

A SURVEY: WRC-2000 AND IMT-2000—THE SEARCH FOR GLOBAL SPECTRUM

Jennifer A. Manner*

I. INTRODUCTION

IMT-2000.¹ The International Telecommunications Union's ("ITU")² buzzword of the moment for third-generation mobile services. This past Spring, IMT-2000 was one of the key items on the 2000 World Radiocommunication Conference

* Jennifer Manner is the Director for International Alliances at WorldCom, Inc. She served on the U.S. delegation to the World Radiocommunication Conference ("WRC") 2000 and participated in crafting the compromise that was ultimately reached. Prior to her current position, Ms. Manner was the Associate Counsel for Foreign Market Access and International Wireless Services at WorldCom, Inc. Before coming to WorldCom, Inc., Ms. Manner served as an associate at Akin, Gump, Strauss, Hauer and Feld, L.P. and was an Attorney-Advisor at the Federal Communications Commission. Ms. Manner is currently a professor at Georgetown University Law Center. She is a 1992 graduate of Georgetown Law School with an L.L.M. *with distinction* in International Law. Ms. Manner received her J.D. *cum laude* from New York Law School in 1991 and her B.A. from the State University of New York at Albany in 1986. The views reflected in this article are those of the author alone and do not reflect the views of WorldCom, Inc.

The author would like to give a special thanks to Joe Ward, who assisted in the completion of this article. Mr. Ward is a student at the Catholic University, Columbus School of Law, a COMM LAW CONSPECTUS associate and a certificate candidate in the Columbus School of Law's Institute for Communications Studies. Mr. Ward holds a bachelor's degree from Georgetown University.

¹ International Mobile Telecommunications 2000 ("IMT-2000"), also known as Third Generation Mobile Systems, are a set of technical standards that provide worldwide digital wireless access by linking terrestrial and satellite mobile networks to fixed wireless networks (e.g., PSTN, ISDN, IP). IMT-2000's specifications are set forth in ITU Recommendation M.687. See generally World Radiocommunication Conference 2000, at <http://www.itu.int/imt> (last visited Oct. 3, 2000).

² The ITU is the United Nations' agency that is responsible for coordinating the development of a global telecommunications network. The ITU develops international regulations concerning all uses of the frequency spectrum, which member nations implement through national legislation and regulations. The ITU also develops common international standards for the interconnection of telecommunications systems on a global basis. See INT'L TELECOMM. UNION, INT'L MONETARY FUND, DIRECTORY OF ECONOMIC, COMMODITY AND DEVELOPMENT ORGANIZATIONS, at <http://www.imf.org/exter->

("WRC-2000" or the "Conference")³ agenda. The crux of the issue—a choice of two frequency bands for use by IMT-2000 systems. The Conference resulted in a myriad of compromises leaving each of the many regional factions equally happy—possibly a first for the ITU.⁴

[nal/np/sec/decco/itu.htm](http://www.itu.int/np/sec/decco/itu.htm) (last updated July 9, 1999).

³ The World Radiocommunication Conference ("WRC") is the international meeting held every two to three years where the telecommunications administrations of ITU member countries decide on the shared use of frequency spectrum that allows the deployment or growth of all forms of radiocommunication services (e.g., television and radio broadcasting, mobile telephony, space services). At the WRC, administrations amend the Radio Regulations, which "constitute an international treaty on Radiocommunication covering the use of the radio-frequency spectrum by radiocommunication services." WRC-2000, INT'L TELECOMM. UNION, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (last updated Feb. 7, 2000). The role of the WRC is to:

revise the Radio Regulations and any associated Frequency Assignment and Allotment Plans, address any radiocommunication matter of [a] worldwide character, [review and] instruct the Radio Regulations Board and the Radiocommunication Bureau . . . and determine Questions for study by the Radiocommunication Assembly and its Study Groups in preparation for future Radiocommunications Conferences.

Id.

⁴ See WRC-2000, INT'L TELECOMM. UNION, THE BOTTOM LINE: WHEN DISHARMONY IS NOT, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (last visited Oct. 3, 2000) ("[T]he ITU's World Radiocommunication Conference achieved everything it set out to achieve for IMT-2000."); *Far-Reaching Agreements at World Radiocommunication Conference*, COMM. STANDARDS NEWS, Jul. 24, 2000, available at 2000 WL 14663892 ("[T]he WRC-2000 was hailed as a success because of its ability to come to grips with key and ever more complex issues."); see *WRC Ends on High Note, with Spectrum Decisions for 3G*, MOBILE COMM. REP., June 12, 2000, available at 2000 WL 8763404 (quoting French delegation head as saying "everyone will be leaving Istanbul with relief"); WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, FINAL COUNTDOWN TO THE FINAL ACTS, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 26–29, 2000) (quoting Mr. Jamieson, Chairperson of Working Group 5A, as saying "I believe that the [IMT-2000] package delivers on the principles we all agreed upon and represents something for everyone").

This survey article will examine the international and domestic dynamics leading up to the Conference, how the United States, by holding a domestic mini-WRC just prior to the Conference, was able to sway the Conference with a middle ground position, and how the Conference resulted in an acceptable agreement on the identification of frequency bands to be utilized for IMT-2000.⁵

II. BACKGROUND

IMT-2000 is the ITU terminology for the family of standards that comprise third-generation mobile services. For over ten years the ITU has struggled with crafting these technical standards to allow the operation of third-generation systems and to determine the amount of spectrum that is required under the auspices of the ITU Technical Study Groups.⁶ At World Radiocommunications Conferences, once the technical spectrum requirements are decided in the study groups, the general Conference is left with the key political question of what is the optimal "global" spectrum for the operation of these mobile systems.⁷

In the early 1990s, it was recognized that an initial identification of spectrum would be required for these systems early on. Accordingly, while the study groups continued their work, the 1992 World Administrative Radiocommunication Con-

ference ("WARC-92") set aside through an "identification" 230 MHz of spectrum for IMT-2000 in each of the three ITU regions of the world.⁸

While the WARC-92 initially identified a global spectrum for IMT-2000, this failed to result in a global use of this spectrum. The United States and several other countries determined that they had other needs in the identified bands so that the identified bands were not allocated domestically to third-generation-type services.⁹ For example, the United States allocated the 1900 MHz band to personal communications services ("PCS").¹⁰ Shortly after this action, the United States came under severe criticism from various international factions, most notably the European Union ("EU"), for what critics argue is a nonconforming use of the IMT-2000 bands. The EU has consistently taken the position that the 1992 initial identification was equivalent to an allocation of spectrum.¹¹ However, the United States has correctly argued that position is legally flawed because the term "identification" has no legal status in the ITU Radio Regulations.¹² The use of the 1992 IMT-2000 bands for nonconforming uses created great concern by many nations in the lead period to WRC-2000 who were once again afraid that there would not be a global identification of spectrum.¹³ This tension would greatly influence the ability of the United States to reach a consensus domestic position on IMT-2000 early in the

⁵ See Press Release, Int'l Telecomm. Union, ITU Gives Final Approval to IMT-2000 Radio Interface Specifications, at <http://www.itu.int/newsroom/press/releases/2000/10.html> (May 8, 2000) ("The decision[,] which was taken unanimously[,] was hailed by all participants.").

⁶ Robert W. Jones, *Global Goals, Global Challenges at WRC-2000*, at http://www.itu.int/newsarchive/wrc2000/presskit/Conference_Overview.html (last visited Nov. 6, 2000) (stating that previous WRC identification of spectrum for IMT-2000 was insufficient because it did not accurately estimate the explosion of mobile services or "the growing demand for megabit data rates"); Lynette Luna, *FCC Mulls Allocating More Spectrum for 3G*, RADIO COMM. REP., Aug. 31, 1998, at 3 (noting ITU's decision in 1997 to re-examine the issue of additional spectrum for IMT-2000 at WRC 2000); see WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS: FINAL COUNTDOWN TO THE FINAL ACTS, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 26-29, 2000) (describing the administration of IMT-2000 issues in Committee 5 "Working Group 5A" as being dictated by an "iron hand").

⁷ See INT'L TELECOMM. UNION, SCOPE OF THE ITU-R CONFERENCE PREPARATORY MEETING, at <http://www.itu.int/brsg/cpm/scope.html> (last updated Mar. 2, 2000) (noting that technical issues are resolved before the WRC to allow the conference to focus on the more delicate political issues surrounding spectrum allocation).

⁸ See WRC-2000, INT'L TELECOMM. UNION, THE MAIN RESULTS, ADDITIONAL SPECTRUM FOR IMT-2000 THIRD GENERATION MOBILE SYSTEMS, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (last visited Oct. 7, 2000) (explaining WARC-92 allocation).

⁹ See Cory Peichel, *From Watson to W-CDMA; How wireless technologies evolved; Special Focus: Technology Information*, COMM NEWS, May 1998, at 62 (noting divergent allocations).

¹⁰ See *id.* (noting that in 1993, the Federal Communications Commission ("FCC") allocated the 1.9 GHz band to be auctioned off for PCS).

¹¹ Lynette Luna, *FCC Mulls Allocating More Spectrum for 3G*, RADIO COMM. REP., Aug. 31, 1998, at 3 (noting European operators' concern over inconsistency with U.S. spectrum allocation and "potential problems associated with roaming with the United States in 3G bands").

¹² Jeffrey Silva, *3G WRC Policy Dispute Erupts*, RADIO COMM. REP., July 5, 1999, at 1 (citing U.S. draft proposal that states that WARC 1992 identifications (i.e., Footnote S5.388) "do not constitute an allocation and lack definition and regulatory purpose").

¹³ David R. Sidall, *Debate Swirls Around IMT-2000*, RADIO COMM. REP., Sept. 21, 2000, at 20 (noting a sense of urgency outside the United States over the identification of additional spectrum for third generation ("3G")).

WRC-2000 preparation process.¹⁴

It was soon apparent that the initial identification of spectrum would be insufficient to satisfy the spectrum requirements for IMT-2000 systems. Over the next few years preceding the Conference, the ITU-R Study Groups¹⁵ focusing on IMT-2000 determined that a minimum of an additional 160 MHz of spectrum was required for these third-generation systems in order to satisfy global IMT-2000 needs through 2010.¹⁶ Study Group 8/1¹⁷ determined that the most suitable bands for IMT-2000 were the 1710–1855 MHz band (the “1.7 GHz band”), the 2500–2690 MHz band (the “2.5 GHz band”) and the 2700–2900 (the “2.8 GHz band”).¹⁸ As discussed below, the current usage of these bands by individual countries greatly influenced the results of the WRC-2000. One consensus band was going to be hard

to find. Each of the proposed bands had advocates and adversaries, depending on the current operational use of the band in a specific country or region.¹⁹

The 1.7 GHz band is allocated to mobile and fixed service on a primary basis under the ITU Radio Regulations.²⁰ Accordingly, no change to the Table of Allocations was necessary to identify a spectrum to IMT-2000.²¹ However, the identification of this band had some very fierce and politically powerful opponents, most notably, the western Europeans and the U.S. Department of Defense (“DOD”).²² As discussed in greater detail below, the western Europeans had already allocated the 1.7 GHz band to second-generation mobile systems and did not foresee evolution of these systems to third generation.²³ Further, the western Europeans had no plans to relocate the cur-

¹⁴ One fear of the incumbent operators in the bands proposed for identification for IMT-2000 was that the Europeans and other advocates would argue that continued operation of their systems in these bands would be inconsistent with the ITU Radio Regulations. See Jeffrey Silva, *U.S. may be shifting 3G spectrum stance*, RADIO COMM. REP., Nov. 15, 1999, at 1 (noting industry’s concern over the public policy question of nonconforming uses).

¹⁵ INT’L TELECOMM. UNION, ITU-R: STUDY GROUPS (“SGs”), at <http://www.itu.int/ITU-R/brochure/6-rsg/index.html> (Sept. 11, 2000) (defining scope of ITU Radiocommunication (“ITU-R”) Study Groups); see also INT’L TELECOMM. UNION, CONFERENCE PREPARATORY MEETINGS (“CPM”) (Nov. 26, 1997) (establishing procedure by which Study Groups preparing for WRC will submit work to CPM) (on file with author). The International Telecommunications Radiocommunication Sector is the body within the ITU charged with ensuring “rational, equitable, efficient and economical use of the radio-frequency spectrum and satellite orbits” by “holding World and Regional Radiocommunication Conferences.” INT’L TELECOMM. UNION, ITU-R, THE RADIOCOMMUNICATION SECTOR (ITU-R), at <http://www.itu.int/ITU-R/brochure/2-rs/index.html> (last visited Jan. 29, 2001). ITU-R recommends “technical characteristics and operational procedures for radiocommunication services,” and provides other forms of information and guidance to assist ITU member states with national spectrum management. INT’L TELECOMM. UNION, ITU-R, THE RADIOCOMMUNICATION SECTOR (ITU-R), at <http://www.itu.int/ITU-R/brochure/2-rs/index.html> (last visited Jan. 29, 2001).

¹⁶ Josef F. Huber, *IMT-2000 Spectrum—Views from the UMTS Forum*, at <http://www.itu.int/newsarchive/> (Sept. 2000) (noting Study Group 8/1’s 1999 determination that an additional 160 MHz of spectrum should be identified globally).

¹⁷ Study Group 8/1 is the group of technical experts within the ITU-R that drafts technical bases for Radiocommunication Conferences and develops draft ITU-R Recommendations on the technical characteristics of “systems and networks for the mobile, radiodetermination and amateur services, including related satellite services.” INT’L TELECOMM. UNION, ITU-R: SCOPE OF STUDY GROUP 8—MOBILE, RADIODETERMINATION, AMATEUR AND RELATED SATELLITE

SERVICES, at <http://www.itu.int/brsg/sg8/scope.html> (last visited Jan. 29, 2001); see also INT’L TELECOMM. UNION, ITU-R SGD: WELCOME TO RADIOCOMMUNICATION STUDY GROUPS, at <http://www.itu.int/brsg/index.html> (last visited Jan. 29, 2001).

¹⁸ The Conference also ultimately identified the 806–960 MHz band, but this is not considered additional spectrum. See William Sweet, *Cell Phones Answer Internet Call*, IEEE SPECTRUM, at <http://www.spectrum.ieee.org/publicfeature/aug00/wire.html> (Aug. 2000).

¹⁹ See U.S. Sees Spectrum Proposal as “Bridge” at Upcoming Conference, COMM. DAILY, Mar. 20, 2000, available at 2000 WL 4694742 (noting diverging positions making identification of one consensus band unlikely).

²⁰ See INT’L TELECOMM. UNION, RADIO REG., ARTICLE S5, FOOTNOTES S5.149, S5.341, S5.380, S5.385–88, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (1988) (identifying the 1710–1930 MHz to the fixed and mobile services).

²¹ The Table of Allocations is part of the larger Radio Regulations. IMT-2000 is a mobile system. Accordingly, in order to identify a frequency band for this type of system, a mobile service allocation is required. See WRC-2000, INT’L TELECOMM. UNION, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (last visited Oct. 27, 2000) (affirming treaty status).

²² Ambassador Gail S. Schoettler, *Fighting for our air waves*, THE DENVER POST, Mar. 5, 2000, at G3 (noting competition between equipment manufacturers, service providers, broadcasters and the military for the identification of certain frequency bands).

