Attachment C

From Wikipedia (emphasis added).

"Many of the railroads have requested that the *FCC* reallocate parts of the 220 MHz spectrum to them. They argue that they must have 220 MHz spectrum to be interoperable with each other. However, the *FCC* has stated that there is no reallocation forthcoming, that the railroads are not justified in requesting spectrum reallocation because they have not quantified how much spectrum they need, and that the railroads should seek spectrum in the secondary 220 MHz markets or in other bands" [citing] "2012 PTC World Congress, Arsenault, Richard *(March 1, 2012)*. Chief Council, *FCC* Mobility Division."

From: http://en.wikipedia.org/wiki/Positive_train_control#cite_note-FCC_Public_Comments-15

See below presentation by Mr. Arsenault filed in Docket No. 11-79.

Meeting the Rail Industry's Positive Train Control Spectrum Needs

Richard Arsenault, Chief Counsel Mobility Division
FCC Wireless Telecommunications Bureau
richard.arsenault@fcc.gov; 202 418-0920

RAIL SAFTEY IMPROVEMENT ACT of 2008 (RSIA)

- RSIA did not allocate spectrum for PTC
- RSIA did not direct the FCC to allocate spectrum for PTC
- Communications Act generally requires FCC to assign spectrum by auction
  - Auction 89, 218-219 MHz and 220 to 222 MHz Licenses (postponed August 2010)

Wireless Bureau

PTC Spectrum Needs Inquiry
WT Docket No. 11–79

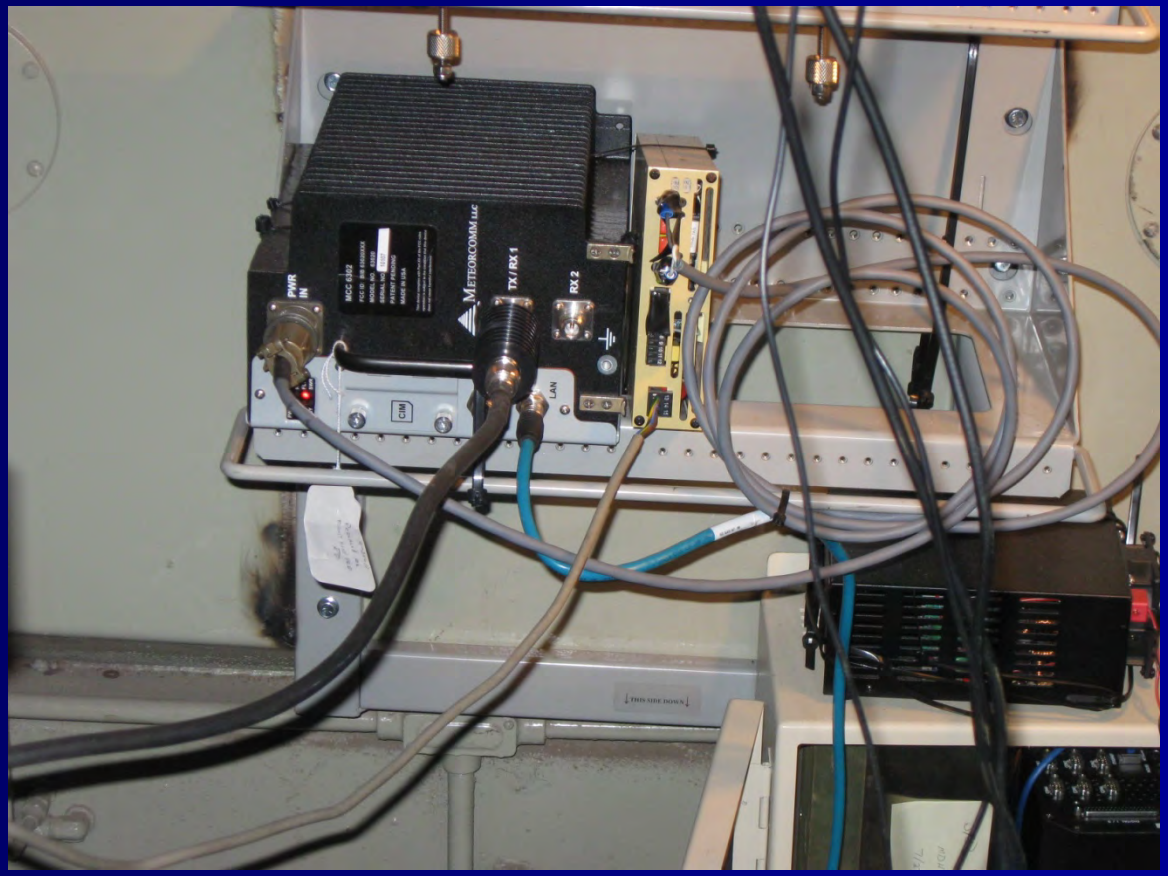
Initiated by Public Notice, May 2011
"Permit-but-Disclose" Proceeding

Substantive written communications and a summary of substantive oral communications with FCC staff must be filed on the record within two (2) business days.

