for the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service, which may preclude its use for terrestrial International Mobile Telecommunications (IMT).

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92

Original: English

For the Federal Republic of Germany, Australia, the Republic of Bulgaria, the Republic of Cyprus, the Republic of Croatia, Denmark, the United States of America, France, Greece, the Republic of Hungary, Ireland, Japan, the Republic of Latvia, the Principality of Liechtenstein, the Republic of Lithuania, Luxembourg, Malta, the Republic of the Marshall Islands, Norway, New Zealand, the Kingdom of the Netherlands, the Republic of Poland, Portugal, the Slovak Republic, the Czech Republic, the United Kingdom of Great Britain and Northern Ireland, the Republic of Slovenia, Sweden, the Confederation of Switzerland, Turkey, Ukraine:

The delegations of the above-mentioned States, referring to the declaration made by the Republic of Colombia (No. 74), inasmuch as these and any similar statements refer to the Bogota Declaration of 3 December 1976 made by equatorial countries and to the claims of those countries to exercise sovereign rights over segments of the geostationary-satellite orbit, and to any related claims, consider that the claims in question cannot be recognized by this conference.

The above-mentioned delegations also wish to state that reference in Article 44 of the Constitution to the "geographical situation of particular countries" does not imply recognition of a claim to any preferential rights to the geostationary-satellite orbit.

95

Original: English

For the United States of America:

1 The United States of America refers to declarations made by various Member States, including Nos. 51 and 39, reserving their right to take such actions as they may consider necessary to safeguard their interests with respect to application of the provisions of the Constitution and Convention of the International Telecommunication Union (Geneva, 1992), and any amendments thereto. The United States of America reserves the right to take whatever measures it deems necessary to safeguard U.S. interests in response to such actions.

2 The United States of America, noting Statement 71 entered by the delegation of Cuba, recalls its right to broadcast to Cuba on appropriate frequencies free of jamming or other wrongful interference and reserves its rights with respect to existing interference and any future interference by Cuba with U.S. broadcasting. The United States also incorporates by reference as if fully stated herein Additional Declaration No. 104 entered in the Final Acts of the International Telecommunication Union Plenipotentiary Conference (Antalya, 2006).

Original: English

For the Republic of the Marshall Islands:

Having considered the declarations and reservations contained in Document 427, the delegation of the United States of America, acting on behalf of the Government of the Republic of the Marshall Islands, pursuant to Article 31 of the International Telecommunication Union Convention (Geneva, 1992), as amended by the Plenipotentiary Conference (Kyoto, 1994), declares that it reserves for the Government of the Republic of the Marshall Islands, the right to make any declarations or reservations necessary to Marshallese interests should declarations or reservations made by other Member States jeopardize the proper operation of the telecommunication services of the Republic of the Marshall Islands.

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ANNEX M: WRC-11 AGENDA

ADD PLEN/408/1 (B24/419/4)

RESOLUTION [COM6/7] (WRC-07)

Agenda for the 2011 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2007),

considering

a) that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for a world radiocommunication conference should be established four to six years in advance and a final agenda shall be established by the Council two years before the conference;

b) Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;

c) the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

recognizing

a) that this Conference has identified a number of urgent issues requiring further examination by WRC-11;

b) that, in preparing this agenda, many items proposed by administrations could not be included and have had to be deferred to future conference agendas,

resolves

to recommend to the Council that a world radiocommunication conference be held in 2011 for a period of four weeks, with the following agenda:

b on the basis of proposals from administrations, taking account of the results of WRC-07 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action with respect to the following items:

1.1 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-07)**;

1.2 taking into account the ITU-R studies carried out in accordance with Resolution **951 (Rev.WRC-07)**, to take appropriate action with a view to enhancing the international regulatory framework;

1.3 to consider spectrum requirements and possible regulatory actions, including allocations, in order to support the safe operation of unmanned aircraft systems (UAS),

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based on the results of ITU-R studies, in accordance with Resolution **[COM6/8] (WRC-07)**;

1.4 to consider, based on the results of ITU-R studies, any further regulatory measures to facilitate introduction of new aeronautical mobile (R) service (AM(R)S) systems in the bands 112-117.975 MHz, 960-1 164 MHz and 5 000-5 030 MHz in accordance with Resolutions **413 (Rev.WRC-07)**, **[COM4/5] (WRC-07)** and **[COM4/9] (WRC-07)**;