²³ See U.S. Offers Draft Plan for Next-Generation Spectrum Services, COMM. DAILY, Feb. 18, 2000 (noting Europe’s preference for the 2.5 GHz band is based in its current use of the 1710–1825 MHz band for Global System for Mobile Communications (“GSM”) 1800 MHz services and its inability to evolve toward 3G use); David R. Siddall, *Debate Swirls Around IMT-2000*, RADIO COMM. REP., Sept. 21, 1998, at 20 (noting European administrations’ current inability to evolve from first- and second-generation services to third-generation services in the 800 MHz and 900 MHz bands, and their desire to identify the 2.5 GHz band).

rent operating mobile systems from this band to allow third-generation systems into this band. Accordingly, this band was unacceptable from their point of view.²⁴

The DOD also held significant concerns over the identification of the 1.7 GHz band. However, the DOD's concerns focused on the defense-related communications systems that were planned, as well as operating in, the 1.7 GHz band that it had around the globe.²⁵ The DOD became entrenched early on and would not move to these systems.²⁶

Despite this opposition, several other countries, such as the Inter-American Telecommunications Commission ("CITEL") nations discussed below, where such spectrum was clear, felt that the 1.7 GHz band was the most suitable place for identification of spectrum for IMT-2000.²⁷ This band was essentially "clear" spectrum in those countries—realizing that many current users want to utilize 1.7 GHz for third-generation mobile systems.²⁸

The 2.5 GHz band also was very controversial. Like the 1.7 GHz band, this band was already allo-

cated under the ITU Radio Regulations to mobile and other services, such as the fixed service, the broadcasting satellite service and the mobile satellite service ("MSS").²⁹ This additional allocation made it very attractive to the MSS community, which predicted the identification of MSS spectrum for IMT-2000 as a key to their hope of recovering international competitiveness.³⁰ The Europeans, through the European Conference of Posts and Telecommunications Administrations ("CEPT"),³¹ also determined that this band was the key to obtaining a global band for IMT-2000.³² Traditionally, this band had only been used by a burgeoning system called Multipoint Multichannel Distribution Systems ("MMDS"), a one-way cable alternative.³³ However, in the year or two before the Conference, the regulatory landscape had changed and MMDS was poised to be a two-way broadband solution to competitive local access in many countries.³⁴ Accordingly, these interests became fiercely involved in protecting their investments in these bands.³⁵ The Europeans, on the other hand, believed that the

²⁴ David R. Siddal, *Debate Swirls Around IMT-2000*, RADIO COMM. REP. Sept. 21, 1998, at 20.

²⁵ See Jeffrey Silva, *U.S. triumphs at WRC-2000*, RADIO COMM. REP., June 5, 2000, at 1 (noting DOD's current and projected use of the 1.7 GHz band and the Pentagon's reluctance to relocate).

²⁶ See Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 3, (recounting DOD's insistence before Congress the previous summer that it would no longer accept surrendering spectrum to commercial users).

²⁷ WRC-2000, INT'L TELECOMM. UNION, CITEL ADMINISTRATIONS, PROPOSALS FOR THE WORK OF THE CONFERENCE 32-33, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Mar. 27, 2000). CITEL is the body within the Organization of American States ("OAS") that coordinates cooperation among OAS member states on issues involving telecommunications. See INTER-AMERICAN TELECOMM. COMM'N: ITS ORIGIN AND ACCOMPLISHMENTS, at http://www.citel.oas.org/origin_e.htm (last visited Jan. 29, 2001).

²⁸ *U.S. Sees Spectrum Proposal as "Bridge" at Upcoming Conference*, COMM. DAILY, Mar. 20, 2000, available at 2000 WL 4694742 ("Most of the countries in the Americas have the 1700 band clear of other uses. It's an empty band." (quoting Ambassador Schoettler)).

²⁹ INT'L TELECOMM. UNION, RADIO REG., ARTICLE S5, FOOTNOTES S5.339, S5.403, S5.409-411, S5.413, S5.415, S5.415A, S5.416-418, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (1988) (allocating the 2520-2700 MHz band to the fixed, mobile and broadcasting satellite services).

³⁰ *ICO's planned Merger with Teledesic and Emergence from Bankruptcy Shows Progress*, SATELLITE NEWS, May 22, 2000, available at 2000 WL 4139624 (recounting instability in MSS industry and the MSS industry's refocus on third-generation mobile systems).

³¹ The European Conference of Posts and Telecommunications Administrations ("CEPT") is the regional standards-setting body for Europe. THE EUROPEAN CONFERENCE OF POSTS AND TELECOMM. ADMINISTRATIONS, WHAT IS THE CEPT?, at <http://www.org/docs/presentation.htm> (last visited Nov. 6, 2000).

³² INT'L TELECOMM. UNION, PROPOSALS FOR THE WORK OF THE CONFERENCE 3, 6-8, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Jan. 21, 2000) (outlining proposal identifying the band 2520-2760 MHz specifically for the terrestrial component of IMT-2000).

³³ HARRY NEWTON, NEWTON'S TELECOM DICTIONARY 527 (15th ed. 2000) ("MMDS is a way of distributing cable television signals, through microwave, from a single transmission point to multiple receiving points . . . The microwave signal is received by an antenna on the subscriber's home, then sent down coaxial cable to a box atop the customer's TV set. The box decodes and decompresses the digital signal."); *U.S. Offers Draft Plan for Next-Generation Spectrum Services*, COMM. DAILY, Feb. 18, 2000 (stating that the 2.5 GHz band is used by MMDS and Improved Mobile Telephone Service ("IMTS") operators).

³⁴ See Christopher Whitely, Editorial, *Fixed wireless won't move unless carriers tout pluses*, ELECTRONIC ENGINEERING TIMES, Nov. 8, 1999, at 83 (citing MMDS' acceptance as a replacement for broadband wireline connections to subscribers); *Optus Vision Telephony Supplier in Broadband Wireless Alliance*, EXCHANGE, Feb. 14, 1997, available at 2000 WL 22239465 (reporting on two companies development of fixed two-way broadband wireless communications systems using spectrum allocated for the MMDS after receiving FCC authorization).

³⁵ Patrick Mannion, *New consortium, startup provide fresh options and disputes—Fixed wireless nets surge ahead*, ELECTRONIC ENGINEERING TIMES, July 17, 2000, available at 2000 WL 22239465 ("Each [WorldCom and Sprint] has spent more than \$1 billion to buy five MMDS companies apiece, in a

existing users could be transitioned out for third-generation mobile systems.³⁶

The final band, the 2.8 GHz band, was not allocated for the mobile service.³⁷ Accordingly, it was the most controversial at the onset because it would require a change in the ITU Radio Regulations, a treaty, to identify the band for IMT-2000.³⁸ Compounding this band's unsuitability for IMT-2000 was the use of this band by the United States' Federal Aviation Administration ("FAA") and the U.S. Weather Service.³⁹ For this reason, this band was not favored by many countries for identification for IMT-2000 and was taken off the table early in the Conference.⁴⁰

head-to-head race to dominate the market on a city-by-city basis in the United States, Europe and South America."); Hilary Smith, *Sprint to extend fixed wireless broadband reach*, RADIO COMM. REP., Aug. 28, 2000, at 28 (noting Sprint and WorldCom's recent filings with the FCC to extend MMDS services to 45 and 60 U.S. markets, respectively); see Hilary Smith, "Broad" is key word in definition of broadband wireless, RADIO COMM. REP., Mar. 13, 2000, at 16 (stating that Sprint and WorldCom have a "duopoly" on MMDS spectrum).

³⁶ WRC-2000, INT'L TELECOMM. UNION, WRC-2000, EUROPEAN COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 3, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (Jan. 21, 2000) (noting Europe's support for transitional arrangements).

³⁷ INT'L TELECOMM. UNION, RADIO REG., ARTICLE S5, FOOTNOTES S5.337, S5.424, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (1988) (allocating the 2.7–2.9 GHz band for aeronautical radionavigation and weather reporting).

³⁸ See WRC-2000, INT'L TELECOMM. UNION, ITU-R MEETINGS, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (last visited Nov. 6, 2000).

³⁹ See INT'L TELECOMM. UNION, RADIO REG., ARTICLE S5, FOOTNOTES S5.337, S5.423, S5.424, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (1988) (identifying the band 2700–2900 MHz to aeronautical radionavigation and weather radar systems).

⁴⁰ See, e.g., WRC-2000, INT'L TELECOMM. UNION, INTER-AMERICAN TELECOMM. COMM., COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 36, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (Mar. 27, 2000) (noting CITEL's apprehension and request for study on identifying the 2.7 GHz band); see WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, THE STEP-BY-STEP APPROACH FOR IMT-2000 STARTS BEARING FRUIT, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 17, 2000) (noting Working Group 5A rejection for consideration of any band not already assigned to mobile services and noting shelving for further study as a possible future home for IMT-2000 systems).

⁴¹ Perhaps the first conference that was driven by industry was WARC-92 where the issue of MSS spectrum for non-geostationary mobile satellite systems was on the agenda. At this conference, Motorola clearly set the stage for widespread industry participation. There was widespread industry partici-

III. PRELIMINARIES

A. The Impact of Divergent Interests

One dynamic that only recently began impacting the WRC on a global basis is the increasing importance of industry participation.⁴¹ Only in the past few years has industry participated actively in the WRC process on numerous delegations.⁴² As more and more markets liberalize, it is likely that industry will continue to increase in power in determining the outcome of the WRCs, both as members and member delegations.⁴³

In general, four key industry groups were repre-

sentation at the WARC-92 compared to the WRC-2000. See Leslie Taylor, *The great spectrum squeeze of 1992*, ASAP, Mar. 11, 1991, at 18 (noting Motorola's extensive participation in the pre-WARC-92 process); Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunication Conferences*, 40, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (noting significant role of industry in the WRC-2000); Jeffrey Silva, *Multiband approach gains followers at WRC*, RADIO COMM. REP., May 22, 2000, at 3 (noting 3G is a "multibillion dollar industry in the making."); Jeffrey Silva, *3G WRC Policy Dispute Erupts*, RADIO COMM. REP., Sept. 5, 1999, at 1 (noting industry's early feelings that the U.S. government was out of touch with the marketplace and would not adequately represent their interests, and that "[a] large amount of resources have already been expended in this effort [IMT-2000 3G] by administrations, manufacturers and service providers").

⁴² As industry has become more global, so has its participation on delegations. For example, Nokia, a Finnish company, had members of its corporation on numerous delegations, including that of the United States. In this manner, multinational corporations are able to influence the domestic and international processes and also monitor what is happening in other "camps" different than the ones in which they had traditionally participated. See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in World Radiocommunication Conferences*, 40–41, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (noting impact of multinational corporations on WRC politics); see also WRC-2000, INT'L TELECOMM. UNION, FINAL LIST OF PARTICIPANTS 1–226, 246, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 23, 2000) (listing, *inter alia*, corporations participating individually and as members of various national delegations).

⁴³ This increase in industry's importance in the ITU and WRC has occurred despite objections by developing countries and sympathetic developed countries concerned that corporations from developed countries could come to dominate the process. See ITU to Charge Satellite Operators for System Notification Services, COMM. DAILY, July 9, 1997, available at <http://www.itu.int/brconf/wrc-2000/about/index-html> (last visited Oct. 10, 2000) (noting the tension between developed and developing nations).

sented on numerous delegations and as members.⁴⁴ The first and most vocal were the equipment manufacturers, including Nokia, Nortel, Ericsson, Qualcomm, Motorola, Lucent and a handful of others.⁴⁵ A second important industry constituency represented were the mobile service providers, such as British Telecom, France Telecom, BellSouth, BellAtlantic, Sprint and others.⁴⁶ An equally vocal constituency were the MSS providers such as ICO and GlobalStar.⁴⁷ Finally, the normally quiet fixed-service operators were present through WorldCom, Inc., Sprint and the Wireless Communications Industry Association International.⁴⁸ Each of these factions played a key role in shaping the outcome of the Conference and what bands, if any, would be identified for IMT-2000.

First, equipment manufacturers felt that they had the most to gain from successfully identifying global spectrum for IMT-2000 systems.⁴⁹ A uni-

form global standard would arguably make it easier for the manufacturers to make cheaper equipment that would operate around the world.⁵⁰ For the MSS providers, it was one of the last few chances they had to become viable systems. Over the past few years, the MSS industry had watched its brethren either go into bankruptcy or fail (such as ICO and Iridium respectively).⁵¹ The remaining MSS entities felt that the identification of MSS spectrum for IMT-2000 would ensure that they would have a role in what they believed was likely to be the next major boom in telecommunications.⁵²

What concerned mobile service providers most was not the actual spectrum that was to be identified for IMT-2000 but whether a spectrum would be identified for these systems at all.⁵³ Failure to do so would likely negatively impact the ability of these operators to expand globally.⁵⁴ Of secondary importance, though, was the ability of the

⁴⁴ Industry can participate not only as part of a delegation but also can join the ITU as small "m" members of the ITU. Accordingly, they may have greater influence in the study group process and in nontreaty making conferences, such as the CPM. See INT'L TELECOMM. UNION, SECTOR MEMBERSHIP PARTICIPATION, at <http://www.itu.int/members/sectmem/participation.html> (last updated Mar. 27, 2000) (explaining difference between ITU Members, or large "M" members, and ITU Sector Members, or small "m" members, and noting that "Sector Members of the Radiocommunication Sector may participate in all the technical, operational and regulatory work in the preparatory phase leading up to a World Radiocommunication Conference").

⁴⁵ See Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (noting that these manufacturers' strident lobbying reached back to the pre-WRC stage when they formed the Wireless Spectrum Coalition to pressure the White House and the U.S. Congress to secure 3G spectrum identifications at WRC-2000).

⁴⁶ See *id.* (noting mobile service providers such as AT&T Wireless, BellSouth, BellAtlantic and Sprint also were members of the Wireless Spectrum Coalition).

⁴⁷ See *GPS Coalition Voices Opposition to Sharing with MSS*, SATELLITE NEWS, Dec. 6, 1999, available at 1999 WL 6684807 (noting GPS advocacy preceding the WRC-2000).

⁴⁸ The Wireless Communications Association International ("WCAI") represents both MMDS providers and also ITFS providers. See Lynette Luna, *Incumbents not eager to share 3G bands*, RADIO COMM. REP., Sept. 11, 2000, at 1 ("ITFS [are] systems run by educational and religious organizations [that] operate [at] the 2.5 GHz band").

⁴⁹ See Press Release, Int'l Telecommunications Union, *Thumbs up for IMT-2000*, at <http://www.itu.int/newsroom/press/releases/2000/12.html> (May 30, 2000) (quoting ITU Secretary-General Yoshio Utsumi as saying that the WRC-2000 identifications "give a clear go-ahead to manufacturers to start building equipment for IMT-2000 for their customers").

⁵⁰ See *id.* (noting that IMT-2000 frequency identifications give manufacturers "the best opportunity to reduce costs via economies of scale"); see also Michael Kennedy and Leonard Kolsky, *U.S. Spectrum Policy: Going Forward? Going Backward? Or Both?*, MOBILE COMM. REP., Sept. 13, 1999, at 36 (explaining manufacturers' view that industry benefits from the identification of a global spectrum standard); Theresa Foley, *Spectrum disharmony mars mobile broadband summit*, COMM. WEEK INT'L, at <http://www.totaltele.com/view.asp?articleID=27970&Pub=CWI&Categoryid=705&kw=WRC> (June 5, 2000) (outlining the debate on whether multiple bands can accommodate global roaming and citing experts' claims that frequency shifting technology will make handsets costlier and heavier).

⁵¹ See *ICO's planned Merger with Teledesic and Emergence from Bankruptcy Shows Progress*, SATELLITE NEWS, May 22, 2000, available at 2000 WL 4139624.