TTCI Locomotive

Ample Licensed Spectrum is Available in the Secondary Market to Meet PTC Needs

PTC Cab Radio



Secondary Markets

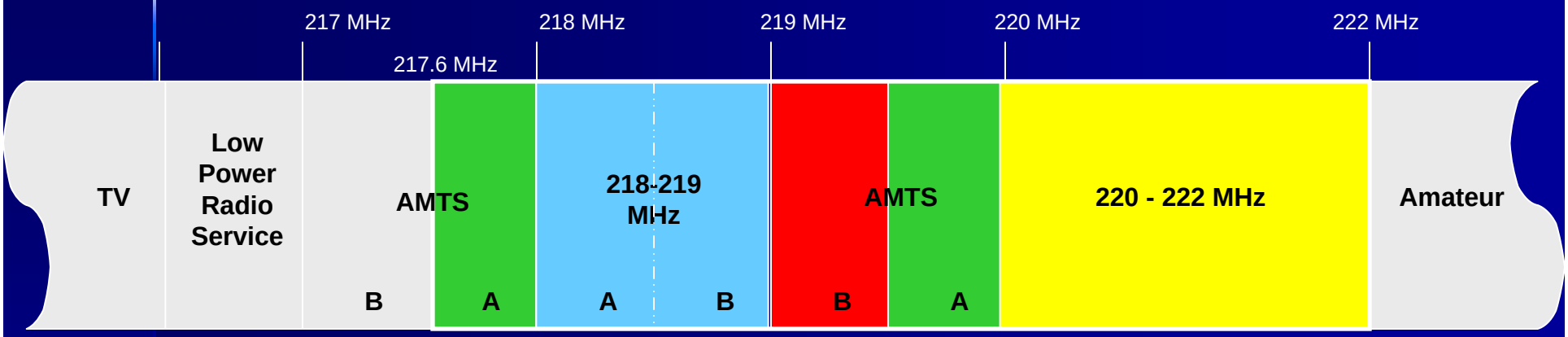
- Identify licensed spectrum needs
  - Contiguous/Non-Contiguous
  - Channelization 12.5 kHz, 25 kHz
  - Spectrum Band
    - AMTS (217-218, 219-220 MHz)
    - IVDS (218-219 MHz)
    - 220-222 MHz
    - Other
- Contact spectrum holder/broker

PTC Cab Antenna

Secondary Markets

- Consider transfer/assignment mechanisms
  - Partitioning of geographic area
  - Disaggregation of required spectrum amount
  - Acquisition or long-term lease
- Consider whether technical waivers may be necessary

Spectrum Targeted by Freight Railroads for Positive Train Control
(217.6 MHz – 222 MHz)



Class I Freight Rail Consortium (PTC-220) holds @ 380 kHz of spectrum nationwide (and an additional 100 kHz in key markets, including Los Angeles, San Francisco, and St Louis)

PTC Base Station

Secondary Markets

- Seek prior FCC approval of assignment, lease, and waivers if applicable
- FCC considers assignments/leases usually within 60 days (possibly longer for some waivers)

National Rural Telecommunications Cooperative (NRTC)

220 MHz Nationwide Licensee

Kurt Schaubach, VP CTO

kschaubach@nrtc.coop

(703) 467-1420

PTC-220

220 MHz Nationwide Spectrum

Craig B. Johnston

PTC-220 Spectrum Coordinator

CRAIGJOHNSTON@up.com (preferred)

(402) 544-0574

Ed L. Hollingsworth

Chair PTC-220 Spectrum Committee

ELHOLLIN@up.com

(402) 544-5464

SPECTRUM BRIDGE
(Broker)

- 218-219 MHz (Chicago, Dallas, Philadelphia, others)
- 220-222 MHz

Steven Tearpock

Manager Business Development

s.tearpock@spectrumbridge.com

(407) 792-1570

SKYBRIDGE

- AMTS A and B Blocks
- 220-222 MHz
- Warren Havens, President
  - (510) 841-2220; warren.havens@sbcglobal.net
- Jimmy Stobaugh
  - (510) 841-2230; jstobaugh@telesaurus.com

Select Waiver of FCC Rules in the Public Interest

Technical Rule Waivers

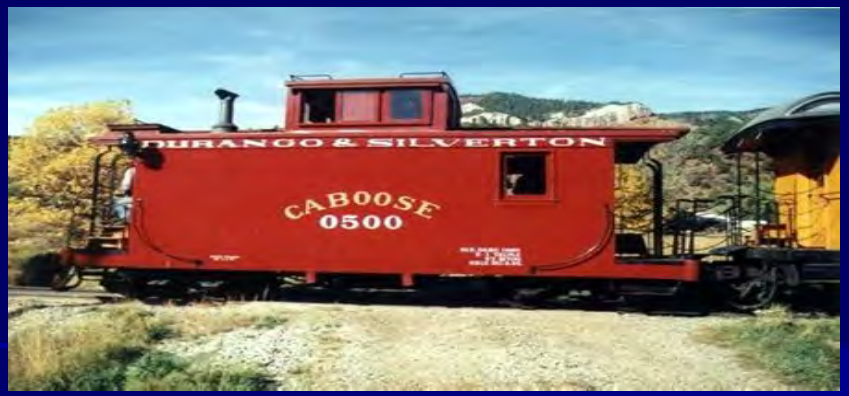
PTC–220, DA 09–1425 (2009)

- Construction Schedule
- Base/Mobile Configuration
- Station ID
- Commercial Use

SEPTA, WPOI 924 (2012)

- Base/Mobile Configuration
- Station ID

Temporary Waiver of Service Discontinuance Rule to Enable Construction of Long Island and Metro North Railroads' PTC System



- Please do not hesitate to contact FCC staff for assistance.
- Richard Arsenault, Chief Counsel Mobility Division
  - richard.arsenault@fcc.gov
  - 202 418-0920