Appendix A

Final Rules

For the reasons discussed in the *Report and Order*, the Federal Communications Commission amends 47 C.F.R. Parts 2, 15, 90, and 95 as follows:

PART 1 PRACTICE AND PROCEDURE

1. The authority citation for Part 1 continues to read as follows:

Authority: 15 U.S.C. 79 *et seq.*; 47 U.S.C. 151, 154(i), 154(j), 155, 225, and 303(r).

2. Section 1.1307 is amended by revising paragraph (b)(2) to read as follows:

§ 1.1307 Actions which may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

* * * * *

(b) * * *

(2) Mobile and portable transmitting devices that operate in the Cellular Radiotelephone Service, the Personal Communications Services (PCS), the Satellite Communications Services, the General Wireless Communications Service, the Wireless Communications Service, the Maritime Services (ship earth stations only) and the Specialized Mobile Radio Service authorized under Subpart H of Parts 22, 24, 25, 26, 27, 80, and 90 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§ 2.1091 and 2.1093 of this chapter. Unlicensed PCS, unlicensed NII and millimeter wave devices are also subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§ 15.253(f), 15.255(g), 15.319(i), and 15.407(f) of this chapter. Portable transmitting equipment for use in the Wireless Medical Telemetry Service (WMTS) is subject to routine environment evaluation as specified in §§ 2.1093 and 95.1125 of this chapter. Equipment authorized for use in the Medical Implant Communications Service (MICS) as a medical implant transmitter (as defined in Appendix 1 to Subpart E of Part 95 of this chapter) is subject to routine environmental evaluation for RF exposure prior to equipment authorization, as specified in § 2.1093 of this chapter by finite difference time domain computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that specific absorption rate measurement data be submitted. All other mobile, portable, and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure under §§ 2.1091, 2.1093 of this chapter except as specified in paragraphs (c) and (d) of this section.

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PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

3. The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 307, 336, and 337, unless otherwise noted.

4. Section 2.106 is amended as follows:

a. Pages 37, 42, 43, and 44 of the Table of Frequency Allocations are revised.

b. In the list of United States footnotes, revise footnote US246 and add footnotes US350, US351, and US352.

c. In the list of Federal Government footnotes, revise footnotes G27, G30, and G114.

The revisions and additions read as follows:

§ 2.106 Table of Frequency Allocations.

* * * * *

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
470-790 BROADCASTING	470-512 BROADCASTING Fixed Mobile S5.292 S5.293	470-585 FIXED MOBILE BROADCASTING S5.291 S5.298	470-608	470-512 FIXED BROADCASTING LAND MOBILE NG66 NG114 NG127 NG128 NG149	Public Mobile (22) Broadcast Radio (TV) (73) Auxiliary Broadcasting (74) Private Land Mobile (90)
	512-608 BROADCASTING S5.297	585-610 FIXED MOBILE BROADCASTING RADIONAVIGATION		512-608 BROADCASTING NG128 NG149	Broadcast Radio (TV) (73) Auxiliary Broadcasting (74)
	608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	S5.149 S5.305 S5.306 S5.307	608-614 LAND MOBILE US350 RADIO ASTRONOMY US74 US246		Personal (95)
		610-890 FIXED MOBILE BROADCASTING			
	614-806 BROADCASTING Fixed Mobile		614-890	614-698 BROADCASTING NG128 NG149	Broadcast Radio (TV) (73) Auxiliary Broadcast. (74)
				698-746 BROADCASTING NG128 NG149	Broadcast Radio (TV) (73) Auxiliary Broadcast. (74) Note: Band to be reallocated and auction-ed by Sept. 30, 2002.

1300-1350 AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation S5.149		1300-1350 AERONAUTICAL RADIO-NAVIGATION S5.337 Radiolocation G2 S5.149	1300-1350 AERONAUTICAL RADIO-NAVIGATION S5.337 S5.149	Aviation (87)
1350-1400 FIXED MOBILE RADIOLOCATION S5.149 S5.338 S5.339	1350-1400 RADIOLOCATION S5.149 S5.334 S5.339	1350-1390 FIXED MOBILE RADIOLOCATION G2 S5.149 S5.334 S5.339 US311 G27 G114	1350-1390 S5.149 S5.334 S5.339	
		1390-1395 RADIOLOCATION G2 Fixed Mobile S5.149 S5.339 US311 US351 G27 G114	1390-1395 S5.149 S5.339 US351	Note: 1390-1395 MHz became non-Federal Government exclusive spectrum in January 1999
		1395-1400 LAND MOBILE US350 S5.149 US5.339 US311 US351	1395-1400 LAND MOBILE US350 S5.149 US5.339 US311 US351	Personal (95)
1400-1427 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.341		1400-1427 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY US74 SPACE RESEARCH (passive) S5.341 US246		
1427-1429 SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile S5.341		1427-1429 SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile S5.341 G30	1427-1429 SPACE OPERATION (Earth-to-space) Fixed (telemetry) Land mobile (telemetry and telecommand) S5.341	Satellite Communications (25) Private Land Mobile (90) Note: 1427-1429 MHz became non-Federal government exclusive spectrum in January 1999