⁵² *Id.* Indeed, MSS providers translated this sense of urgency into their advocacy for additional bands for the satellite component of IMT-2000. See *FCC Seeks Comment as it Moves on New Wireless Service*, MOBILE COMM. REP., Sept. 7, 1998, available at 1998 WL 10705887 (quoting MSS provider as stating "there will be no IMT-2000 without the satellite component").

⁵³ See Lynette Luna, *FCC Mulls Allocating More Spectrum for 3G*, RADIO COMM. REP., Aug. 31, 1998, at 3 (noting U.S. operators concern that current spectrum allocations will not be enough to handle the introduction of 3G services).

⁵⁴ See Michael Kennedy and Leonard Kolsky, *U.S. Spectrum Policy*, MOBILE COMM. REP., Sept. 13, 1999, at 5 (explaining that operators are pushing for additional 3G spectrum allocation and that overlaying spectrum rather than allocating additional spectrum will put U.S. carriers at competitive disadvantage in the larger global marketplace); *FCC Seeks Comments as it Moves on New Wireless Services*, MOBILE COMM. REP., Sept. 7, 1998, at 2 (citing global demand for 3G industry insistence on allocation of additional spectrum (499 MHz) for terrestrial 3G component).

spectrum to be “global.”⁵⁵ A global identification (i.e., all countries using the same frequency band for IMT-2000) would likely reduce the cost of equipment to deploy these systems.⁵⁶

For the first time, the fixed service providers were key participants in the WRC process. In the past, companies like WorldCom, Inc., Sprint Corp. and Bell South, Inc. had primarily participated in the technical study groups, if at all.⁵⁷ At WRC-2000, these companies came to ensure that their interests were protected.⁵⁸ For the MMDS operators, like WorldCom, Inc. and Sprint Corp., they came to protect the 2.5 GHz band from sole identification.⁵⁹ For operators like Bell Atlantic, it was to ensure that sufficient spectrum was identified for IMT-2000.⁶⁰ The participation of these companies directly influenced the development of the U.S. proposal for the Conference.⁶¹

B. The Beginning: Conference Preparation

Since the WRC is a treaty negotiation, the key

⁵⁵ Lynette Luna, *FCC Mulls Allocating More Spectrum for 3G*, RADIO COMM. REP., Aug. 31, 1998, at 3 (noting mobile service providers' consideration of global roaming issue); *U.S. Offers Draft Plan for Next-Generations Spectrum Services*, COMM. DAILY, Feb. 18, 2000, at 3 (citing wireless industry's criteria for a WRC-2000 spectrum proposal).

⁵⁶ Press Release, Int'l Telecommunication Union, Thumbs up for IMT-2000, at <http://www.itu.int/newsroom/press/releases/2000/12.html> (May 30, 2000) (stating that manufacturers have a clear go-ahead “to start building equipment for IMT-2000 for their customers”).

⁵⁷ See *MMDS Industry Gears Up on Standards Issues, Spectrum Planning*, COMM. DAILY, Apr. 3, 2000, available at 2000 WL 4684937 (noting Sprint and WorldCom's participation in technical-standard and spectrum-planning study groups prior to WRC-2000).

⁵⁸ See Jeffrey Silva, *Fixed Wireless Lobby Influences WRC Debate*, RADIO COMM. REP., Apr. 17, 2000, at 17 (noting that Sprint and MCI have been sending delegates to international meetings and attended WRC-2000 to advocate policies in their best interest).

⁵⁹ Sprint had a particularly odd role at the Conference. Sprint holds both MMDS and mobile service (“PCS”) licenses. See *MMDS, MSS Operators and Wireless Carriers Jockey for 3G Bands*, COMM. DAILY, Aug. 30, 2000, available at 2000 WL 4696094.

Unlike fellow MMDS licensee WorldCom, Sprint also has PCS wireless spectrum and is faced with twin interests in protecting incumbent uses of 2500 MHz bands and ensuring that mobile wireless uses have enough spectrum. Sprint argued that MMDS and ITFS spectrum sharing in 2500 MHz bands with MSS users wasn't technically viable.

Id.

⁶⁰ See Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 2 (stating that Bell Atlantic, as a member of Wireless Spectrum Coal-

tion, sought U.S. support for identification of additional spectrum for IMT-2000).

tion, sought U.S. support for identification of additional spectrum for IMT-2000).⁶² This input takes the form of proposals.⁶³ The formation of these proposals and whether they are a single member's contribution or part of a proposal that also is supported by a regional body, such as CEPT, CITELE or Asia Pacific Telecommunity (“APT”),⁶⁴ heavily influences the likelihood of success of the proposal.⁶⁵ Arguably, the more members that sign onto a proposal, the more influential it is likely to be.⁶⁶

The first major period for unveiling proposals is the Conference Preparatory Meeting (“CPM”) that is held approximately six months before the Conference.⁶⁷ The purpose of the CPM is to craft a report that will be presented to the Conference and that provides guidance on the potential outcome of the Conference with a focus on the technical differences (hence, leaving the more political issues to be resolved at the WRC).⁶⁸

The 1999 CPM all but avoided the crux of the IMT-2000 controversy, namely, which spectrum

tion, sought U.S. support for identification of additional spectrum for IMT-2000).

⁶¹ See Lynette Luna, *FCC Mulls Allocating More Spectrum for 3G*, RADIO COMM. REP., Aug. 31, 1998, at 3 (noting influence of U.S. service providers in the U.S. delegation's decision to propose further study of the 2.5 GHz band).

⁶² Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, § 1.2, at <http://www.ntia.doc.gov/osmhome/wrc/wrcrecommendations.htm> (June 27, 2000).

⁶³ *Id.* at § 2.5.

⁶⁴ Asia-Pacific Telecommunity (“APT”) is an international standards body comprised of countries from Central and East Asia and the Pacific Rim. ASIA-PACIFIC TELECOMMUNITY, MEMBERSHIP OF APT, at <http://www.apsec.org/membership/aptem.html> (last visited Nov. 2, 2000).

⁶⁵ Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, § 1.2, at <http://www.ntia.doc.gov/osmhome/wrc/wrcrecommendations.htm> (June 27, 2000) (noting Europe's ability to form influential coalitions because of its organizational discipline, and noting importance of coalition building through international outreach before and during Conference).

⁶⁶ Vineeta Shetty, *CEPT sets WRC agenda with backroom dealing*, TOTAL TELECOM, at <http://www.totaltele.com> (May 10, 2000) (giving the CEPT proposal a strong chance of passage if CEPT can maintain its coalition with a number of African and Arab states).

⁶⁷ INT'L TELECOMM. UNION, CPM REPORT ON TECHNICAL, OPERATIONAL AND REGULATORY/PROCEDURAL MATTERS TO BE CONSIDERED BY THE 2000 WORLD RADIOCOMMUNICATION CONFERENCE, at <http://www.itu.int/brsg/cpm/WRC-2000-report/english> (last visited July 10, 2000) (stating that the CPM Report was prepared and approved by the CPM at its second meeting, held from Nov. 15 to 26, 1999).

⁶⁸ WRC-2000, INT'L TELECOMM. UNION, SCOPE OF THE

would be identified for IMT-2000.⁶⁹ Instead, the members focused on the amount of spectrum, and the pros and cons of identifying certain bands.⁷⁰ This was particularly odd because many countries came with proposals on bands.⁷¹ A likely reason for specific frequency bands not being discussed was that the United States, a key country in the ITU, submitted a proposal to further study the bands.⁷² It appeared to many observers that the CPM was unwilling to address this issue until the United States was able to introduce its own proposal, or else the ultimate outcome of the Conference would not take hold.⁷³ In the back of the mind of many delegations was the importance of the U.S. market to the creation of a viable third-generation standard.⁷⁴ This position angered many other countries that believed that the need for global spectrum for IMT-2000 was the prime

issue for the Conference to resolve.⁷⁵

Despite avoiding the identification of spectrum, the CPM was very notable for the role of industry, what are termed small "m" members of the ITU.⁷⁶ During the CPM, unlike at WRC, the members of the ITU are able to speak on the floor of the meeting, input documents and the like.⁷⁷ In order to help move the CPM toward adopting a firm stance on the identification of spectrum for IMT-2000,⁷⁸ the equipment manufacturers worked closely together to force the identification of spectrum at WRC-2000 by providing support for such identification in the CPM Report.⁷⁹

Specifically, the CPM Report urged WRC to do the following:

- identify 160 MHz of additional spectrum for the terrestrial component of IMT-2000, in addition to what is used for second-genera-

ITU-R CONFERENCE PREPARATORY MEETING ("CPM"), at <http://www.itu.int/brsg/cpm/scope.html> (last updated Mar. 2, 2000) ("On the basis of contributions from administrations, the Special Committee, the Radiocommunication Study Groups, and other sources . . . the CPM shall prepare a consolidated report to be used in support of the work of such conferences."); Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, § 1.2.10, at <http://www.ntia.doc.gov/osmhome/wrc/wrcrecommendations.htm> (June 27, 2000) (noting that resolution of technical issues at the CPM allowed the United States to prepare for the political aspects of the WRC).

⁶⁹ INT'L TELECOMM. UNION, CPM REPORT ON TECHNICAL, OPERATIONAL AND REGULATORY/PROCEDURAL MATTERS TO BE CONSIDERED BY THE 2000 WORLD RADIOCOMMUNICATION CONFERENCE 3-29, at <http://www.itu.int/brsg/cpm/WRC-2000-report/english> (last visited July 10, 2000) (making the issue of identifying specific bands of spectrum conspicuous by its absence).

⁷⁰ *Id.* at 13-19 (reflecting Members' focus on the larger-scale, less specific spectrum issue).

⁷¹ See ASIA PACIFIC BROADCASTING UNION, PROPOSED AMENDMENTS TO DRAFT CPM REPORT, Chapter 1, at <http://www.itu.int/search/index.asp> (Sept. 23, 1999); ASIA-PACIFIC TELECOMMUNITY, PROPOSALS TO AMEND THE DRAFT CPM REPORT AND THE REPORT OF THE SPECIAL COMMITTEE ON REGULATORY/PROCEDURAL MATTERS, at <http://www.itu.int/search/index.asp> (Oct. 20, 1999); TECHNICAL COMMITTEE, WORLD BROADCASTING UNIONS, PROPOSED AMENDMENTS TO DRAFT CPM REPORT, Chapter 1, at <http://www.itu.int/search/index.asp> (Nov. 1, 1999) (proposing candidate bands for additional IMT-2000 terrestrial spectrum).

⁷² See INT'L TELECOMM. UNION, MODIFICATIONS TO CPM REPORT, Chapter 1, 7, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Nov. 3, 1999) (proposing additional study of possible interference on the band 2700-2900 between proposed IMT-2000 use and "incumbent radar systems").

⁷³ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, § 3.3, at <http://www.ntia.doc.gov/>

[osmhome/wrc/wrcrecommendations.htm](http://www.osmhome/wrc/wrcrecommendations.htm) (June 27, 2000) ("The United States is seen as global leader in any negotiation of this kind. Consequently, other countries seek our involvement in their own issues and expect [the U.S.] to be fully prepared and to provide leadership in solving problems and developing compromises.").

⁷⁴ Lynette Luna, *GSM community awaits Brazil spectrum selection*, RADIO COMM. REP., Jan. 10, 2000, at 25 (noting that projected increases in roaming between Latin America and the United States translate into increased spectrum alignment between the United States and Latin American countries).

⁷⁵ See INT'L TELECOMM. UNION, EUROPEAN COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 5, at <http://www.itu.int/search/index.asp> (Jan. 21, 2000) (stating that "the purpose of [WRC]-2000 should be to find global [frequency] bands," and that "[g]lobally harmonized spectrum will facilitate worldwide roaming"); ASIA-PACIFIC TELECOMMUNITY, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 47, at <http://www.itu.int/search/index.asp> (May 25, 2000) (agreeing with CEPT view on purpose of WRC-2000).

⁷⁶ See INT'L TELECOMM. UNION, ITU PLENIPOTENTIARY CONFERENCE MEETING: REFORMING THE ITU: NEW ROLES, NEW RESPONSIBILITIES FOR ITU MEMBER, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Nov. 6, 1998) (explaining difference between ITU Members, or large "M" members, and ITU Sector Members, or small "m" members).

⁷⁷ See WRC-2000, INT'L TELECOMM. UNION, SCOPE OF THE ITU-R CONFERENCE PREPARATORY MEETING ("CPM"), at <http://www.itu.int/brsg/cpm/scope.html> (last updated Mar. 2, 2000).

⁷⁸ See Jeffrey Silva, *3G WRC Policy Dispute Erupts*, RADIO COMM. REP., Apr. 17, 2000, at 17.

⁷⁹ WRC-2000, INT'L TELECOMM. UNION, CONFERENCE PREPARATORY MEETING FOR WRC-2000: THE REQUIREMENT FOR GLOBAL ADDITIONAL SPECTRUM FOR IMT-2000 1-3, at <http://www.itu.int/search/index.asp> (Nov. 12, 1999) (submitting joint proposal stressing the importance of identifying additional spectrum for IMT-2000, that a software-defined radio cannot solve spectrum problem alone and that a common global IMT-2000 extension band is critical).

tion cellular mobile systems;⁸⁰

- make available additional spectrum where there exists a reasonable chance to achieve a common frequency plan worldwide;⁸¹
- identify spectrum to fulfill the requirement of twice 67 MHz (two separate bands of 67 MHz, one for the satellite uplink and one for the downlink) for the satellite component of IMT-2000;⁸²
- set forth potential candidate bands for additional IMT-2000 terrestrial spectrum;⁸³ and
- consider using High Altitude Platform Stations (“HAPS”) for providing IMT-2000.⁸⁴

C. The United States, After a Slow Start, Takes the Bull by the Horns

The United States attempted to formulate a position on IMT-2000 for the two years preceding the Conference.⁸⁵ Unfortunately, because of the divergent interests, both governmental and industry,⁸⁶ no single band could be agreed on, let alone the specific language for the footnotes, prior to

the CPM.⁸⁷

In order to handle this, the United States initially took an opposing, if not negative, position on the identification of spectrum for IMT-2000.⁸⁸ This approach, while attractive to some participants, including the DOD and the MMDS industry,⁸⁹ was extremely unattractive to the mobile service proponents.⁹⁰ In addition, even the MMDS industry recognized that such an approach was unrealistic.⁹¹ This recognition ultimately resulted in the compromise position that was crafted just four short months prior to the Conference.⁹² However, before discussing this process in greater detail, it is important to take a step back and look at the long process leading up to this pivotal event—the United States “mini-WRC.”

The United States’ preparatory process for WRCs is a multilayered approach. There are two preparation processes occurring concurrently. On one hand, the National Telecommunications and Information Administration (“NTIA”) of the U.S. Department of Commerce coordinates a government position for the WRC.⁹³ Simultaneously, the

⁸⁰ See INT’L TELECOMM. UNION, CPM REPORT ON TECHNICAL, OPERATIONAL AND REGULATORY/PROCEDURAL MATTERS TO BE CONSIDERED BY THE 2000 WORLD RADIOCOMMUNICATION CONFERENCE 4–5, at <http://www.itu.int/brsg/cpm/WRC-2000-report/english/> (last visited July 10, 2000).

⁸¹ *Id.* at 7–9.

⁸² *Id.* at 6.

⁸³ *Id.* at 13–19.

⁸⁴ *Id.* at 19. The discussion of HAPS is beyond the scope of this article.

⁸⁵ See *No Easy Answers in Sight as Governments and Industry Plan Spectrum Allocations for Third Generation*, PCS WEEK, Sept. 2, 1998, available at 1998 WL 8016014.