1.5 to consider worldwide/regional harmonization of spectrum for electronic news gathering (ENG), taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/5] (WRC-07)**;

1.6 to review No. **5.565** of the Radio Regulations in order to update the spectrum use by the passive services between 275 GHz and 3 000 GHz, in accordance with Resolution **950 (Rev.WRC-07)**, and to consider possible procedures for free-space optical-links, taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/9] (WRC-07)**;

1.7 to consider the results of ITU-R studies in accordance with Resolution **222 (Rev.WRC-07)** in order to ensure long-term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service, and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz;

1.8 to consider the progress of ITU-R studies concerning the technical and regulatory issues relative to the fixed service in the bands between 71 GHz and 238 GHz, taking into account Resolutions **731 (WRC-2000)** and **732 (WRC-2000)**;

1.9 to revise frequencies and channelling arrangements of Appendix 17 to the Radio Regulations, in accordance with Resolution **351 (Rev.WRC-07)**, in order to implement new digital technologies for the maritime mobile service;

1.10 to examine the frequency allocation requirements with regard to operation of safety systems for ships and ports and the related regulatory provisions, in accordance with Resolution **[COM6/10] (WRC-07)**;

1.11 to consider a primary allocation to the space research service (Earth-to-space) within the band 22.55-23.15 GHz, taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/11] (WRC-07)**;

1.12 to protect the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/12] (WRC-07)**;

1.13 to consider the results of ITU-R studies in accordance with Resolution **[COM6/13] (WRC-07)** and decide on the spectrum usage of the 21.4-22 GHz band for the broadcasting-satellite service and the associated feeder-link bands in Regions 1 and 3;

1.14 to consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30-300 MHz, in accordance with Resolution **[COM6/14] (WRC-07)**;

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1.15 to consider possible allocations in the range 3-50 MHz to the radiolocation service for oceanographic radar applications, taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/15] (WRC-07)**;

1.16 to consider the needs of passive systems for lightning detection in the meteorological aids service, including the possibility of an allocation in the frequency range below 20 kHz, and to take appropriate action, in accordance with Resolution **[COM6/16] (WRC-07)**;

1.17 to consider results of sharing studies between the mobile service and other services in the band 790-862 MHz in Regions 1 and 3, in accordance with Resolution **[COM4/13] (WRC-07)**, to ensure the adequate protection of services to which this frequency band is allocated, and take appropriate action;

1.18 to consider extending the existing primary and secondary radiodetermination-satellite service (space-to-Earth) allocations in the band 2 483.5-2 500 MHz in order to make a global primary allocation, and to determine the necessary regulatory provisions based upon the results of ITU-R studies, in accordance with Resolution **[COM6/17] (WRC-07)**;

1.19 to consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU-R studies, in accordance with Resolution **[COM6/18] (WRC-07)**;

1.20 to consider the results of ITU-R studies and spectrum identification for gateway links for high altitude platform stations (HAPS) in the range 5 850-7 075 MHz in order to support operations in the fixed and mobile services, in accordance with Resolution **734 (Rev.WRC-07)**;

1.21 to consider a primary allocation to the radiolocation service in the band 15.4-15.7 GHz, taking into account the results of ITU-R studies, in accordance with Resolution **[COM6/19] (WRC-07)**;

1.22 to examine the effect of emissions from short-range devices on radiocommunication services, in accordance with Resolution **[COM6/4] (WRC-07)**;

1.23 to consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services;

1.24 to consider the existing allocation to the meteorological-satellite service in the band 7 750-7 850 MHz with a view to extending this allocation to the band 7 850-7 900 MHz, limited to non-geostationary meteorological satellites in the space-to-Earth direction, in accordance with Resolution **[COM6/20] (WRC-07)**;

1.25 to consider possible additional allocations to the mobile-satellite service, in accordance with Resolution **[COM6/21] (WRC-07)**;

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the

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corresponding references in the Radio Regulations, in accordance with principles contained in the Annex 1 to Resolution **27 (Rev.WRC-07)**;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

4 in accordance with Resolution **95 (Rev.WRC-07)**, to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

6 to identify those items requiring urgent action by the Radiocommunication Study Groups in preparation for the next world radiocommunication conference;