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
1429-1452 FIXED MOBILE except aeronautical mobile S5.341 S5.342	1429-1452 FIXED MOBILE S5.343 S5.341		1429-1432 LAND MOBILE US350 S5.341 US352	1429-1432 LAND MOBILE US350 Fixed (telemetry) Land mobile (telemetry and telecommand) S5.341 US352	Private Land Mobile (90) Personal (95)
			1432-1435 FIXED MOBILE S5.341 G30	1432-1435 Fixed (telemetry) Land mobile (telemetry and telecommand) S5.341	Private Land Mobile (90) Note: 1432-1435 MHz became mixed-use spectrum In January 1999.
1452-1492 FIXED MOBILE except aeronautical mobile BROADCASTING S5.345 S5.347 BROADCASTING-SATELLITE S5.345 S5.347 S5.341 S5.342	1452-1492 FIXED MOBILE S5.343 BROADCASTING S5.345 S5.347 BROADCASTING-SATELLITE S5.345 S5.347 S5.341 S5.344		1435-1525 MOBILE (aeronautical telemetry) S5.341 US78		Aviation (87)
1492-1525 FIXED MOBILE except aeronautical mobile S5.341 S5.342	1492-1525 FIXED MOBILE S5.343 MOBILE-SATELLITE (space-to-Earth) S5.348A S5.341 S5.344 S5.348	1492-1525 FIXED MOBILE S5.341 S5.348A			
1525-1530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite Mobile except aeronautical mobile S5.349 S5.341 S5.342 S5.350 S5.351 S5.352A S5.354	1525-1530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite Fixed Mobile S5.343 S5.341 S5.351 S5.354	1525-1530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite Mobile S5.349 S5.341 S5.351 S5.352A S5.354	1525-1530 MOBILE-SATELLITE (space-to-Earth) Mobile (aeronautical telemetry) S5.341 S5.351 US78		Satellite Communications (25) Aviation (87)

1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile S5.341 S5.342 S5.351 S5.354	1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.353A Earth exploration-satellite Fixed Mobile S5.343 S5.341 S5.351 S5.354	1530-1535 MOBILE-SATELLITE (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) Mobile (aeronautical telemetry) S5.341 S5.351 US78 US315	
1535-1559 MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 S5.353A S5.354 S5.355 S5.356 S5.357 S5.357A S5.359 S5.362A		1535-1544 MOBILE-SATELLITE (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 US315	Satellite Communications (25) Maritime (80)
		1544-1545 MOBILE-SATELLITE (space-to-Earth) S5.341 S5.356	
		1545-1549.5 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) Mobile-satellite (space-to-Earth) S5.341 S5.351 US308 US309	Aviation (87)
		1549.5-1558.5 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 US308 US309	
		1558.5-1559 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) S5.341 S5.351 US308 US309	
1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 S5.355 S5.359 S5.363		1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 US208 US260	Note: The *NTIA Manual* (footnote G126) states that differential GPS stations may be authorized in the 1559-1610 MHz band, but the FCC has not yet addressed this footnote.

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UNITED STATES (US) FOOTNOTES

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US246 Except for medical telemetry equipment operating in the band 608-614 MHz, no stations shall be authorized to transmit in the following bands: 608-614 MHz, 1400-1427 MHz, 1660.5-1668.4 MHz, 2690-2700 MHz, 4990-5000 MHz, 10.68-10.70 GHz, 15.35-15.40 GHz, 23.6-24.0 GHz, 31.3-31.8 GHz, 51.4-54.25 GHz, 58.2-59.0 GHz, 64-65 GHz, 86-92 GHz, 100-102 GHz, 105-116 GHz, 164-168 GHz, 182-185 GHz and 217-231 GHz. Medical telemetry equipment shall not cause harmful interference to radio astronomy operations in the band 608-614 MHz and shall be coordinated under the requirements found in 47 C.F.R. § 95.1119.

* * * * *

US350 In the bands 608-614 MHz, 1395-1400 MHz, and 1429-1432, the land mobile service is limited to medical telemetry and telecommand operations. Additionally, the band 1429-1432 MHz may be used on secondary basis for non-Government land mobile telemetry and telecommand and fixed telemetry.

US351 In the band 1390-1400 MHz, Government operations, except for medical telemetry operations in the sub-band 1395-1400 MHz, are on a non-interference basis to authorized non-Government operations and shall not hinder implementation of any non-Government operations. However, Government operations authorized as of March 22, 1995 at 17 sites identified below will be continued on a fully protected basis until January 1, 2009.