⁸⁶ See Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (noting the White House’s reluctance to identify bands for 3G services because the candidate bands (1.7 GHz and 2.5 GHz) are occupied by government and private sector service providers, and noting equipment manufacturers and service providers’ rigorous lobbying of Congress and the White House).

⁸⁷ *Battle Line Forming for 3G Spectrum*, TELECOM PRICING BULL., Nov. 30, 1999, at No. 51 (“The USA does not have a spectrum proposal at this point . . . We’re not agreed what the IMT-2000 proposal will be on the radio side.” (quoting the head of the U.S. delegation to the CPM, Frank Williams)).

⁸⁸ See WRC-2000, INT’L TELECOMM. UNION, PROPOSALS FOR THE WORK OF THE CONFERENCE, at <http://www.itu.int/search/index.asp> (Jan. 12, 2000) (failing to propose identification of additional spectrum by avoiding entire agenda item dealing with IMT-2000 (Agenda Item 1.6.1)); Jeffrey Silva, *U.S. May Not Aggressively Seek More 3G Spectrum at WRC*, RADIO COMM. REP., May 3, 1999, at 3 (terming U.S. government stance as “ambivalent”); see Jeffrey Silva, *Industry Pushes Clinton Administration to Secure More 3G Spectrum*, RADIO COMM. REP., Aug. 9, 1999, at 6 (citing Clinton Administration’s

stance against amending an ITU Regulation footnote to open bands used for cellular and PCS to 3G evolution).

⁸⁹ See Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 3 (noting the use and protection of the 1.7 GHz band by the DOD, and the 2.5 GHz band by Sprint and WorldCom for MMDS).

⁹⁰ See *id.* (noting mobile phone carriers and manufacturers’ desire for U.S. identification and pursuit of additional global spectrum for 3G services).

⁹¹ Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (citing Sprint’s membership in the Wireless Spectrum Coalition supporting additional identification of frequency for IMT-2000).

⁹² See *U.S. Offers Draft for Next Generation Spectrum Services*, COMM. DAILY, Feb. 18, 2000; Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 3 (explaining development of compromise).

⁹³ NTIA is responsible for managing the radio frequency spectrum used by federal agencies in satisfying their legislatively assigned missions. Specifically, NTIA processes requests from federal agencies for frequency assignments; provides Executive Branch leadership in coordinating both current and future spectrum requirements for federal government users; and develops and promotes positions at the ITU and other treaty organizations. NTIA addresses spectrum management in the context of the WRC through the Interdependent Radio Advisory Committee and its subcommittee, the Radio Conference Subcommittee. NAT’L TELECOMM. AND INFO. ADMIN., INTERDEPENDENT RADIO ADVISORY COMMITTEE (“IRAC”), FUNCTIONS AND RESPONSIBILITIES, at <http://www.ntia.doc.gov/osmhome/iracdefn.html>. (last visited Oct. 28, 2000); see also NAT’L TELECOMM. AND INFO. ADMIN., INTERDEPENDENT RADIO ADVISORY COMM. (“IRAC”): RADIO CONFERENCE SUBCOMM. (“RCS”), at http://www.ntia.doc.gov/osmhome/wrc99pre/ntia.htm#_Radio_Conference_Subcommittee (last visited Oct. 28, 2000).

Federal Communications Commission ("FCC") coordinates the U.S. industry position through both a Notice of Inquiry process and the creation of an Industry Advisory Group.⁹⁴ Once these positions are determined, the U.S. Department of State has the responsibility of pulling these two views together to come up with a U.S. proposal to the Conference.⁹⁵

As of the CPM, the United States was torn on positions. In fact, its unofficial view just prior to the Conference was to argue that no global identification of spectrum for IMT-2000 was necessary.⁹⁶ This approach upset all those involved in the process, including: the regulators felt that they might be steamrolled;⁹⁷ the DOD was worried that other countries might put the 1.7 GHz band into play;⁹⁸ the MMDS and Instructional Television Fixed Service ("ITFS") operators also were concerned that by failing to identify a spectrum, the Europeans could force the Conference to adopt 2.5 GHz as the primary expansion band for IMT-2000;⁹⁹ the

equipment manufacturers felt that the U.S. was providing no guidance for global development of third-generation mobile systems;¹⁰⁰ and the mobile service providers were afraid that there would be insufficient spectrum for third-generation mobile systems.¹⁰¹

At about this juncture, Gail Schoettler was appointed as the U.S. Ambassador to the WRC.¹⁰² The Ambassador realized that a position needed to be staked out or the United States would be in an indefensible position at the Conference.¹⁰³ Accordingly, she created a group of fifteen stakeholders in the process (both government and industry), co-chaired by the FCC and NTIA, who would meet for approximately one month to develop a position ("Group of 15").¹⁰⁴ This group involved a pre-U.S. delegation engaged in a post-FCC preparatory process—an untried concept.¹⁰⁵

The first meetings of the group were very contentious.¹⁰⁶ At first, the DOD, the Equipment Manufacturers and the Cellular Service Providers

⁹⁴ See FED. COMM. COMM'N, WRC-2000: GUIDING PRINCIPLES, at <http://www.fcc.gov/wrc00/guiding.html> (last visited Oct. 28, 2000) (noting fair open process and solicitation of comments); FCC ADVISORY COMM. FOR THE 2000 WORLD RADIOCOMMUNICATION CONFERENCE, CHARTER, at <http://www.fcc.gov/wrc00/chartera.html> (last visited Oct. 28, 2000).

⁹⁵ See INT'L COMM. AND INFO. POLICY DIV., U.S. BUREAU OF ECON. AND BUS. AFFAIRS, DEP'T OF STATE, ORGANIZATION, at <http://www.state.gov/www/issues/economic/cip/organization.html> (last visited Oct. 10, 2000) (noting the Division's coordination with the FCC and NTIA in developing spectrum policy and the Multilateral Affairs Office's representation of U.S. spectrum interests at the WRC).

⁹⁶ See Jeffrey Silva, *U.S. may be shifting 3G spectrum stance*, RADIO COMM. REP., Nov. 15, 1999, at 1 (noting U.S. resistance to identifying additional spectrum); see also Sarah Parkes, *Battle Lines Drawn for WRC-2000*, GLOBAL WIRELESS, Jan. 1, 2000, at 2 (predicting U.S. opposition to identification of additional spectrum at the WRC-2000).

⁹⁷ See William J. Sill & Christiana L. Lin, *Fence-Mending on the Frontier*, WIRELESS REV., Feb. 29, 2000, available at 2000 WL 7119101 (noting Europe's WRC aggressive 3G allocation and licensing, and warning that without an alternative, Europe's "advanced" may become the "de facto worldwide" policy).

⁹⁸ See Jeffrey Silva, *U.S. Triumphs at WRC-2000*, RADIO COMM. REP., June 5, 2000, at 2-3 (noting Europe's preference for the 2.5 GHz band and the DOD's current use and protectiveness of that band); Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 2.

⁹⁹ *U.S. Offers Draft for Next Generation Spectrum Services*, COMM. DAILY, Feb. 18, 2000 (noting MMDS and IFTS operators investment in the 2.5 GHz band); see William J. Sill & Christiana L. Lin, *Fence-Mending on the Frontier*, WIRELESS REV., Feb. 29, 2000, at 2 (noting Europe's WRC 2.5 GHz band proposal and warning that without an alternative, Europe's aggressive allocation and licensing policies may propel Europe's 2.5 GHz band proposal into the "de facto worldwide"

policy).

¹⁰⁰ See Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (citing equipment manufacturers' view of U.S. government leadership).

¹⁰¹ See *id.* (noting use of coalition by operators (e.g., BellSouth, AT&T Wireless, Cisco) to insure identification of spectrum sufficient for 3G).

¹⁰² Press Release, Office of the Press Secretary, The White House, President Clinton Names Gail Schoettler for Rank of Ambassador as Head of the U.S. Delegation to the World Radio Conference, at <http://www.pub.whitehouse.gov/uri-res/I2R?urn:pdi://oma.eop.gov.us/1999/11/3/8.text.1> (Nov. 2, 1999).

¹⁰³ See Jeffrey Silva, *U.S. may be shifting 3G spectrum stance*, RADIO COMM. REP., Nov. 15, 1999, at 1 (communicating desire to "go into Istanbul with a unified position"); Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 40, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (stressing importance of resolving internal conflicts early, so as to be prepared for the "vagaries of the WRC").

¹⁰⁴ Jeffrey Silva, *Industry-government group to craft WRC-2000 recommendations*, RADIO COMM. REP., Jan. 24, 2000, at 10 (noting the Group of 15's joint industry and government composition, the group's FCC-NTIA leadership, and the group's goal of having recommendations completed and ready for international presentation in approximately one month).

¹⁰⁵ *Id.* (stating generally that the group's purpose was to develop recommendations for the U.S. delegation to take into WRC-2000, and that the once-completed FCC preparatory process had been "re-open[ed]" several months before the group's creation).

¹⁰⁶ Early on, the 2.8 GHz was taken off the table. From thereon, no debate occurred among interested U.S. parties as to whether this band should be offered forward. However,

batted heads.¹⁰⁷ DOD kept up its argument that no spectrum be introduced; the mobile interests argued that both the 1.7 GHz and the 2.5 GHz bands be put forward.¹⁰⁸ The MMDS and ITFS interests surprised the group by introducing a proposal whereby the 1.7 GHz and 2.5 GHz bands would be identified for possible use by IMT-2000, leaving implementation of those bands for IMT-2000 to be a country-by-country decision.¹⁰⁹ This strategic move changed the course of the negotiations in the United States and ultimately, the entire WRC.¹¹⁰ Initially, the DOD objected to this approach. They were afraid this approach would force the use of the 1.7 GHz band for IMT-2000.¹¹¹ In order to satisfy these concerns, the language of the footnote and the accompanying res-

olution were crafted in such a manner to ensure that use of any spectrum for IMT-2000 was discretionary, and to be left to the administration's individual requirements and decisions.¹¹²

Another stumbling block was the identification of spectrum for MSS.¹¹³ In the United States, the two frequency bands that the MSS industry wanted to use for the satellite component of IMT-2000 (the 2500–2520 MHz and the 2670–2690 MHz bands) were not allocated for use by the MSS.¹¹⁴ The MMDS and ITFS advocates wanted to ensure that identifying spectrum for MSS would not prejudice any U.S. actions on this issue.¹¹⁵ Once again, the Group of 15 was able to reach consensus on this issue by providing for utmost flexibility on the proposal.¹¹⁶

despite the band's removal, the group's meeting remained contentious over the remaining issues. See Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 3 (noting that only two bands (1.7 GHz and 2.5 GHz) were recommended in the consensus recommendations reached by the Group of 15, and describing the stakeholders (i.e., manufactures and providers) and government officials as "warring").

¹⁰⁷ See *id.* (describing U.S. spectrum stakeholders (i.e., manufacturers and providers) and government officials (i.e., DOD) as "warring," and noting conflict between manufacturers and providers with the DOD over identifying and reallocating the 1.7 GHz band for commercial 3G use); see also Jeffrey Silva, *Industry-government group to craft WRC-2000 recommendations*, RADIO COMM. REP., Jan. 24, 2000, at 10 (elaborating on industry-DOD conflict).

¹⁰⁸ Jeffrey Silva, *Industry-government group to craft WRC-2000 recommendations*, RADIO COMM. REP., Jan. 24, 2000, at 10. Silva noted that in time leading up to the Group of 15 meetings, government spectrum users resisted spectrum identification because they did not want to be "booted off their spectrum [1.7 GHz], even with a promise of possible relocation and compensation." *Id.* They also resisted listing frequency bands, including the 1.7 GHz and 2.5 GHz bands, that the wireless industry targeted for possible identification going into the Group of 15 meeting. *Id.* See also Jeffrey Silva, *Rohde: Hunt for 3G spectrum to dominate 2000 agenda*, RADIO COMM. REP., Dec. 6, 1999, at 3 (explaining tension between industry and DOD in the period leading up to the Group of 15 meetings and DOD's general opposition to additional spectrum identification).

¹⁰⁹ See Jeffrey Silva, *U.S. faces challenges on global 3G position*, RADIO COMM. REP., Feb. 21, 2000, at 3 (stating that the Group of 15 recommended both the 1.7 GHz and 2.5 GHz bands for identification). Silva also quoted the Wireless Communications Association's president as saying, "the compromise provides commendable flexibility for individual countries to make the key spectrum allocation determinations that will best provide advanced new services" *Id.*

¹¹⁰ See *id.* (reflecting the impact of the MMDS and ITFS advocates' proposal by noting incorporation of the "flexible" approach to spectrum identification in the group's recommendations); see INT'L TELECOMM. UNION, RADIO REG., ARTICLE S5, FOOTNOTE S5.388, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (1998) (noting "flexible" approach

was ultimately adopted at WRC-2000).

¹¹¹ Jeffrey Silva, *Industry-government group to craft WRC-2000 recommendations*, RADIO COMM. REP., Jan. 24, 2000, at 10 (explaining DOD's fear of being moved off the 1.7 GHz band and their efforts to prevent such an occurrence).

¹¹² See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA 1.6.1, 10, 14–16, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Feb. 22, 2000) (modifying Article S5, Footnote S5.388 so as to state that the 1.7 GHz and 2.5 GHz bands are only "identified," not "intended," for use by IMT-2000 and that the administrations are not required to give IMT-2000 use "priority" over other uses).

¹¹³ See Jeffrey Silva, *Industry Pushes Clinton Administration to Secure More 3G Spectrum*, RADIO COMM. REP., Aug. 9, 1999, at 6 (outlining conflict prior to Group of 15 meetings between incumbent 2 GHz licensees (MMDS and ITFS operators) and the MSS operators seeking to acquire that spectrum and have the incumbents relocated); Jeffrey Silva, *Industry-government group to craft WRC-2000 recommendations*, RADIO COMM. REP., Jan. 24, 2000, at 10 (describing the satellite industry as a big factor in the 3G spectrum equation and noting the satellite industry's aggressive advocacy for the identification of additional spectrum for the satellite component of IMT-2000); Sarah Parkes, *Battle Lines Drawn for WRC-2000*, GLOBAL WIRELESS, Jan. 1, 2000, at 1 (establishing just prior to the Group of 15 meetings that MSS issues were considered important issues by industry and government and were seen as being potentially "contentious" at WRC-2000).

¹¹⁴ See NAT'L TELECOMM. AND INFO. ADMIN., U.S. FREQUENCY ALLOCATION CHART, at <http://www.ntia.doc.gov/osmhome/allochrt.html> (Mar. 1996) (allocating the 2655–2690 MHz band to space research (passive), radio astronomy and earth exploration satellite (passive)); see also MMDS, *MSS Operators and Wireless Carriers Jockey for 3G Bands*, COMM. DAILY, Aug. 30, 2000, available at 2000 WL 4696094 (noting that Satellite Industry Association ("SIA") was still seeking reallocation of the 2500–2520 MHz and 2670–2690 MHz bands from MMDS and ITFS use to MSS use as of Aug. 2000).

¹¹⁵ See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA 1.6.1, 10, 14–16, at <http://www.ntia.doc.gov/osmhome/allochrt.html> (Feb. 22, 2000) (referring to the "flexibility" the proposal gave administrations in determining how to allocate bands identified through WRC).