7 to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks", in accordance with Resolution **86 (Rev.WRC-07)**;

8 in accordance with Article 7 of the Convention:

8.1 to consider and approve the Report of the Director of the Radiocommunication Bureau:

8.1.1 on the activities of the Radiocommunication Sector since WRC-07;

8.1.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations; and

8.1.3 on action in response to Resolution **80 (Rev.WRC-07)**;

8.2 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution **[COM6/22] (WRC-07)**,

resolves further

to activate the Conference Preparatory Meeting and the Special Committee on Regulatory/ Procedural Matters,

invites the Council

to finalize the agenda and arrange for the convening of WRC-11, and to initiate as soon as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a report to WRC-11,

instructs the Secretary-General

to communicate this Resolution to international and regional organizations concerned.

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ANNEX N: ACRONYMS AND TECHNICAL TERMS

700 MHz band	frequency band between 698-806 MHz
ADD*	add
AI	Agenda Item
AIS	automatic identification system
AM(R)S	aeronautical mobile (route) service
AMT	aeronautical mobile telemetry
API	advanced publication information
APT	Asia-Pacific Telecommunity
ATC	ancillary terrestrial component
ATU	African Telecommunications Union
BR	Radiocommunication Bureau
BSS	broadcasting-satellite service
C-band	frequency band between 3.4-4.2 GHz
CEPT	Conference of European Post and Telecommunications
CHF	Swiss francs
CITEL	Inter-American Telecommunication Commission
COM	Committee
CPM	Conference Preparatory Meeting
CR/C	coordination request
EESS	Earth exploration-satellite service

* Term used to denote action taken with respect to a provision in the ITU Radio Regulations

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EIRP	Equivalent Isotropic Radiated Power
FAA	Federal Aviation Administration
FACA	Federal Advisory Committee Act
FM	frequency modulation
FS	fixed service
FSS	fixed-satellite service
GHz	Gigahertz
GLONASS	global orbiting navigation satellite system
GMDSS	global maritime distress and safety system
GPS	global positioning system
GSO	geostationary satellite orbit
HAPS	high altitude platform station
HF	high frequency
HIO	highly inclined orbits
IAP	Inter-American Proposal
ICAO	International Civil Aviation Organization
IDD	International Direct Dialing
IMT	international mobile telecommunication
IRAC	Interdepartment Radio Advisory Committee
ISM	industrial, scientific and medical radio bands
ITAC-R	International Telecommunication Advisory Committee-Radiocommunication
ITSO	International Telecommunication Satellite Organization

* Term used to denote action taken with respect to a provision in the ITU Radio Regulations

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ITU	International Telecommunication Union
ITU-R	ITU Radiocommunication Sector
ITU-T	ITU Telecommunication Standardization Sector
JTG	joint task group
kHz	kilohertz
LAAS	local area augmentation system
Little LEO	low data rate store and forward mobile satellite service in low Earth orbit
MES	mobile earth station
MetSat	meteorological satellite
MHz	Megahertz
MMSI	mobile maritime service identities
MOD*	modify
MS	mobile service
MSS	mobile-satellite service
MSS/ATC	mobile-satellite service with ancillary terrestrial component
NASA	National Aeronautics and Space Administration
NGSO	non-geostationary satellite orbit
NOC*	No Change
NTIA	National Telecommunication and Information Administration
pfd	power flux density
RA	ITU Radiocommunication Assembly
RCC	Regional Commonwealth in the field of Communications

* Term used to denote action taken with respect to a provision in the ITU Radio Regulations

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RCS	Radio Conference Subcommittee
Region 1	ITU region comprising Europe, Africa, the former Soviet countries and parts of the Middle East
Region 2	ITU region comprising the Americas
Region 3	ITU region comprising Asia/ Oceania, and Iran
Res.	Resolution
RNSS	radionavigation-satellite service
RR	ITU Radio Regulations
RRB	Radio Regulations Board
SADC	Southern African Development Council
SRS	space research service
SUP*	suppress
SWG	sub-working group
UAS	unmanned aircraft systems
UHF	ultra high frequency
VHF	very high frequency
VSAT	very small aperture terminals
WAC	WRC-07 Advisory Committee
WP	working party
WRC	World Radiocommunication Conference

* Term used to denote action taken with respect to a provision in the ITU Radio Regulations

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