Sites	Lat/Long	Radius	Sites	Lat/Long	Radius
Eglin AFB, FL	30°28'N/086°31'W	80 km	Ft. Greely, AK	63°47'N/145°52'W	80 km
Dugway PG, UT	40°11'N/112°53'W	80	Ft. Rucker, AL	31°13'N/085°49'W	80
China Lake, CA	35°41'N/117°41'W	80	Redstone, AL	34°35'N/086°35'W	80
Ft. Huachuca, AZ	31°33'N/110°18'W	80	Utah Test Range, UT	40°57'N/113°05'W	80
Cherry Point, NC	34°57'N/076°56'W	80	WSM Range, NM	32°10'N/106°21'W	80
Patuxent River, MD	38°17'N/076°25'W	80	Holloman AFB, NM	33°29'N/106°50'W	80
Aberdeen PG, MD	39°29'N/076°08'W	80	Yuma, AZ	32°29'N/114°20'W	80
Wright-Patterson AFB, OH	39°50'N/084°03'W	80	Pacific Missile Range, CA	34°07'N/119°30'W	80
Edwards AFB, CA	34°54'N/117°53'W	80			

US352 In the band 1429-1432 MHz, Government operations, except for medical telemetry operations, are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations. However, Government operations authorized as of March 22, 1995 at 14 sites identified below will be continued on a fully protected basis until January 1, 2004.

Sites	Lat/Long	Radius	Sites	Lat/Long	Radius
Patuxent River, MD	38°17'N/076°25'W	70 km	Mountain Home AFB, ID	43°01'N/115°50'W	160
NAS Oceana, VA	36°49'N/076°02'W	100	NAS Fallon, NV	39°24'N/118°43'W	100
MCAS Cherry Point, NC	34°54'N/076°52'W	100	Nellis AFB, NV	36°14'N/115°02'W	100
Beaufort MCAS, SC	32°26'N/080°40'W	160	NAS Lemore, CA	36°18'N/119°47'W	120
NAS Cecil Field, FL	30°13'N/081°52'W	160	Yuma MCAS, AZ	32°39'N/114°35'W	160
NAS Whidbey IS., WA	48°19'N/122°24'W	70	China Lake, CA	35°29'N/117°16'W	80
Yakima Firing Ctr AAF, WA	46°40'N/120°15'W	70	MCAS Twenty Nine Palms, CA	34°15'N/116°03'W	80

GOVERNMENT (G) FOOTNOTES

* * * * *

G27 In the bands 225-328.6, 335.4-399.9, and 1350-1395 MHz, the fixed and mobile services are limited to the military services.

G30 In the bands 138-144, 148-149.9, 150.05-150.8, 1427-1429, and 1432-1435 MHz, the fixed and mobile services are limited primarily to operations by the military services.

* * * * *

G114 In the band 1350-1395 MHz, the frequency 1381.05 MHz with emissions limited to ±12 MHz is also allocated to fixed and mobile satellite services (space-to-earth) for the relay of nuclear burst data.

* * * * *

5. Section 2.1093 is amended by revising paragraph (c) to read as follows:

§ 2.1093 Radiofrequency radiation exposure evaluation: portable devices.

* * * * *

(c) Portable devices that operate in the Cellular Radiotelephone Service, the Personal Communications Service (PCS), the Satellite Communications Services, the General Wireless Communications Service, the Wireless Communications Service, the Maritime Services, the Specialized Mobile Radio Service, the Wireless Medical Telemetry Service (WMTS) and the Medical Implant Communications Service (MICS), authorized under subpart H of part 22 of this chapter, part 24 of this chapter, part 25 of this chapter, part 26 of this chapter, part 27 of this chapter, part 80 of this chapter (ship earth station devices only), part 90 of this chapter, subparts H and I of part 95, and unlicensed personal communication service, unlicensed NII devices and millimeter wave devices authorized under subparts D and E, § 15.253 and § 15.255 of part 15 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use. All other portable transmitting devices are categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, except as specified in §§ 1.1307(c) and 1.1307(d) of this chapter. Applications for equipment authorization of portable transmitting devices subject to routine environmental evaluation must contain a statement confirming compliance with the limits specified in paragraph (d) of this section as part of their application. Technical information showing the basis for this statement must be submitted to the Commission upon request.

* * * * *

PART 15 -- RADIO FREQUENCY DEVICES

6. The authority citation for Part 15 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 304, 307 and 544A.

7. Section 15.37 is amended by adding a new paragraph (h).

§ 15.37 Transition provisions for compliance with the rules.

* * * * *

(h) Effective **[two years from effective date of final rules]**, an equipment approval may no longer be obtained for medical telemetry equipment operating under the provisions of §15.242. The requirements for obtaining an approval for medical telemetry equipment after this date are found in Subpart H of Part 95 of this chapter.