¹¹⁶ *Id.* at 4, 10–12 (allowing administrations flexibility in

Another goal of some of the U.S. industry was to ensure that by identifying spectrum for IMT-2000, no administration was tied to this technology or standard.¹¹⁷ Accordingly, to ensure that there was flexibility, the U.S. proposal specifically provided that the identified spectrum was for "IMT-2000 and other advanced communications applications."¹¹⁸ Although this worked to satisfy much of the U.S. industry, it would, as discussed below, create tension during the final days of the Conference.¹¹⁹

Ultimately, after some careful negotiations, the Group of 15 agreed to the final U.S. proposal to WRC. This proposal identified two bands for possible identification to the IMT-2000—the 1.7 GHz and the 2.5 GHz.¹²⁰ However, the U.S. proposal specifically provided for flexibility in allowing countries the ability to do what they want, including not identifying any spectrum domestically for IMT-2000.¹²¹ The proposal specifically included the following:

- A flexible approach that identified the 2.5 GHz band for IMT-2000 and other advanced communications applications.¹²² It also

identified portions of the 2.5 GHz band (the 2500–2520/2670–2690 MHz) for the satellite component of IMT-2000.¹²³

- The 2.5 GHz band was not identified as an extension band on a stand-alone basis; to the contrary, the U.S. proposal identified several bands for IMT-2000 and other advanced communications applications, including the 1.7 GHz band.¹²⁴ By identifying several bands and adding flexible language, the proposal ensured that all administration interests are accommodated in the relevant frequency bands.¹²⁵
- The 2.5 GHz band included primary worldwide allocations for fixed and mobile services. The 2500–2520/2670–2690 MHz portions of the band also have a primary worldwide allocation to the mobile-satellite service effective January 1, 2005.¹²⁶
- Recognized that in the United States, and many other countries, the 2.5 GHz band is already used or planned to be used for a myriad of applications, including IMT-2000, MMDS, instructional television fixed ser-

identification by identifying a wide range of bands in the 1 GHz to 3 GHz band, including the 2500–2520 MHz and 2670–2690 MHz bands).

¹¹⁷ See Michael Kennedy and Leonard Kolsky, *U.S. Spectrum Policy: Going Forward? Going Backward? Or Both?*, RADIO COMM. REP., Sept. 13, 1999, at 36 (describing the diversity of the standards in the United States, Europe's regulatory push toward a common standard, and opining on the U.S. government and industry's "misplaced" advocacy for technology-neutral international standards that will allow U.S. carriers and manufacturers to be competitive in markets abroad); *3G Wireless Experts Work on Technical Details, Spectrum*, COMM. DAILY, June 21, 1999, available at 1999 WL 7579728 (reporting on U.S. efforts to persuade European Union adoption of technology-neutral standards).

¹¹⁸ INT'L TELECOMM. UNION, PROPOSAL FOR TERRESTRIAL AND SATELLITE COMPONENTS OF IMT-2000, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (stating that "[i]n order to facilitate Administrations identifying bands for national use, sufficient to provide for advanced communications applications, and to encourage global harmonization, [the U.S.] identifies additional spectrum in several bands" and that "the term 'advanced communications applications' include[s] IMT-2000, [and] prepares for the inevitable technology changes"). This draft document was eventually replaced by a largely identical proposal that was officially submitted to the WRC-2000. See generally INT'L TELECOMM. UNION, PROPOSALS FOR THE WORK OF THE CONFERENCE, PROPOSAL FOR TERRESTRIAL AND SATELLITE COMPONENTS OF IMT-2000, at http://www.itu.int/itudocr/itu-t/wrc-2000/cocs/1-99/12-A3_ww9.doc (Apr. 17, 2000).

¹¹⁹ See INT'L TELECOMM. UNION, WRC-2000, HIGHLIGHTS, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 19, 2000) (recounting an international

(largely European) objection to U.S. introduction of "advanced communications application" language and the larger debate on flexibility in spectrum identification); *Telephony*, COMM. DAILY, May 22, 2000, available at 2000 WL 4695360.

¹²⁰ See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 4, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (identifying bands 1710–1885 MHz, 2500–2690 MHz and the 698–960 MHz band for the terrestrial component of IMT-2000). This draft document was eventually replaced by a largely identical proposal that was officially submitted to the WRC-2000. See generally INT'L TELECOMM. UNION, PROPOSALS FOR THE WORK OF THE CONFERENCE, PROPOSAL FOR TERRESTRIAL AND SATELLITE COMPONENTS OF IMT-2000, at http://www.itu.int/itudocr/itu-t/wrc-2000/cocs/1-99/12-A3_ww9.doc (Apr. 17, 2000).

¹²¹ See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 1, 4, 14–16, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (proposing that administrations be allowed to select portions of bands based on their technological, regulatory and market demands).

¹²² *Id.* at 1 (explaining that the term "advanced communications applications" includes IMT-2000 and allows for the "inevitable technology changes").

¹²³ *Id.* at 4, 12–17.

¹²⁴ *Id.* at 4–10 (identifying all or portions of the bands—698–960 MHz, 1525–1559 MHz, 1610–1660.5 MHz, 1710–2025 MHz, 2110–2200 MHz and 2483.5–2690 MHz—for use by administrations seeking to implement advanced communications applications).

¹²⁵ See *id.* at 1, 4, 14–16 (proposing flexibility for administrations).

¹²⁶ See *id.* at 16 n.8.

vices (provided by educational and religious organizations), and other forms of wireless access and broadcast applications.¹²⁷ It is also expected that MSS applications will be developed for the 2500–2520/2670–2690 MHz bands.¹²⁸

- Ensured that administrations retain the flexibility to utilize the 2.5 GHz band for the applications they best see fit, while also providing administrations with notice that other or similar administrations around the world may utilize this band or portions thereof for satellite and terrestrial IMT-2000 and other advanced communications applications.¹²⁹
- Recognized that in the proposals submitted to the Conference, no single band, including the 2.5 GHz band, has global support for identification for IMT-2000. This is because the candidate bands in many countries are heavily encumbered by other uses.¹³⁰
- Recognized that because of existing uses, the studies from many administrations would need to be conducted and evaluated to determine the suitability of this band for IMT-2000 and other advanced communications applications, as well as how such systems might be implemented.¹³¹
- Recognized that the proposal, with its flexible approach, best accommodates the vari-

ous interests of all of the Union's members with respect to the 2500–2690 MHz band, and the possible implementation of IMT-2000 terrestrial and satellite components and other advanced communications applications.¹³²

With the tentative agreement of the U.S. industry and government, Ambassador Schoettler went to work in trying to sell the U.S. proposal internationally.¹³³ The Ambassador set out to visit with many different countries and regions, including CITELE and the Middle Eastern countries.¹³⁴ All in all, there was a somewhat positive reception of the U.S. proposal. As discussed below, some countries, such as the CITELE members, while disappointed that the United States was not supporting solely the 1.7 GHz band, were pleased to see that the United States at least had what they considered a position on IMT-2000.¹³⁵ Other countries, such as several Middle Eastern countries, felt that at least by providing flexibility in the proposal, they would not be forced to identify spectrum for IMT-2000.¹³⁶ Accordingly, the United States, while seeking support for its position, was unable to obtain definitive pre-WRC-2000 support.¹³⁷

D. Regional Preparations

The United States was not the only major administration preparing for the Conference.

about/index-html (June 27, 2000) (recounting pre-Conference outreach among other nations).

¹²⁷ See INT'L TELECOMM. UNION, U.S. PROCESS TO IDENTIFY SPECTRUM FOR ADVANCED COMMUNICATIONS APPLICATIONS 2–3, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (citing methods of reconciling diverse use of 2.5 MHz band as reason for further study of the band).

¹²⁸ See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 15, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (noting MSS applications).

¹²⁹ See *id.* at 3–4 (stating U.S. technology-neutral policy that will allow non-IMT-2000 uses to evolve toward IMT-2000 and clarifying that administrations may use identified spectrum for nonconforming uses).

¹³⁰ See *id.* at 15 (recognizing varying levels of incumbent investment as an obstacle to global support for a single band).

¹³¹ See *id.* at 2–3 (noting need for studies of selected bands and outlining areas to be studied); *Battle Line Forming for 3G Spectrum*, TELECOM PRICING BULL., Nov. 30, 1999, no. 51, available at 1999 WL 13383409 (outlining areas to be studied).

¹³² See INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 16, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (citing flexible approach respectful of all the administrations' prerogatives as reason for supporting proposal).

¹³³ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, at <http://www.itu.int/brconf/wrc-2000/>

¹³⁴ See *id.* (citing specific countries visited).

¹³⁵ See Kenneth Skilling, *U.S. Multi-Band Plan for 3G Will Not Have Western Hemisphere Support*, BNA REG., LAW & ECON., Mar., 15, 2000, at A-24 (citing Ambassador's notice of the overlap on the 1.7 GHz band between the U.S. and CITELE proposal).

¹³⁶ See *U.S. Remains Optimistic on Compromise at WRC*, COMM. DAILY, Apr. 10, 2000, available at 2000 WL 4694992 (citing Arab countries as part of larger bloc of countries stating identification of additional spectrum is unnecessary); Dianne Hammer, *U.S. wants multiple bands for 3G spectrum allocation*, GLOBAL WIRELESS, May 1, 2000, at 4 (citing Ambassador Schoettler's perception, after traveling the Middle East, that the Arab countries were leaning to the U.S.' multiband position, thereby indicating that the Middle East was willing to support a multiband proposal to avoid choosing the fixed European or CITELE proposals); *U.S. Remains Optimistic on Compromise at WRC*, COMM. DAILY, Apr. 10, 2000, available at 2000 WL 4694992 (citing Ambassador Schoettler that Middle East countries are conflicted on multiband issue and may be willing to compromise).

¹³⁷ Jeffrey Silva, *U.S. WRC-2000 stance unsupported*, RADIO COMM. REP., Apr. 3, 2000, at 6 (citing lack of global or regional support for WRC-2000 proposal).

WRC-2000 set the stage for a dramatic amount of pre-Conference planning and coordination among the regions of the world. In fact, this preplanning coordination made it seem unlikely to the casual observer that the United States proposal would ultimately carry the Conference.¹³⁸ Below is a brief overview of some of the key regional preparations for the Conference.

1. CEPT

Understanding regional preparation and strategy is critical to understanding the larger WRC process.¹³⁹ Europe is by far the most organized and disciplined region, and therefore the most formidable when advocating an opposing view.¹⁴⁰ CEPT is comprised of forty-three countries that CEPT must ceaselessly work to keep together whenever a coalition is formed.¹⁴¹ The greatest source of difficulty and dissent from within CEPT usually comes from the Russians and their former Soviet partners.¹⁴² The Russians often adopt different positions than their CEPT counterparts and advocate them vehemently.¹⁴³

As noted above, the Europeans are the most disciplined regional body in the WRC.¹⁴⁴ The Europeans farm out the development of their positions, known as European Common Proposals ("ECP"), to different countries in CEPT.¹⁴⁵ A proposal must garner the support of at least ten CEPT countries and have no more than six countries opposed in order for it to become an ECP.¹⁴⁶ Once approved, every CEPT member is expected to support the final ECP.¹⁴⁷ This discipline is com-

plemented by CEPT's vigilant attendance of pre-Conference meetings on the regional and individual country levels.¹⁴⁸

"CEPT was well prepared for WRC-2000 and effectively developed a consensus-based set of proposals for the identification of additional spectrum for the terrestrial component of IMT-2000."¹⁴⁹ This pre-Conference organization may have been fostered by CEPT's endorsement of the Conference agenda's determination that the terrestrial component of IMT-2000 should be given priority over the satellite component.¹⁵⁰ CEPT's organization also may have been aided by its strong support for the CPM Report's estimates on the total spectrum requirements for the terrestrial element of IMT-2000.¹⁵¹ Based on this framework of findings, CEPT issued a set of proposals that would seal off from other use spectrum currently identified for terrestrial IMT-2000, identify additional bands for terrestrial IMT-2000 and implement identified spectrum so as to promote international harmonization.¹⁵²

The principle of insuring stability in the identification of spectrum for terrestrial IMT-2000 emerged again in CEPT's proposal when it recommended fulfilling the CPM requirement of 160 MHz of spectrum by introducing a resolution and a footnote identifying the band 2500–2690 MHz for use by IMT-2000 systems.¹⁵³ CEPT linked the stability of spectrum identification with the larger goals of standardization and harmonization.¹⁵⁴

While CEPT's identification of the band 2500–2690 MHz provided additional spectrum for the terrestrial component of IMT-2000, CEPT's

¹³⁸ See William J. Sill, Christina L. Lin, *Fence-Mending on the Frontier*, WIRELESS REV., Feb. 29, 2000, available at 2000 WL 7119101 (stating fears that European preparedness and aggressive allocation policies would propel the European Union proposal into ascendancy).

¹³⁹ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 40, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (explaining ITU politics).

¹⁴⁰ See *id.* at 5 (explaining the European delegation's organization).

¹⁴¹ See *id.*

¹⁴² See *id.* (explaining European-Russian dynamic).

¹⁴³ *Id.*

¹⁴⁴ See *id.*

¹⁴⁵ *Id.* (describing Europe's pre-Conference preparation).

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ See *id.*

¹⁴⁹ INT'L TELECOMM. UNION, EUROPEAN COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Jan. 21, 2000) ("CEPT [is] the first WRC regional organization (before APT and CITELE) to introduce their initial proposals for terrestrial IMT-2000 to the Plenary Meeting."); see also Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) ("Europe is probably the most organized region.").

¹⁵⁰ See INT'L TELECOMM. UNION, EUROPEAN COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 4, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Jan. 21, 2000) (embracing wording of Agenda Item 1.6.1).

¹⁵¹ See *id.* at 5 (expressing support for the CPM report finding that an additional 160 MHz of spectrum in every region of the world will be necessary to meet IMT-2000 demand by the year 2010).

¹⁵² See *id.* at 4–6 (outlining proposal).

¹⁵³ See *id.* at 6–8.

¹⁵⁴ *Id.* at 5.

second proposal also suggested two new resolutions. The first proposal actually threatened the fulfillment of the 160 MHz requirement by identifying spectrum for the satellite component of IMT-2000.¹⁵⁵ Despite CEPT's initial endorsement of terrestrial priority, CEPT's first resolution identified the bands 2500–2520 MHz and 2670–2690 MHz for use by the satellite component of IMT-2000.¹⁵⁶ However, it provided that use of the band could transfer to the terrestrial component of IMT-2000 if market developments dictated.¹⁵⁷ In its second proposed resolution, CEPT sought to further protect against failing to meet the 160 MHz requirement (perhaps in light of its first proposed resolution) by requesting a study of the band 2700–2900 MHz for terrestrial IMT-2000 use.¹⁵⁸

2. CITEL

CITEL, because of the United States' hesitancy in staking out an advance position, moved ahead before the 1999 CPM to take a position on IMT-2000.¹⁵⁹ Specifically, it tentatively agreed to adopt the 1.7 GHz band for IMT-2000 at CITEL's December meeting in San Diego, but agreed to give the United States until the March CITEL meeting in Argentina to present its own proposal.¹⁶⁰

In March, the United States introduced its proposal.¹⁶¹ It was not well received.¹⁶² To the contrary, it was met with misunderstanding by many of the CITEL countries.¹⁶³ Accordingly, the ma-

majority of CITEL countries supported modifying footnote S5.388 to identify the band 1710–1885 MHz for IMT-2000 use on a global basis.¹⁶⁴ The stated rationale for the selection of this frequency range was its existing use by first- and second-generation mobile systems.¹⁶⁵ While major mobile market countries Brazil and the United States did not sign onto the identification,¹⁶⁶ CITEL maintained that it still reflected the interests of many CITEL member countries that have made a significant investment in cellular and PCS services, and would prefer to see a market-led evolution from first- and second-generation systems to IMT-2000.¹⁶⁷ CITEL also cited the frequency band's contiguous location next to spectrum already identified for IMT-2000 as an additional advantage to the identification.¹⁶⁸ In supporting this identification, CITEL noted that when coupled with the opportunity for existing pre-IMT-2000 systems to evolve to IMT-2000, spectrum identification on adjacent bands would “facilitate a cost-effective expansion” toward IMT-2000 use that “increases the possibility of [spectrum] harmonization with other regions.”¹⁶⁹

CITEL's second proposal was a No Change (“NOC”) recommendation for the 2.7 GHz band.¹⁷⁰ The proposal also called for further study of possible interference issues on the 2.7 GHz band, noting in the conclusion of the CPM Report that the sharing of frequency bands between public safety radars and IMT-200 systems is only feasible when explicitly confirmed by ITU-R

¹⁵⁵ *Id.* at 16 (proposing Resolution TTT that would identify the 2500–2520 MHz and 2670–2690 MHz bands primarily for the satellite component of IMT-2000, and secondarily for the terrestrial component).

