

1.4 GHz Band
Auction (#69) Seminar

Overview of Service Rules:
**Technical and Licensing
Issues**

Keith Harper
Electronics Engineer, Mobility Division, WTB

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Disclaimer

Nothing herein is intended to supersede any provision of the Commission's rules or public notices. These slides should not be used as a substitute for a prospective applicant's review of the Commission's relevant orders, rules, and public notices. Prospective applicants must familiarize themselves thoroughly and remain current with the Commission's rules relating to the 1.4 GHz Bands, rules relating to application and auction procedures, and the procedures, terms and conditions contained in the Auction No. 69 public notices.

Introduction

- ◆ Service Rules
- ◆ Technical Rules
- ◆ Incumbency Issues

Service Rules

- ◆ Permissible Licensed Services
- ◆ Band plan - Available spectrum
- ◆ Geographic area licenses
- ◆ Licensing rules – 47 C.F.R. Part 27

Permissible Licensed Services

- ◆ Flexible use approach
- ◆ Fixed & mobile wireless services
(see § 27.802)
- ◆ Examples include voice and data services such as paging, wireless internet, and telemetry.

Band Plan

1.4 GHz Band



Block	Frequencies (MHz)	Bandwidth	Pairing	Geo. Area Type	No. of Licenses
	1390-1392	2 MHz	Unpaired	MEA	52
A	1392-1393.5/1432-1433.5	3 MHz	2 x 1.5 MHz	EAG	6
B	1393.5-1395/1433.5-1435	3 MHz	2 x 1.5 MHz	EAG	6

Geographic Area Licenses

- ◆ 1390-1392 MHz band will be licensed over 52 Major Economic Areas (MEAs).
- ◆ 1392-1395 MHz / 1432-1435 MHz band of paired spectrum will be licensed over 6 Economic Area Groupings (EAGs).

Licensing Rules

- ◆ Part 27 framework
- ◆ License term and renewal expectancy
- ◆ Build-out requirements
- ◆ Partitioning & Disaggregation

Part 27 Framework

- ◆ Part 27 framework generally applies to band.
- ◆ Flexible licensing approach used to facilitate service deployment.

License Term and Renewal

- ◆ Initial authorizations will have a term not to exceed ten years from the date of initial issuance or renewal (see § 27.13 (c) and (d)).

Build-out Requirements

- ◆ No specific benchmarks to afford flexibility.
- ◆ “Substantial service” must be provided to service area before the end of their license term (see § 27.14(a)).
- ◆ Several “safe harbor” standards established in Part 27 Report and Order can be invoked to demonstrate substantial service.
- ◆ Note that substantial service standard requires the licensee to build out in rural areas as well as urban; build-out limited to urban areas, even if otherwise compliant, is not necessarily assured of license renewal.

Partitioning and Disaggregation

- ◆ Partitioning (dividing geographic areas) and disaggregation (dividing spectrum) are permitted.
- ◆ Two options for buildout.
- ◆ see § 27.15

Technical Rules

- ◆ Power limits
- ◆ Emission limits
- ◆ Signal strength limits

Power Limits

- ◆ 1390-1392 MHz & 1432-1435 MHz
 - Fixed stations: 2 kW EIRP
 - Mobile stations: 4 W EIRP
- ◆ 1392-1395 MHz
 - Fixed stations: 100 W EIRP
 - Mobile stations: 1 W EIRP
- ◆ see §27.50(e)
- ◆ RF safety compliance required (§27.52)

Emission Limits

- ◆ The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.
- ◆ see § 27.53(i)

Emission Limits, cont'd...

- ◆ Potential bidders should be aware that as part of the 2007 World Radio Communications Conference, WRC-07, NTIA has proposed more stringent out-of-band emission limits than presently specified in § 27.53(i) in bands 1350-1400 MHz and 1427-1452 MHz.

Signal Strength Limits

- ◆ Field strength limit: 47 dB μ V/m
- ◆ *see § 27.55*

Incumbent Gov't & Non-Gov't Protection

- ◆ Incumbent Gov't Operations
- ◆ International Protection
- ◆ Quiet Zones

Incumbent Gov't Protection

- ◆ Potential bidders are reminded that there are a number of government facilities presently operating in the 1.4 GHz band.
- ◆ Incumbent government operations must be fully protected according to footnotes in 47 C.F.R § 2.106.
- ◆ US311, US351, and US361

International Coordination

- ◆ Operations in these bands must not cause harmful interference with operations across the borders with Mexico and Canada.
- ◆ See Auction 69 Procedures Public Notice for further information.

Quiet Zones

- ◆ Potential licensees must protect the radio quiet zones as required in 47 C.F.R § 2.106.

AUCTION #69 INFORMATION WEBSITES

- ◆ FCC home page
 - <http://www.fcc.gov>
- ◆ 1.4 GHz Bands website:
 - <http://wireless.fcc.gov/auctions/69>

Questions?

- ◆ Technical or legal - licensing:
 - Keith Harper (engineer) 202-418-0620
 - Michael Connelly (legal) 202-418-0132
- ◆ ULS or licensing:
 - Bettye Woodward 202-418-0620
- ◆ Legal – auction:
 - Howard Davenport 202-418-0660
- ◆ General auction questions:
 - Roy Knowles or Barbara Sibert 717-338-2868

Service Rules

THE END

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Any Questions?

Contact: Keith Harper, 202-418-0620, Keith.Harper@fcc.gov