PART 90 -- PRIVATE LAND MOBILE RADIO SERVICES

8. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

9. Section 90.203 is amended by revising paragraph (a)(1) to read as follows:

§ 90.203 Certification required.

(a) * * *

(1) Effective **[two years from effective date of final rules]**, an equipment approval may no longer be obtained for in-hospital medical telemetry equipment operating under the provisions of this part. The requirements for obtaining an approval for medical telemetry equipment after this date are found in Subpart H of Part 95 of this chapter.

(2) * * *

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PART 95 -- PERSONAL RADIO SERVICES

10. The authority citation for Part 95 continues to read as follows:

AUTHORITY: Sections 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.

11. Section 95.401 is amended by adding a new paragraph (d) to read as follows:

§ 95.401 (CB Rule 1) What are the Citizens Band Radio Services?

* * * * *

(d) The Wireless Medical Telemetry Service (WMTS)--a private, short distance data communication service for the transmission of patient medical information to a central monitoring location in a hospital or other medical facility. Voice and video communications are prohibited. Waveforms such as electrocardiograms (ECGs) are not considered video.
The rules for this service are contained in subpart H of this part.

12. Section 95.601 is amended by revising the last sentence to read as follows:

§ 95.601 Basis and purpose.

* * * The Personal Radio Services are the GMRS (General Mobile Radio Service)-subpart A, the Family Radio Service (FRS)-subpart B, the R/C (Radio Control Radio Service)-subpart C, the CB (Citizens Band Radio Service)-subpart D, the Low Power Radio Service (LPRS)-subpart G, the Wireless Medical Telemetry Service (WMTS)-subpart H, and the Medical Implants Communication Service (MICS)-subpart I.

13. A new section 95.630 is added as follows:

§ 95.630 WMTS transmitter frequencies.

WMTS transmitters may operate in the frequency bands specified below:

608-614 MHz
1395-1400 MHz
1429-1432 MHz

14. Section 95.631 is amended by adding a new paragraph (h) to read as follows:

§ 95.631 Emission types.

* * * * *

(h) A WMTS station may transmit any emission type appropriate for communications in this service, except for video and voice. Waveforms such as electrocardiograms (ECGs) are not considered video.

15. Section 95.639 is amended by adding a new paragraph (f) to read as follows:

§ 95.639 Maximum transmitter power.

* * * * *

(f) The maximum field strength authorized for WMTS stations in the 608-614 MHz band is 200 mV/m, measured at 3 meters. For stations in the 1395-1400 MHz and 1429-1432 MHz bands, the maximum field strength is 740 mV/m, measured at 3 meters.

16. Section 95.649 is revised to read as follows:

§ 95.649 Power capability

No CB, R/C, LPRS, FRS, MICS or WMTS unit shall incorporate provisions for increasing its transmitter power to any level in excess of the limits specified in § 95.639.

17. Section 95.651 is revised to read as follows:

§ 95.651 Crystal control required

All transmitters used in the Personal Radio Services must be crystal controlled, except an R/C station that transmits in the 26-27 MHz frequency band, a FRS unit, a LPRS unit, a MICS transmitter, or a WMTS unit.

18. Appendix 1 to Subpart E to Part 95 – Glossary of Terms is revised to add the term "*WMTS.* Wireless Medical Telemetry Service." at the end of the list.

19. A new Subpart H is added to Part 95 to read as follows:

Subpart H – Wireless Medical Telemetry Service (WMTS)

Sec.

95.1101 Scope.
95.1103 Definitions.
95.1105 Eligibility.
95.1107 Authorized locations.
95.1109 Equipment authorization requirement.
95.1111 Frequency coordination.
95.1113 Frequency coordinator.
95.1115 General technical requirements.
95.1117 Types of communications.
95.1119 Specific requirements for wireless medical telemetry devices operating in the 608-614 MHz band.
95.1121 Specific requirements for wireless medical telemetry devices operating in the 1395-1400 MHz and 1429-1432 MHz bands.
95.1123 Protection of medical equipment.
95.1125 RF Safety.
95.1127 Station identification.
95.1129 Station inspection.

* * * * *

Subpart H -- Wireless Medical Telemetry Service (WMTS)

General Provisions

§ 95.1101 Scope.

This part sets out the regulations governing the operation of Wireless Medical Telemetry Devices in the 608-614 MHz, 1395-1400 MHz and 1429-1432 MHz frequency bands.

§ 95.1103 Definitions.

(a) Authorized health care provider. A physician or other individual authorized under state or federal law to provide health care services, or any other health care facility operated by or employing individuals authorized under state or federal law to provide health care services, or any trained technician operating under the supervision and control of an individual or health care facility authorized under state or federal law to provide health care services.