¹⁵⁶ *Id.* at 16.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 13 (proposing Resolution ZZZ requesting, *inter alia*, further study of the feasibility of sharing in the band 2700–2900 MHz between incumbent aeronautical radio-navigation service and proposed mobile service).

¹⁵⁹ See INT'L TELECOMM. UNION, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 32, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Mar. 27, 2000) (outlining proposal for sole identification of 1.7 MHz band for IMT-2000).

¹⁶⁰ See *U.S. Sees Spectrum Proposal as “Bridge” at Upcoming Conference*, COMM. DAILY, Mar. 20, 2000, available at 2000 WL 4694742 (noting CITEL support for 1.7 GHz band and the U.S. request that final CITEL decisions on the proposals be postponed until the March CITEL meeting in Argentina).

¹⁶¹ See generally INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Feb. 22, 2000); *U.S. Sees Spectrum Proposal as “Bridge” at Upcoming Conference*, COMM. DAILY, Mar. 20,

2000, available at 2000 WL 4694742 (noting U.S. proffering draft proposal).

¹⁶² See *U.S. Sees Spectrum Proposal as “Bridge” at Upcoming Conference*, COMM. DAILY, Mar. 20, 2000, available at 2000 WL 4694742 (noting CITEL rejection of U.S. draft proposal).

¹⁶³ See *id.* (identifying the preferred band of Latin American countries, the 1.7 GHz band).

¹⁶⁴ See INT'L TELECOMM. UNION, PROPOSAL TO IDENTIFY ADDITIONAL SPECTRUM FOR IMT-2000 32, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Mar. 27, 2000).

¹⁶⁵ See *id.* at 33 (noting the introduction of GSM-1800 in Europe and elsewhere in the band 1710–1785/1805–1880 MHz, and PCS in the Americas in the 1850–1990 MHz band).

¹⁶⁶ See *id.* at 2 (noting positions of all CITEL member states).

¹⁶⁷ See *id.* at 33 (expressing preference and capability for the evolution of pre-IMT-2000 mobile systems to IMT-2000 on the same frequency band).

¹⁶⁸ See *id.* at 32–33.

¹⁶⁹ *Id.* (noting ability to increase harmonization and the possibility of cost-effective spectrum evolution).

¹⁷⁰ See *id.* at 36.

sharing studies.¹⁷¹ While public safety concerns seemed effective in garnering more support from member countries for this second proposal rather than CITELE's first proposal, significant players such as Canada and Brazil did not join to support this measure.¹⁷² This was indicative of the challenges CITELE's organizational problems presented the body in its attempts to form both a cohesive regional unit and consistent proposals.¹⁷³

3. APT

APT took an approach very similar to the United States. It proposed identifying both the 2.5 GHz and the 1.7 GHz bands.¹⁷⁴ However, it did so in separate footnotes.¹⁷⁵ This was a point that appeared to have been impacted from discussions with the Europeans,¹⁷⁶ and the very real demand in countries, such as Japan, for new IMT-2000 spectrum in the very near term.¹⁷⁷ From a regulatory perspective, this would mean that someone referring to the Table of Allocations might not be aware that a particular frequency band was one of several potential bands available

for use for IMT-2000.¹⁷⁸

In addition, its proposal retained the language in the footnotes added to the Radio Regulations at WARC-92.¹⁷⁹ This approach seemed to argue for a more binding nature of the identification than the U.S. approach.¹⁸⁰ In addition, APT proposed a resolution regarding the implementation of IMT-2000 in the spectrum identified elsewhere in the proposal.¹⁸¹ The resolution emphasized the importance of facilitating the global roaming essential to lowering costs and creating economies of scale for manufacturers.¹⁸² It focused on giving administrations flexibility to foster compatibility between existing and future frequency arrangements, as well as arranging smooth transitions between services.

4. The Arab Block

The Arabs also have recently begun to form a disciplined and organized coalition.¹⁸³ They developed several proposals, although the primary proposal was on the replanning of the Broadcasting Satellite Service ("BSS").¹⁸⁴ While the Arab Group maintained its discipline throughout the

¹⁷¹ See *id.* (citing WRC-2000, INT'L TELECOMM. UNION, CONFERENCE PREPARATORY MEETING FOR WRC-2000: THE REQUIREMENT FOR GLOBAL ADDITIONAL SPECTRUM FOR IMT-2000 11-12, at <http://www.itu.int/search/index.asp> (Nov. 12, 1999)).

¹⁷² See *id.* at 2.

¹⁷³ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (citing CITELE as "the least organized of the three main regional spectrum groups").

¹⁷⁴ See ASIA-PACIFIC TELECOMMUNITY, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 53-54, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (May 25, 2000) (identifying the 1.7 GHz and 2.5 GHz bands for the terrestrial component of IMT-2000).

¹⁷⁵ See *id.* at 47 (proposing identification of spectrum through additional footnotes to Article 5 of the Radio Regulations).

¹⁷⁶ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000).

¹⁷⁷ See Toshio Aritake, *At WRC Meeting, Japan Will Be Promoting Multi-Band 3G Plan, Official Says*, BNA REG., LAW & ECON., May 12, 2000, at A-4 (noting Japan's urgency for identification fostered by its shrinking spectrum supply and advanced progress toward 3G).

¹⁷⁸ See *Telephony*, COMM. DAILY, May 22, 2000, available at 2000 WL 4695360 (noting that telecommunications regulators treat Radio Regulations (including the Table of Allocations) and their footnotes as "the Bible" in making decisions, while resolutions are often ignored).

¹⁷⁹ See ASIA-PACIFIC TELECOMMUNITY, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 49, at <http://www.itu.int/search/index.asp> (May 25, 2000) (proposing no change ("NOC") for the portions of the 1885-2200 MHz band allocated at WARC-92 and as laid out at the time in Article S5 of the Table of Allocations and associated footnote for the 1885-2200 MHz band).

¹⁸⁰ See *id.* (reasoning that "[i]mplementation of IMT-2000 in the bands identified in the Radio Regulations at WARC-92 is already planned in many countries, including the transitional arrangement of existing services" and that it is "therefore essential to maintain the existing provisions within the Radio Regulations relating to the frequency bands"); *Telephony*, COMM. DAILY, May 22, 2000, available at 2000 WL 4695360 (noting that regulators gave more interpretive weight to Radio Regulations and their footnotes than the resolutions).

¹⁸¹ See ASIA-PACIFIC TELECOMMUNITY, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 55-58, at <http://www.itu.int/search/index.asp> (May 25, 2000).

¹⁸² See *id.*

¹⁸³ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (noting the Arab bloc's organizational level).

¹⁸⁴ See Sarah Parkes, *Battle Lines Drawn for WRC-2000*, GLOBAL WIRELESS, Jan. 1, 2000, at 1 (explaining the Arab and African countries' leadership on the BSS issue); *BSS Replanning Process Cleared at WRC, Other Issues Remain*, COMM. DAILY, May 16, 2000, available at 2000 WL 4695300 (noting Arab nations' support for European multiband proposal that included 2.5 GHz band).

WRC-2000 process, there was dissent among the members on the details of many issues.¹⁸⁵ The Arabs, in terms of IMT-2000, believed that no additional spectrum should be identified.¹⁸⁶ However, this position appeared to be up for trade several times during the Conference when the BSS replanning issue was at a logjam.¹⁸⁷

5. Africa

The countries from the African region are still attempting to form a regional organization.¹⁸⁸ The African countries held a conference in Abidjan, Ivory Coast prior to the WRC-2000 to study the WRC issues in preparation for the Conference.¹⁸⁹ Like many delegations from the developing areas of the world, they are sensitive toward their lack of trained people and financial resources, which prevents their full involvement in the WRC process.¹⁹⁰ Like other developing area delegations, they lack money or influence.¹⁹¹ In addition, there are substantial cultural and language differences between North Africa and Sub-Saharan Africa, and between Francophone and Anglophone African countries.¹⁹² Despite all of these differences, the African countries view themselves as a large block that is still coming together to address their considerable group

needs.¹⁹³ In doing so at WRC-2000, the African nations generally felt that additional spectrum was not necessary at this time to be identified for IMT-2000.¹⁹⁴ This position would be a driving factor as the Conference waned on and they knew that some spectrum would have to be identified.

6. Former Soviet States

Russia led the group of former Soviet States.¹⁹⁵ This was particularly interesting since the Russians and the other former Soviet States are a part of CEPT.¹⁹⁶ However, on the issue of IMT-2000, these administrations split from the CEPT position.¹⁹⁷

The Russians took the most conservative position by generally opposing any identification of bands for IMT-2000.¹⁹⁸ Central to the Russian position was the assertion that the allocation of targeted spectrum to first- and second-generation services is such that many administrations are unwilling to disrupt existing investment by reallocating spectrum for IMT-2000, thus causing administrations to develop their own national policies independent of the ITU and thereby frustrating the goal of international harmonization.¹⁹⁹ The Russians argued for deferral of consideration of the identification of additional frequency bands

¹⁸⁵ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (noting the Arab bloc's organizational level).

¹⁸⁶ See *U.S. Remains Optimistic on Compromise at WRC*, COMM. DAILY, Apr. 10, 2000, available at 2000 WL 4694992 (citing Arab countries as part of a larger bloc of countries stating identification of additional spectrum as unnecessary).

¹⁸⁷ See *BSS Replanning Process Cleared at WRC, Other Issues Remain*, COMM. DAILY, May 16, 2000, available at 2000 WL 4695300 (noting Arabs' willingness to deal when it is in their own interest).

¹⁸⁸ Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 5, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (relating African countries' situation).

¹⁸⁹ *Id.*

¹⁹⁰ *Id.* at 5, 42-45 (examining the relationship between developing countries and the larger international telecommunications community).

¹⁹¹ *Id.*

¹⁹² *Id.* at 5.

¹⁹³ *Id.*

¹⁹⁴ See *U.S. Remains Optimistic on Compromise at WRC*, COMM. DAILY, Apr. 10, 2000, available at 2000 WL 4694992 (including African bloc in the group of countries opposing identification).

¹⁹⁵ See INT'L TELECOMM. UNION, RUSSIAN FEDERATION, PROPOSALS FOR THE WORK OF THE CONFERENCE, at <http://www.itu.int/search/index.asp> (Apr. 20, 2000).

¹⁹⁶ EUROPEAN CONFERENCE OF POSTAL & TELECOMMUNICATIONS ADMINISTRATIONS, WHAT IS CEPT, at <http://www.cept.org/docs/presentation.htm> (last visited Nov. 1, 2000) (listing the Russian Federation as one of CEPT's 43 current member states).

¹⁹⁷ Vineeta Shetty, *CEPT sets WRC agenda with backroom dealing*, TOTAL TELECOM, at <http://www.totaltele.com> (May 10, 2000) (noting Russia's split from CEPT on IMT-2000 issue because of military interests in the 2.5 GHz band).

¹⁹⁸ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 4-6, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (refuting claim that additional spectrum is necessary for IMT-2000); see also *U.S. Remains Optimistic on Compromise at WRC*, COMM. DAILY, Apr. 10, 2000, available at 2000 WL 4694992 (citing Russia as part of larger bloc of countries stating identification of additional spectrum as unnecessary).

¹⁹⁹ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 4-6, at <http://www.itu.int/brconf/wrc-2000/about/index-html> (June 27, 2000) (claiming that premature allocation of spectrum for IMT-2000 may conflict with existing investment in current generation mobile services and threaten the overall mobile market goal of harmonization).

to WRC-03, with further study of the issue until that time.²⁰⁰ This position was strongly repeated throughout the Conference and may have been a key reason that countries were willing to step back from a single-band identification approach.²⁰¹

IV. THE CONFERENCE

A. The United States Sets the Tenor

Prior to the Conference, there was much apprehension that the United States would not bring a proposal supporting the identification of any spectrum for IMT-2000 to the Conference.²⁰² Even though Ambassador Schoettler had spent a few months selling this proposal abroad before the Conference,²⁰³ it did not seem to the rest of the world that this was a done deal.²⁰⁴ Accordingly, there was a sense of relief when the United States arrived with its compromise position for consideration by the Conference.²⁰⁵

It is interesting that despite the formation of

the deep regional alliances formed prior to the Conference, the United States, by finding a compromise position in its own country that generally satisfied all interests, was able to sway all the regions of the world to adopt a flexible, multiple-band approach to the identification of spectrum to IMT-2000 without having any international support for its proposal.²⁰⁶ What was particularly unique, however, was that the United States did not unveil its WRC proposal until just prior to the Conference.²⁰⁷

The most relieved delegations were those of the CEPT countries (with the exception of the countries comprising the former Soviet Republics) and several key APT countries, such as Japan and Korea.²⁰⁸ These countries desperately needed to have spectrum identified for IMT-2000.²⁰⁹ In their view, it was imperative to have common bands used for IMT-2000.²¹⁰ Specifically, the manufacturers and a few key operators lobbied extensively as both individual members and as members of

²⁰⁰ See *id.* (proposing further study of the need for additional spectrum and the economic consequences of identifying such).

²⁰¹ Both the CEPT and CITELECOM proposals recognized, at some level, the potential to disrupt existing investment and jeopardize harmonization by prematurely identifying spectrum. See INT'L TELECOMM. UNION, PROPOSAL FOR THE WORK OF THE CONFERENCE 32, at <http://www.itu.int/brconf/wrc-2000/index.html> (Mar. 27, 2000); INT'L TELECOMM. UNION, EUROPEAN COMMON PROPOSAL FOR THE WORK OF THE CONFERENCE 3, at <http://www.itu.int/brconf/wrc-2000/index.html> (Jan. 21, 2000) (citing need for flexibility in light of diverse global use of bands).

²⁰² Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (noting uncertainty over Clinton administration's spectrum policy was such that industry requested Congress to put pressure on the administration).

²⁰³ Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 8, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (noting Ambassador Schoettler's advocacy of the U.S. proposal around the world).

²⁰⁴ Jeffrey Silva, *U.S. WRC-2000 stance unsupported*, RADIO COMM. REP., Apr. 3, 2000, at 6 (noting failure to acquire international support despite Ambassador Schoettler's diplomacy).

²⁰⁵ Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 10, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) ("The United States is seen as global leader in any negotiation of this kind. Consequently, other countries seek our involvement in their own issues and expect [the U.S.] to be fully prepared and to provide leadership in solving problems and developing compromises.").

²⁰⁶ See Kenneth Skilling, *U.S. Multi-Band Plan for 3-G Spectrum Won't Have Western Hemisphere Support*, BNA REG., LAW & ECON., Mar. 15, 2000, at A-25 (citing Ambassador's belief that no global agreement on a single band would force countries to back the U.S. multiband approach); see also Theresa Foley, *Fired-up 3G backers set to force WRC spectrum clash*, COMM. WEEK INT'L, at <http://www.totaltelecom/view.asp?articleID=25991&Pub=CWI&categoryid=705&kw=WRC> (Feb. 21, 2000).

²⁰⁷ INT'L TELECOMM. UNION, PROPOSAL FOR AGENDA 1.6.1, 1, at <http://www.fcc.gov/96/wrc001> (Feb. 22, 2000) (noting U.S. proposal completed in mid-February).

²⁰⁸ See INT'L TELECOMM. UNION, EUROPEAN COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 5, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (Jan. 21, 2000) (explaining Europe's need for the 2.5 GHz band to accommodate an evolution from its current generation systems on the band); Toshio Aritake, *At WRC Meeting, Japan Will Be Promoting Multi-Band 3G Plan, Official Says*, BNA REG., LAW & ECON., May 12, 2000, at A-4 (explaining Japan's critical need for additional spectrum); see WRC-2000, INT'L TELECOMMUNICATION UNION, SPECTRUM FOR THIRD GENERATION IMT-2000 SYSTEMS, at <http://www.itu.int/brconf/wrc-2000/index.html> (last visited Oct. 3, 2000) (noting South Korea's, as well as Japan's, swift movement toward implementing IMT-2000).

²⁰⁹ Toshio Aritake, *At WRC Meeting, Japan Will Be Promoting Multi-band 3G Spectrum Plan, Official Says*, BNA REG., LAW & ECON., May 12, 2000, at A-4; see also INT'L TELECOMM. UNION, EUROPEAN PROPOSALS FOR THE WORK OF THE CONFERENCE 3, 6-8, at <http://www.itu.int/brconf/wrc-2000/index.html> (Jan. 21, 2000).

²¹⁰ See Toshio Aritake, *At WRC Meeting, Japan Will Be Promoting Multi-band 3G Spectrum Plan, Official Says*, BNA REG., LAW & ECON., May 12, 2000, at A-4; see also INT'L TELECOMM. UNION, EUROPEAN PROPOSALS FOR THE WORK OF THE CONFERENCE 3, 6-8, at <http://www.itu.int/brconf/wrc-2000/index.html> (Jan. 21, 2000).

delegations, to ensure that what they considered sufficient spectrum was identified for IMT-2000.²¹¹ The concept of whether a single global band for IMT-2000 is necessary is very controversial.²¹² Advocates have continually argued that technology mandates the creation of a single frequency band.²¹³ But with the development of cheap technology for multiband phones and software enhancements, the validity of this premise is questionable.²¹⁴

The Conference began with a slow, noncontroversial start as each of the members who had proposals introduced them to the working group.²¹⁵ Mr. Jamieson²¹⁶ only allowed points of clarification to be discussed at first.²¹⁷ It was evident that the Chair was aware that if he allowed the working group to break away into discussions on the proposals so early in the Conference, chaos would ensue.

Once the proposals were introduced, the Chairman met with key members of various delegations to best gauge how to proceed. Participants included representatives of each of the major regional groups, such as APT and CITEL, as well as representatives from the United States.

²¹¹ See Sarah Parkes, *Battle Lines Drawn for WRC-2000*, GLOBAL WIRELESS, Jan. 1, 2000, at 1 (noting that the Universal Mobile Telecommunications System ("UMTS") Forum, the 188-member organization charged with harmonizing Europe's regional 3G deployment, as leading the charge for identification of additional bands); Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 7, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (relating the high level of industry participation in WRC process); *Europeans Said to Be Heading Toward U.S. 3G Position*, COMM. DAILY, May 10, 2000, available at 2000 WL 4695255 (noting Members of Congress' urging of the U.S. delegation to reject any WRC proposal that does not provide sufficient flexibility); see also Jeffrey Silva, *Wireless Coalition Turns to Congress for 3G Support*, RADIO COMM. REP., Apr. 17, 2000, at 17 (establishing manufacturers and operators extensive lobbying efforts).

²¹² See Theresa Foley, *Spectrum disharmony mars mobile broadband summit*, COMM. WEEK INT'L, at <http://www.totaltele.com/view.asp?articleID=27970&Pub=CWL;Categoryid=705kw=wrc> (June 5, 2000) (outlining debate on whether multiple bands can accommodate global roaming).

²¹³ See *id.* (citing experts' claims that frequency shifting technology will make handsets costlier and heavier).

²¹⁴ See *id.* (noting CEPT and New Zealand WRC delegate leaders' recognition that affordable frequency shifting technology can be placed in handsets to handle global roaming); WRC-2000, INT'L TELECOMM. UNION, SPECTRUM FOR THIRD GENERATION IMT-2000 SYSTEMS, at <http://www.itu.int/brconf/wrc-2000/index.html> (last visited Oct. 7, 2000) (explaining that software-defined radio, not circuitry built into the handset, will be used to provide multifrequency, thereby

B. The Initial Compromise

Early in the Conference, Mr. Jamieson recognized the need to establish clear ground rules for the negotiations.²¹⁸ His initial meetings with the relevant delegations led him to encapsulate, in a guideline document, portions of the major proposals introduced in the first few days of the Conference.²¹⁹ This document provided:

To provide guidance in the identification of additional spectrum for IMT-2000, the following provides a framework on which to build consensus on identifying suitable frequency band(s) to satisfy the requirements of WRC-2000 [A]genda [I]tem 1.6.1.²²⁰

1. Identification of frequency bands through appropriate provisions at this conference to satisfy the requirement of additional spectrum for the IMT-2000 terrestrial component, recognizing that the CPM Report concludes that spectrum to the order of 160 MHz, beyond that identified already for initial IMT-2000 bands in RR S5.388 and beyond the spectrum used in the three Regions for first- and second-generation mobile systems, will be needed to meet the projected requirements of IMT-2000.
2. Spectrum identified for IMT-2000 should be identified globally, in order to maximize harmonized use, to the greatest extent possible. It is desirable to identify a limited number of contiguous global bands.
3. To meet the requirements of individual administra-

avoiding heavier and costlier handsets unpalatable to the consumer).

²¹⁵ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, ALLOCATION ISSUES, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 9, 2000) (recounting little conflict or detailed discussion of proposals during introduction); INT'L TELECOMM. UNION, ADDITIONAL SPECTRUM FOR IMT-2000 TERRESTRIAL COMPONENT BASED ON PROPOSALS SUBMITTED BY ADMINISTRATIONS, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 15, 2000) (listing proposals introduced at beginning of Conference).

²¹⁶ Mr. Jamieson was the chairperson for Working Group 5A, which addressed the IMT-2000 issues assigned in Agenda Item 1.6.1. See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, DEPUTY PRIME MINISTER OF TURKEY OPENS WORLD RADIOCOMMUNICATION CONFERENCE, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 8, 2000) (noting Mr. Jamieson's position).

²¹⁷ See *id.* (noting that only outlines of proposals were discussed).

²¹⁸ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 11, 2000) (stating that Mr. Jamieson had to formulate a proposal to focus what were becoming unruly negotiations).

²¹⁹ INT'L TELECOMM. UNION, FRAMEWORK FOR CONSENSUS ON WRC-2000 AGENDA ITEM 1.6.1, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 16, 2000) (setting guidelines).

²²⁰ INT'L TELECOMM. UNION, NOTE BY THE SECRETARY GENERAL, COORDINATED PROPOSALS FOR THE WORK OF THE CONFERENCE 18, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 4, 2000) (introducing Agenda Item 1.6.1).

tions, flexibility must be afforded in a number of areas:

- in order to identify sufficient spectrum for those countries implementing IMT-2000, whilst also taking account of the requirements of those countries not having a need for additional spectrum for IMT-2000 at this time;
 - flexibility in the timing of availability and use of the bands identified for IMT-2000, in order to meet particular market demand and other national considerations;
 - the opportunity for administrations to determine, at a national level, how much spectrum to make available for IMT-2000 from within the identified bands;
 - to allow administrations to develop their own transition plans, tailored to meet their specific deployment of existing systems; [and]
 - the ability for the identified bands to be used by all services allocated in those bands.
4. The particular needs of developing countries must be met.
 5. To identify additional spectrum for IMT-2000 within current bands allocated to the mobile service.
 6. To take into account the substantial work already done in ITU-R, as endorsed by the Radiocommunication Assembly 2000, on IMT-2000, as well as the ability of administrations to deploy other technologies in the bands identified.²²¹

In order to address all the various issues, Mr. Jamieson broke Committee 5A into sub-working groups that, among other issues, addressed the terrestrial and satellite components of IMT-2000.²²² These working groups were given strict timelines by which they were required to complete their work. Similarly, Mr. Jamieson's working group also was provided with a strict timeline.²²³ This lack of time to fully flesh out issues resulted in some agreement by fire. Specifically, many terms that were not yet agreed to moved up to the next level working group where the Chair would take it on face value that this was the

agreed upon position.²²⁴ Many delegates would complain throughout this process that they were having items pushed down their throat that they would not have supported in an output document if they knew these issues would not be revisited.²²⁵

C. The Middle

The Conference continued in a most contentious manner. Even with laid out ground rules, fighting continued over the very details that would add teeth to the guidelines issued by Mr. Jamieson.²²⁶

Throughout the Conference, the Russians continued to take a hard-line position. The Russian Federation (the "Federation") generally opposed amendment of the Radio Regulations, as laid out in Agenda Item 1.6.1, on the grounds that the ITU-R calculations unreliably estimated the additional spectrum that will be necessary by 2010.²²⁷ They claimed the calculations were prospective, and therefore could not accurately account for future market developments and possible spectrum relief by emerging wideband data transmission services (i.e., IP telephony).²²⁸ To overcome this inadequacy, the Federation proposed further studies focusing on the shared use of spectrum, international harmonization, the process and cost of reallocating services currently on IMT-2000 targeted bands, and the impact of reallocation on market evolution.²²⁹ The Federation buttressed this delayed approach by warning of the individual nations' ability and "inalienable right" to develop national allocation policies when confronted with premature and unfavorable international agreements.²³⁰

²²¹ INT'L TELECOMM. UNION, WORKING GROUP 5A, FRAMEWORK FOR CONSENSUS ON WRC-2000 AGENDA ITEM 1.6.1, 1, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 16, 2000) (setting guidelines).

²²² See INT'L TELECOMM. UNION, STRUCTURE OF WORKING GROUP 5A, 2, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 17, 2000) (announcing organization of working group into sub-working groups).

²²³ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, FINAL COUNTDOWN TO THE FINAL ACTS, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 26-29, 2000) (describing the administration of IMT-2000 issues in Working Group 5A as being dictated by an "iron hand").

²²⁴ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, THE STEP-BY-STEP APPROACH FOR IMT-2000 STARTS BEARING FRUIT, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 18, 2000) (recounting the trials of this tiered approach to proposal approval).

²²⁵ See *id.* (noting delegates' unhappiness with process and fear that all the review of proposals would be lost once a proposal received preliminary approval).

²²⁶ See *id.* (recounting Chairperson's need to cut off negotiations when debate became too bogged down and counterproductive); see also WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000: BUILDING BLOCKS PAINSTAKINGLY LAID, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 19, 2000) (noting continual failure to reach consensus).

²²⁷ See INT'L TELECOMM. UNION, RUSSIAN FEDERATION, PROPOSALS FOR THE WORK OF THE CONFERENCE 4-5, at <http://www.itu.int/brconf/wrc-2000/index.html> (Mar. 6, 2000) (noting CPM Report's reliance on currently immeasurable estimates).

²²⁸ See *id.*

²²⁹ See *id.* at 4-6.

²³⁰ See *id.* at 5.

The CEPT nations, on the other hand, continued to maneuver in such a manner that would force the Conference to prioritize the 2.5 GHz band, if not single it out for global use for IMT-2000.²³¹ The CITEL administrations, however, countered these efforts by continuing to move the 1.7 GHz band forward as the priority or sole band for IMT-2000.²³² APT was concerned to a large extent with keeping the original footnote language that was adopted at WARC-92.²³³

It was in this environment that the United States' efforts at working with undecided administrations, such as the Africans and Arabs, began to pay off.²³⁴ Ambassador Schoettler made it a cornerstone of her efforts to meet both formally and informally with each delegation to discuss issues of concern to both administrations.²³⁵ Further, her staff formulated a very successful country outreach program.²³⁶ Under this program, each member of the United States delegation (whether industry or governmental) had a delegation that they were responsible for meeting and staying in contact with during the Conference.²³⁷ In this manner, the United States always was able to have

contact with each delegation, and the other delegations felt connected to the United States.

A tactical move by Mr. Jamieson also was to ensure that the adopted language for the terrestrial component be made applicable to the other relevant components. Accordingly, the major debates over language occurred in the confines of the territorial working groups. This did not mean that debates did not rage during the working group meetings.

For example, a major stumbling block during the course of the Conference was the United States' insistence that the spectrum identified for IMT-2000 also be identified to "other advanced communications applications."²³⁸ Many of the other delegations, especially the European delegations, ascribed evil motives to the United States—arguing that the United States had a potentially secret technology it was planning to deploy in the very bands being identified for IMT-2000.²³⁹ Support only came from a handful of countries, such as Israel and South Africa.²⁴⁰ Hours of floor debate ensued over this issue.²⁴¹ Ultimately, a compromise was reached on this

²³¹ See Vineeta Shetty, *CEPT sets WRC agenda*, TOTAL TELECOM, at <http://www.totaltele.com> (May 10, 2000) (explaining CEPT's temporary acquisition of Arab and African support for the 2.5 GHz band, in exchange for a reallocation of the broadcast spectrum more acceptable to the Arab and African nations); see also WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000: PROGRESS MADE, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 16, 2000) (citing Europe's continued advocacy for identification of the 2.5 GHz band throughout the Conference, as well as downplaying the 1.7 GHz band).

²³² See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000: PROGRESS MADE, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 16, 2000) (citing a strong declaration of support for identifying the 1.7 GHz band by sixteen of CITEL's member countries).

²³³ See ASIA-PACIFIC TELECOMMUNITY, COMMON PROPOSALS FOR THE WORK OF THE CONFERENCE 49, at <http://www.itu.int/brconf/wrc-2000/index.html> (May 25, 2000) (explaining that the APT preferred leaving the WARC-92 footnote language untouched and using new footnotes to identify additional spectrum because it would provide the identification's clearer authority among regulators than if they were combined in one footnote or expressed in a resolution).

²³⁴ See Jeffrey Silva, *Multiband approach gains followers at WRC*, RADIO COMM. REP., May 22, 2000, at 3 (noting acceptance of U.S. multiband approach after blocking European-Arab/African broadcast); see also *Europeans Said to be "Heading" Toward U.S. 3G Position*, COMM. DAILY, May 10, 2000, available at 2000 WL 46952555.

²³⁵ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 8-10, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (stating the Ambas-

sador's emphasis on meeting with other delegations).

²³⁶ See *id.*

²³⁷ See *id.* at 8 (describing assignment process in International Outreach initiative).

²³⁸ WRC-2000, INT'L TELECOMM. UNION, UNITED STATES OF AMERICA, PROPOSALS FOR THE WORK OF THE CONFERENCE, PROPOSAL FOR TERRESTRIAL AND SATELLITE COMPONENTS OF IMT-2000, at <http://www.itu.int/ITU-R/index.html> (Mar. 27, 2000) (identifying bands for "use for IMT-2000 and other advance communications applications," and intending to cover future technologies that provide similar voice, data and video as IMT-2000 systems but are not technically an IMT-2000 system).