(b) Health care facility. A health care facility includes hospitals and other establishments that offer services, facilities and beds for use beyond a 24 hour period in rendering medical treatment,

and institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments, including government entities and agencies such as Veterans Administration hospitals; except the term health care facility does not include an ambulance or other moving vehicle.

(c) Wireless medical telemetry. The measurement and recording of physiological parameters and other patient-related information via radiated bi- or unidirectional electromagnetic signals in the 608-614 MHz, 1395-1400 MHz, and 1429-1432 MHz frequency bands.

§ 95.1105 Eligibility.

Authorized health care providers are authorized by rule to operate transmitters in the Wireless Medical Telemetry Service without an individual license issued by the Commission provided the coordination requirements in § 95.1111 have been met. Manufacturers of wireless medical telemetry devices and their representatives are authorized to operated wireless medical telemetry transmitters in this service solely for the purpose of demonstrating such equipment to, or installing and maintaining such equipment for, duly authorized health care providers. No entity that is a foreign government or which is active in the capacity as a representative of a foreign government is eligible to operate a WMTS transmitter.

§ 95.1107 Authorized locations.

The operation of a wireless medical telemetry transmitter under this part is authorized anywhere within a health care facility provided the facility is located anywhere a CB station operation is permitted under § 95.405. This authority does not extend to mobile vehicles, such as ambulances, even if those vehicles are associated with a health care facility.

§ 95.1109 Equipment authorization requirement.

(a) Wireless medical telemetry devices operating under this part must be authorized under the certification procedure prior to marketing or use in accordance with the provisions of Part 2, Subpart J of this chapter.

(b) Each device shall be labeled with the following statement:

> Operation of this equipment requires the prior coordination with a frequency coordinator designated by the FCC for the Wireless Medical Telemetry Service.

§ 95.1111 Frequency coordination.

(a) Prior to operation, authorized health care providers who desire to use wireless medical telemetry devices must register all devices with a designated frequency coordinator. The registration must include the following information:

(1) specific frequencies or frequency range(s) used;

(2) modulation scheme used (including occupied bandwidth);

(3) effective radiated power;

(4) number of transmitters in use at the health care facility as of the date of registration including manufacturer name(s) and model numbers);

(5) legal name of the authorized health care provider;

(6) location of transmitter (coordinates, street address, building);

(7) point of contact for the authorized health care provider (name, title, office, phone number, fax number, e-mail address).

(b) An authorized health care provider shall notify the frequency coordinator whenever a medical telemetry device is permanently taken out of service, unless the device is replaced with another transmitter utilizing the same technical characteristics as those reported on the effective registration. An authorized health care provider shall maintain the information contained in each registration current in all material respects, and shall notify the frequency coordinator when any change is made in the location or operating parameters previously reported which is material.

§ 95.1113 Frequency coordinator.

(a) The Commission will designate a frequency coordinator(s) to manage the usage of the frequency bands for the operation of medical telemetry devices.

(b) The frequency coordinator shall (1) review and process coordination requests submitted by authorized health care providers as required in Section 95.1111 of this part; (2) maintain a database of WMTS use; (3) notify users of potential conflicts; and (4) coordinate WMTS operation with radio astronomy observatories and Federal Government radar systems as specified in § 95.1119 and § 95.1121.

§ 95.1115 General technical requirements.

(a) Field strength limits. (1) In the 608-614 MHz band, the maximum allowable field strength is 200 mV/m, as measured at a distance of 3 meters, using measuring instrumentation with a CISPR quasi-peak detector.

(2) In the 1395-1400 MHz and 1429-1432 MHz bands, the maximum allowable field strength is 740 mV/m, as measured at a distance of 3 meters, using measuring equipment with an averaging detector and a 1 MHz measurement bandwidth.

(b) Undesired emissions. (1) Out-of-band emissions below 960 MHz are limited to 200 μV/m, as measured at a distance of 3 meters, using measuring instrumentation with a CISPR quasi-peak detector.

(2) Out-of-band emissions above 960 MHz are limited to 500 μV/m as measured at a distance of 3 meters using measuring equipment with an averaging detector and a 1 MHz measurement bandwidth.

(c) Emission types. A wireless medical telemetry device may transmit any emission type appropriate for communications in this service, except for video and voice. Waveforms such as electrocardiograms (ECGs) are not considered video.

(d) Channel use. (1) In the 1395-1400 MHz and 1429-1432 MHz bands, no specific channels are specified. Wireless medical telemetry devices may operate on any channel within the bands authorized for wireless medical telemetry use in this part.

(2) In the 608-614 MHz band, wireless medical telemetry devices utilizing broadband technologies such as spread spectrum shall be capable of operating within one or more of the following channels of 1.5 MHz each, up to a maximum of 6 MHz, and shall operate on the minimum number of channels necessary to avoid harmful interference to any other wireless medical telemetry devices.

608.0-609.5 MHz
609.5-611.0 MHz
611.0-612.5 MHz
612.5-614.0 MHz

(3) Channel usage is on a co-primary shared basis only, and channels will not be assigned for the exclusive use of any entity.

(4) Authorized health care providers, in conjunction with the equipment manufacturers, must cooperate in the selection and use of frequencies in order to reduce the potential for interference with other wireless medical telemetry devices, or other co-primary users. Operations in the 608-614 MHz band (television channel 37) are not protected from adjacent band interference from broadcast television operating on channels 36 and 38.

(e) Frequency stability. Manufacturers of wireless medical telemetry devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all of the manufacturer's specified conditions.

§ 95.1117 Types of communications.

(a) All types of communications except voice and video are permitted, on both a unidirectional and bidirectional basis, provided that all such communications are related to the provision of medical care. Waveforms such as electrocardiograms (ECGs) are not considered video.

(b) Operations that comply with the requirements of this part may be conducted under manual or automatic control, and on a continuous basis.

§ 95.1119 Specific requirements for wireless medical telemetry devices operating in the 608-614 MHz band.

For a wireless medical telemetry device operating within the frequency range 608-614 MHz and that will be located near the radio astronomy observatories listed below, operation is not permitted until a WMTS frequency coordinator specified in §95.1113 has coordinated with, and obtain the written concurrence of, the director of the affected radio astronomy observatory before the equipment can be installed or operated

(a) Within 80 kilometers of:

(1) National Astronomy and Ionosphere Center, Arecibo, Puerto Rico: 18° 20' 38.28" North Latitude, 66° 45' 09.42" West Longitude.

(2) National Radio Astronomy Observatory, Socorro, New Mexico: 34° 04' 43" North Latitude, 107° 37' 04" West Longitude.

(3) National Radio Astronomy Observatory, Green Bank, West Virginia: 38° 26' 08" North Latitude, 79° 49' 42" West Longitude.

(b) Within 32 kilometers of the National Radio Astronomy Observatory centered on:

Very Long Baseline Array Stations	Latitude (North)	Longitude (West)
Pie Town, NM	34° 18'	108° 07'
Kitt Peak, AZ	31° 57'	111° 37'
Los Alamos, NM	35° 47'	106° 15'
Fort Davis, TX	30° 38'	103° 57'
North Liberty, IA	41° 46'	91° 34'
Brewster, WA	48° 08'	119° 41'
Owens Valley, CA	37° 14'	118° 17'
Saint Croix, VI	17° 46'	64° 35'
Mauna Kea, HI	19° 49'	155° 28'
Hancock, NH	42° 56'	71° 59'

The National Science Foundation point of contact for coordination is: Spectrum Manager, Division of Astronomical Sciences, NSF Room 1045, 4201 Wilson Blvd., Arlington, VA 22230, telephone: 703-306-1823.

§ 95.1121 Specific requirements for wireless medical telemetry devices operating in the 1395-1400 MHz and 1429-1432 MHz bands.

Due to the critical nature of communications transmitted under this part, the frequency coordinator in consultation with the National Telecommunications and Information Administration shall determine whether there are any federal government radar systems whose operations could affect, or could be affected by, proposed wireless medical telemetry operations in the 1395-1400 MHz and 1429-1432 MHz bands. The locations of government radar systems in these bands are specified in footnotes US351 and US352 of § 2.106 of this chapter.

§ 95.1123 Protection of medical equipment

The manufacturers, installers and users of WMTS equipment are cautioned that the operation of this equipment could result in harmful interference to other nearby medical devices.

§ 95.1125 RF safety.

Portable devices as defined in § 2.1093(b) operating in the WMTS are subject to radio frequency radiation exposure requirements as specified in §§ 1.1307(b) and 2.1093 of this chapter. Applications for equipment authorization of WMTS devices must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

§ 95.1127 Station identification.

A WMTS station is not required to transmit a station identification announcement.

§ 95.1129 Station inspection.

All WMTS transmitters must be available for inspection upon request by an authorized FCC representative.