²³⁹ The delegations that comprised the CEPT region felt particularly strong about this issue. They were convinced that the United States was going to support identification of spectrum for IMT-2000 and other advanced communications applications and then release a new technology that they would call an advanced communications application. In addition, several delegates believe that the CEPT countries were fearful that this term of art would put in jeopardy their own efforts to have spectrum identified at future conferences for multimedia applications. See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000: BUILDING BLOCKS PAINSTAKINGLY LAID, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 19, 2000) (noting Europe's characterization of the forward-looking language as "a dangerous precedent that could not be accepted").

²⁴⁰ See *Telephony*, COMM. DAILY, (May 22, 2000), available at 2000 WL 4695360 (citing limited support for adapting controversial U.S. measure into the language that recognizes evolution of technology and administrations' ability to respond).

²⁴¹ WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS,

position whereby the possibility of use of the spectrum for other advanced communications applications was recognized in the accompanying resolution, but not in the actual footnote language.²⁴²

Another critical issue was the priority given to the MSS component in comparison to the terrestrial component of IMT-2000.²⁴³ Ultimately, MSS was to be given priority for use of the identified spectrum until 2010, at which point the spectrum would revert back to terrestrial use.

Many other critical issues were still unresolved by the time the package of IMT-2000 footnotes and resolutions were sent up to the Chairman of Working Group 5A, Mr. Jamieson. This working group was structured to consider requirements of existing future services in the bands. Quite a bit of language that some delegations considered critical was still in square brackets. However, the Chairman of Working Group 5A limited debate and moved the documents up to the next level. Accordingly, more debate was raised on the outstanding issues in Working Group 5.

V. THE RESULT

The final acts of the Conference reflect an outcome that is essentially unprecedented in the history of the WRC.²⁴⁴ However, up until the last few

IMT-2000: BUILDING BLOCKS PAINSTAKINGLY LAID, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 19, 2000).

²⁴² See *id.* (noting adoption of the compromise in the resolution).

²⁴³ See Ram Manohar, *Mobile-satellite services: Spectrum requirements of mobile-satellite services*, at <http://www.itu.int/brconf/wrc-2000/index.html> (last visited Jan. 3, 2001) (noting satellite component of IMT-2000 will suffer spectrum shortfalls of 2x8 MHz by 2005 and 2x30 MHz by 2010 if additional spectrum is not allocated for that use).

²⁴⁴ See *Far-Reaching Agreements at World Radiocommunication Conference*, COMM. STANDARDS NEWS, July 24, 2000, available at 2000 WL 14663892 (stating "the WRC-2000 was hailed as a success because of its ability to come to grips with key and ever more complex issues").

²⁴⁵ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, FINAL COUNTDOWN TO THE FINAL ACTS, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 26–29, 2000) (citing Chairperson of Committee 5, who warned near the conclusion of the Conference that if debate were reopened, it could take another three weeks to reach the same point).

²⁴⁶ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, SCIENCE SERVICES SECURE SPECTRUM FOR FUTURE DEVELOPMENT, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 22, 2000) (outlining issue and its divisiveness).

²⁴⁷ See *id.* (noting United States and CITEL for single footnote covering similarly identified bands, and European

days of the Conference, it was still not a done deal.²⁴⁵

One key sticking point of the Conference in the final days was whether the WRC-2000 footnotes that identified IMT-2000 spectrum would have priority over the existing 1992 IMT-2000 footnotes.²⁴⁶ Several delegations, including the United States, argued fervently that the language in the 1992 footnotes should be aligned to be the same as the WRC-2000 footnotes²⁴⁷ or this would be inconsistent with the equality concept embodied in Mr. Jamieson's negotiating paper. The 1992 footnotes provided:

The bands 1885–2025 MHz and 2110–2200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). *Such use does not preclude the use of these bands by other services to which they are allocated.* The bands should be made available for IMT-2000 in accordance with Resolution 212.²⁴⁸

This almost brought the Conference to a standstill.²⁴⁹ Ultimately the Conference determined that the 1992 footnotes would remain intact.²⁵⁰

Another major issue that arose at the end of the Conference was how to best take into account the needs of the developing countries. In order to accommodate these needs, specific language was included in the accompanying resolution.²⁵¹

At the end of the Conference, both the 1.7 GHz

opposition to merging the footnotes).

²⁴⁸ INT'L TELECOMM. UNION, RADIO REG., ARTICLE S5, S5.388, at <http://www.itu.int/brconf/wrc-2000/index.html> (1988) (emphasis added).

²⁴⁹ See WRC-2000, INT'L TELECOMM. UNION, HIGHLIGHTS, IMT-2000: TIME TO COMPROMISE, at <http://www.itu.int/newsroom/wrc2000/releases/index.html> (May 22, 2000) (stating that conflict among the delegations on the footnote issue was such that a drafting group was formed to address the issue away from the rest of Working Group 5A, where divisions could be minimized).

²⁵⁰ See WRC-2000, INT'L TELECOMMUNICATION UNION, PROVISIONAL FINAL ACTS OF THE WORLD RADIOCOMMUNICATION CONFERENCE, ARTICLE S5, S5.388, 21, at <http://www.itu.int/itudocr/itu-r/wrc/wrc-2000/pfa-2/articles/65088.pdf> (2000) (leaving the WARC-92 footnote intact and only adding a reference to the newly added WRC-2000 Resolution, [COM 5/24], (WRC-2000)).

²⁵¹ See WRC-2000, INT'L TELECOMM. UNION, RESOLUTION [COM 4/24], ADDITIONAL FREQUENCY BANDS IDENTIFIED FOR IMT-2000, at <http://www.itu.int/brconf/wrc-2000/index.html> (2000) ("emphasizing . . . that the particular needs of the developing countries must be met" and "emphasizing . . . that Recommendation ITU-R M.819 describes the objectives to be met by IMT-2000 in order to meet the needs of developing countries"). The resolution also invited the ITU Radiocommunication sector "to provide guidance to insure that IMT-2000 can meet the telecommunications needs of the developing countries and rural areas in the context of [ITU]

and the 2.5 GHz bands were identified for use for IMT-2000 through a footnote in the Radio Regulations, as well as through accompanying resolutions.²⁵² The resolution expressly provides for administrations to have flexibility to implement IMT-2000 in any of the identified bands or any other band, or not at all.²⁵³ In addition, the resolution calls for future studies on a myriad of issues.²⁵⁴ The resolution also encapsulates additional items that the United States had wanted addressed at the Conference. Specifically, it addresses the evolution of existing mobile communication systems to IMT-2000.²⁵⁵ It also expressly notes the regulatory parity between the WRC footnotes in 1992 and the WRC-2000 footnotes.²⁵⁶

VI. THE IMPACT OF THE WRC ON WHERE ARE WE TODAY

The one clear outcome of WRC-2000 is that many countries, most notably the Europeans, will continue to push to have spectrum “identified”

for certain uses. For example, the 2003 WRC Agenda is set to consider the identification of spectrum for both multimedia applications and fourth-generation mobile systems.²⁵⁷ This effort may result in a push for spectrum “identification” to become a recognized term with regulatory meaning. Although no formal efforts have been made on this part, the informal process of continuing to have spectrum “identified” for different uses makes this a de facto reality. Such actions are already under way by the CEPT countries in the ITU and other fora.²⁵⁸

Another key area that is still under resolution is how the footnotes and resolutions adopted at WRC-2000 will be implemented.²⁵⁹ ITU-R Working Party 8F (“WP 8F”) has been tasked with this effort.²⁶⁰ In order to best address the work in WP 8F, many of the regional groups are working together to address the issues that have arisen. For example, CITELE has formed a working group just to coordinate regional positions for this process.²⁶¹

studies.” *Id.*

²⁵² See WRC-2000, INT’L TELECOMM. UNION, PROVISIONAL FINAL ACTS OF THE WORLD RADIOCOMMUNICATION CONFERENCE, ARTICLE S5, S5.AAA, 21, at <http://www.itu.int/itudocr/itu-r/wrc/wrc-2000/pfa-2/articles/65088.pdf> (2000) (identifying bands 1710–1885 MHz and 2500–2690 MHz “for use by administrations wishing to implement International Mobile Telecommunications (‘IMT-2000’) in accordance with Resolution”).

²⁵³ See *id.* (emphasizing that administrations must be afforded flexibility in managing spectrum). The resolution notes that “identification of a band for IMT-2000 does not establish priority in the Radio Regulations and does not preclude the use of the band for any [unidentified] application.” *Id.* Finally, the resolution recognizes that spectrum identified for IMT-2000 in footnotes S5.388 (1885–2025 MHz and 2110–2200 MHz), S5.AAA (1710–1885 MHz and 2500–2690 MHz) and S5.XXX (806–960 MHz) “does not preclude the use for IMT-2000 of other bands allocated to the mobile service.” *Id.*

²⁵⁴ See WRC-2000, INT’L TELECOMM. UNION, RESOLUTION [COM 4/24], ADDITIONAL FREQUENCY BANDS IDENTIFIED FOR IMT-2000, at <http://www.itu.int/brconf/wrc-2000/index.html> (2000) (including required studies tracking the evolution of IMT-2000). The studies included the provision of IP based applications, the development of harmonized frequency arrangements aimed at achieving compatibility with existing frequency arrangements used by first and second generation mobile systems, the completion of signaling and communications protocols, etc. *Id.* Additionally the ITU provided guidance to ensure that IMT-2000 can meet the needs of the developing world and rural areas. *Id.*

²⁵⁵ See *id.*; cf. INT’L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 3, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000) (linking evolution of systems to technical neutrality).

²⁵⁶ See WRC-2000, INT’L TELECOMM. UNION, RESOLUTION

[COM 4/24], ADDITIONAL FREQUENCY BANDS IDENTIFIED FOR IMT-2000, at <http://www.itu.int/brconf/wrc-2000/index.html> (2000) (noting that separate footnotes do not confer differences in regulatory status); cf. INT’L TELECOMM. UNION, PROPOSAL FOR AGENDA ITEM 1.6.1, 1–2, at <http://www.fcc.gov/ib/wrc00/> (Feb. 22, 2000). (emphasizing need for a clear statement of regulatory parity between existing and new spectrum identifications).

²⁵⁷ See WRC-2000, INT’L TELECOMM. UNION, PROVISIONAL FINAL ACTS OF THE WORLD RADIOCOMMUNICATION CONFERENCE, RESOLUTION [GT PLEN-2/4], AGENDA FOR THE 2003 RADIOCOMMUNICATION CONFERENCE 3, at <http://www.itu.int/itudocr/itu-r/wrc/wrc-2000/pfa-2/res/65311.pdf> (2000) (resolving to “consider the progress of the ITU-R studies concerning the technical and regulatory requirements of terrestrial wireless interactive multimedia applications” and “studies concerning future deployment of IMT-2000 and systems beyond IMT-2000”).

²⁵⁸ See generally INT’L TELECOMM. UNION, EUROPEAN COMMON PROPOSALS OR THE WORK OF THE CONFERENCE, at <http://www.itu.int/brconf/wrc-2000/index.html> (Jan. 21, 2000) (using term “identification” consistently when designating spectrum for use by IMT-2000).

²⁵⁹ See Fabio Leite, *IMT-2000 responsibility lies with regulators, operators*, GLOBAL WIRELESS, Sept. 1, 2000, at 11 (“The successful [post-WRC-2000] deployment of IMT-2000 systems now lies elsewhere—with the regulators’ licensing policies and with operators’ deployment strategies.”).

²⁶⁰ See INT’L TELECOMM. UNION, INFORMATION ON WORKING PARTY 8F: IMT-2000 AND SYSTEMS BEYOND IMT-2000, at <http://www.itu.int/broconf/wrc-2000/index.html> (Sept. 15, 2000) (outlining the Working Party’s responsibility within Study Group 8 for all “issues related to the terrestrial component of IMT-2000 and beyond,” and its collaborative role in examining the satellite elements of IMT-2000 and beyond).

²⁶¹ See INTER-AMERICAN TELECOMM. COMM’N, CITELE STRUCTURE, at <http://www.citele.oas.org/structure.htm> (last

Further, it is anticipated that the role of regional alliances will only expand. Although the United States was able to make a difference at the Conference, it is unclear that without firm alliances in the future, it will continue to make such progress. It is important to remember that numbers count at the WRC. Accordingly, more support will lead to a stronger proposal.

VII. LESSONS LEARNED FOR THE UNITED STATES' PROCESS

As the United States and the rest of the world begin preparations for the WRC-2003, we will see a very changed process.²⁶² Ambassador Schoettler, in the waning days of her appointment, issued a set of suggestions to improve the United States' preparation process for the WRC.²⁶³ Because of her success at WRC-2000, it is likely that her suggestions may have more credence than those given by others in the recent past.²⁶⁴ Many members of the U.S. delegation who participated on the IMT-2000 issue believe the success of the United States was owed partially to her forcing the United States to have a firm position entering the Conference, as well as her country outreach program.²⁶⁵

Specifically, some of the key recommendations that the Ambassador (with input from her delegation) made included:

- continuing to have staff assigned to the WRC Ambassador early and from several agencies;
- working within regional organizations to obtain support for U.S. positions;
- forming issue groups within the U.S. delega-

tion to formulate proposals and fallback positions;

- forming a U.S. delegation as early as possible;
- having a large delegation;
- having an extensive international outreach program both before and during the Conference; and
- having an effective media strategy, with active participation by the WRC Ambassador.²⁶⁶

At this time, the U.S. has just begun the preparatory process by examining lessons learned at WRC-2000 and how the process can be improved.²⁶⁷ It is unclear what, if any, changes will be included. In addition, with a new leader in the White House, it may be even more difficult to change the WRC process.

However, a key issue that is omitted from Ambassador Schoettler's report is the need to find a moderate ground. It is only because of this moderate approach that took into the account all players, that the Conference was able to provide direction to facilitate technological development.

VIII. CONCLUSION

The WRC-2000 introduced a new concept into the WRC process—an approach whereby each participant obtains the outcome they want through a moderate approach. By accepting an approach that did not preclude the use of the bands by other systems on the spectrum identified for IMT-2000, many countries that otherwise would not have accepted the position of the Conference were able to do so.

updated Nov. 2, 2000) (noting organization of the Working Group on Terrestrial Wireless Access to develop "recommendations and resolutions for the harmonization of spectrum usage; prepare guidelines for the implementation of systems and services; provide information on different technologies and services," including Personal Communications Services and IMT-2000).

²⁶² See *WRC Participants Eye Changes for Future Conferences*, COMM. DAILY, June 16, 2000, available at 2000 WL 4695567 (reporting post-Conference forum where Ambassador Schoettler, other U.S. Conference delegates, and telecommunications policymakers called for changes in the way the United States prepares for the WRC).

²⁶³ Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 40, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000).

²⁶⁴ See *Schoettler's work nixes need for full-time position*, RADIO COMM. REP., June 12, 2000, at 20 (reporting FCC Commissioner Harold Furtchgott-Roth's respect for Ambassador Schoettler's "fine work" led to his assertion that a permanent, full-time Ambassador to the WRC is not required).

²⁶⁵ See Ambassador Gail S. Schoettler, *Recommendations to Improve United States Participation in the World Radiocommunications Conferences*, 12-20, at <http://www.itu.int/brconf/wrc-2000/about/index.html> (June 27, 2000) (listing U.S. delegate endorsements of Ambassador Schoettler and her country outreach program).

²⁶⁶ *Id.* at 24 (providing WRC-2000 delegate feedback in favor of outreach initiative and early preparation).

²⁶⁷ See FED. COMM. COMM'N, DAILY DIGEST, at http://www.fcc.gov/Daily_Releases/Daily_Digest/2000/dd001106.html (Nov. 6, 2000) (announcing FCC public forum on improving the FCC's preparation process for WRC-2003).