Appendix B

List of commenting parties

Comments

1. American Hospital Association Task Force on Medical Telemetry (AHA)
2. American Mobile Telecommunications Association, Inc. (AMTA)
3. Anthony D. White
4. Brian Porras
5. Cheryl A. Shimek
6. Comsearch
7. Criticare Systems, Inc. (Criticare)
8. Datascope Corporation (Datascope)
9. Datex-Ohmeda Division Instrumentarium Corporation (Datex-Ohmeda)
10. Department of Health and Human Services Center for Devices and Radiological Health (CDRH)
11. Department of Health and Human Services Office for the Advancement of Telehealth (OAT)
12. Donald R. Cummings
13. Final Analysis Communication Services, Inc. (Final Analysis)
14. Forrest Fox
15. GE Marquette Medical Systems, Inc. (GE)
16. George (last name unknown)
17. Georgios Kokovidis
18. Heather Miller
19. Hewlett-Packard Company (HP)
20. Holy Cross Hospital
21. IIT Research Institute (IIT)
22. International Association of Fire Chiefs, Inc. and International Municipal Signal Association (IAFC/IMSA)
23. Itron, Inc. (Itron)
24. James P. Welch
25. Joseph Lewandowski
26. Keith B. James
27. Land Mobile Communications Council (LMCC)
28. Martha McDonough
29. MedStar Health Corporation (MedStar)
30. Mortara Instrument, Inc. (Mortara)
31. Motorola, Inc. (Motorola)
32. Orbital Communications Corporation (ORBCOMM)
33. PCTEST Engineering Laboratory, Inc. (PCTEST)
34. Personal Communications Industry Association, Inc. (PCIA)
35. Rick Evans RN
36. Spacelabs Medical, Inc. (Spacelabs)
37. Steve M. Siefken
38. Symbol Technologies, Inc. (Symbol)

39. The National Academies
40. Vitalcom, Inc. (Vitalcom)
41. Zymed, Inc. (Zymed)

Reply Comments

1. American College of Clinical Engineering (ACCE)
2. American Hospital Association Task Force on Medical Telemetry (AHA)
3. Datascope Corporation (Datascope)
4. Final Analysis Communication Services, Inc. (Final Analysis)
5. Itron, Inc. (Itron)
6. National Telecommunications and Information Administration (NTIA)
7. Office of Advocacy, U.S. Small Business Administration (SBA)
8. POH Medical Center
9. Vitalcom, Inc. (Vitalcom)

Ex Parte Comments

1. PCTEST Engineering Laboratory, Inc. (PCTEST)
2. Phillip Inglis

APPENDIX C

FINAL REGULATORY FLEXIBILITY ANALYSIS

As required by the Regulatory Flexibility Act (RFA),[156] an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making, Amendment of Parts 2 and 95 of the Commission's Rules to Establish a Wireless Medical Telemetry Service.*[157] The Commission sought written public comment on the proposals in the *Notice,* including comment on the IRFA. The comments received are discussed below. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.[158]

A. Need for, and Objectives of, the Report and Order

Medical telemetry equipment currently operates on an unlicensed basis on certain unused TV channels under Part 15 of the rules, and on a secondary basis to private land mobile services in the 450-470 MHz band under Part 90 of the rules. With the transition to digital TV service, both full power and low-power TV stations may begin operating on some of the vacant channels used by medical telemetry equipment. In addition, the new channelization scheme being implemented in the 450-470 MHz band will allow high-power operation on the channels currently reserved for low-power use where medical telemetry equipment operates. Both of these changes could result in severe interference to medical telemetry equipment. The rules adopted in the Report and Order allocate new frequency bands where medical telemetry equipment can operate on a primary basis without receiving interference.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

There were no timely filed comments in response to the IRFA. The Office of Advocacy, U.S. Small Business Administration (SBA) filed "reply comments" after the comment deadline, but prior to the reply comment deadline. Because they do not respond to comments on the IRFA, they are in fact untimely filed comments. Nevertheless, we will address the issues raised by the SBA.

The SBA claims two deficiencies on the part of the Commission in this proceeding. First, SBA states that the NPRM did not consider the impact of the proposed rules on small businesses.[159] Second, SBA states that the IRFA does not describe the impact of the rules on small businesses and does not provide significant alternatives designed to minimize this impact.[160]

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[156] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

[157] *See Notice of Proposed Rule Making* in ET Docket 99-255, 64 FR 41891, 41896 (August 2, 1999).

[158] *See* 5 U.S.C. § 604.

[159] *See* SBA comments at 1-2.

[160] *See* SBA comments at 2-3.

We believe SBA is clearly in error on the first point. The RFA only requires agencies to provide an analysis of the impact of the proposed rules on small businesses in the IRFA.[161] There is no requirement in the RFA to provide such an analysis in the NPRM, which would unnecessarily duplicate the analysis in the IRFA. Thus we reject SBA's first claim.

We disagree with SBA on the second point as well. The RFA requires the Commission to provide an analysis that discusses significant alternatives such as (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.[162] These are merely examples of the type of information that should be included; this list is not a rigid checklist. The IRFA included with the *Notice* in this proceeding did in fact include an analysis of the type required by the RFA. Specifically, it discussed the simplified compliance and reporting requirements we considered to minimize the impact of the rules on small businesses. We considered the effect on small business from the outset and made the rules apply equally to all parties. Thus, we consider the IRFA in this proceeding to be adequate. We further note that no other parties had any objections to the IRFA or considered it to be inadequate.

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.[163] Under the RFA, small entities may include small organizations, small businesses, and small governmental jurisdictions. 5 U.S.C. § 601(6). The RFA, 5 U.S.C. § 601(3), generally defines the term "small business" as having the same meaning as the term "small business concern" under the Small Business Act, 15 U.S.C. § 632. A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. This standard also applies in determining whether an entity is a small business for purposes of the RFA.

The Commission has not developed a definition of small entities applicable to RF Equipment Manufacturers. Therefore, the applicable definition of small entity is the definition under the SBA rules applicable to manufacturers of "Radio and Television Broadcasting and Communications Equipment." According to the SBA's regulation, an RF manufacturer must have 750 or fewer employees in order to qualify as a small business.[164] Census Bureau data indicates that there are 858 companies in the United States that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would

[161] *See* 5 U.S.C. § 603(a).

[162] *See* 5 U.S.C. § 603(c).

[163] *See* 5 U.S.C. § 603(b)(3).

[164] *See* 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 3663.

be classified as small entities.[165] Therefore, we believe that many of the companies that manufacture RF equipment would qualify as small entities.

According to the SBA's regulations, nursing homes and hospitals must have annual gross receipts of $5 million or less in order to qualify as a small business concern. 13 C.F.R. § 121.201. There are approximately 11,471 nursing care firms in the nation, of which 7,953 have annual gross receipts of $5 million or less.[166] There are approximately 3,856 hospital firms in the nation, of which 294 have gross receipts of $5 million or less. Thus, the approximate number of small confined setting entities to which the Commission's new rules will apply is 8,247.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

WMTS equipment will be authorized through the certification procedure. The certification procedure requires the manufacturer to file electronically a test report showing the equipment complies with the rules along with other supporting documentation to the Commission or to a designated Telecommunication Certification Body (TCB). The equipment may not be marketed or operated until an approval has been received from the Commission or TCB. This is the same process adopted by the Commission for the Medical Implant Communication Service (MICS).[167] We are requiring that all parties including small businesses have their equipment approved though the certification procedure because of concerns over radiofrequency radiation safety.

Parties operating the equipment will not be required to obtain an individual operator's license from the Commission, but they will have to register with a frequency coordinator designated by the Commission. The Commission may designate multiple coordinators to provide competition to keep costs at a minimum. The information submitted to the frequency coordinator will be:

(1) specific frequencies or frequency range(s) used;
(2) modulation scheme used (including occupied bandwidth);
(3) effective radiated power;
(4) number of transmitters in use at the health care facility as of the date of registration (including manufacturer name(s) and model numbers);
(5) legal name of the authorized health care provider;
(6) location of transmitter (coordinates, street address, building);
(7) point of contact for the authorized health care provider (name, title, office, phone number, fax number, e-mail address).

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[165] *See* U.S. Department of Commerce, 1992 Census of Transportation, Communications and Utilities (issued May 1995), SIC category 3663.

[166] *See* Small Business Administration Tabulation File, SBA Size Standards Table 2C, January 23, 1996, SBA, Standard Industrial Code (SIC) categories 8050 (Nursing and Personal Care Facilities) and 8060 (Hospitals). (SBA Tabulation File)

[167] *See* para. 53, *supra*.

E. Steps Taken to Minimize Significant Economic Impact on Sm. . Entities, and Significant Alternatives Considered

We are not requiring individual operators' licenses for equipment in the WMTS. Instead, the equipment will be "licensed by rule", meaning that users are permitted to operate WMTS equipment that complies with rules without the need to apply for a license from the Commission. Licensing by rule benefits small businesses by eliminating the expense and delays that would result if parties were required to obtain individual operators' licenses.

New equipment for the WMTS will not have to operate in the newly allocated frequency bands until two years after the effective date of the new rules. This will allow sufficient time for manufacturers to develop equipment for the new bands, thus reducing the development costs for small businesses. We are also allowing equipment in the old frequency bands that has received an equipment authorization before the two year transition date to be manufactured, imported, marketed and operated without a cutoff date. This will ensure that replacement parts are available for existing telemetry systems and that hospitals will be able to use their existing systems as long as possible before replacement is required, thus reducing expenses for small businesses.

There is currently a freeze on high-power land mobile operations in the 450-470 MHz band. The freeze was put in effect in 1995 to protect medical telemetry in that band from interference. We are providing a three-year transition period before lifting the freeze in the 460-470 MHz band. This will assist small businesses by providing adequate time for medical telemetry users to begin migration to the new frequency bands, if necessary. The freeze in the 450-460 MHz band will be lifted shortly after release of this Order because we have determined that little medical telemetry equipment operates in this portion of the band. Therefore, there will be little impact on small businesses.

Report to Congress: The Commission will send a copy of the *Report and Order, Amendment of Parts 2 and 95 of the Commission's Rules to Establish a Wireless Medical Telemetry Service*, including this FRFA, in a report to be sent to Congress pursuant to the SBREFA, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the *Report and Order*, including FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).