

Transit Wireless Communications Joint Council
The Voice of Public Transport in a Complex World

Barry Einsig
Chair APTA Wireless
Communications Subcommittee
Chair Joint Council on Transit
Wireless Communications
and
Market Director
Harris Corporation,
Washington, DC



2011 Bus & Paratransit Conference

Joint Council Vision and Mission



- **VISION**

To be the collective voice committed to addressing transit industry wireless communications needs.

- **MISSION**

To assure that the transit industry wireless communications needs are continuously met through information sharing.



Joint Council

Why Create a new Joint Council?



2007 TCRP Transit Industry Survey Project J-06

- Survey Objective
 - “To develop a profile of current radio-frequency and wireless-data usage for the transit industry and to assess future needs.”
- 765 agencies were queried (36% responded)
- Key conclusion: Need a strategic plan to address transit industry wireless communications.

2009 TCRP Project C-18, Strategic Plan for Transit Industry Wireless Communications

- Completed in summer of 2009 with four strategic goals identified.
- Goal # 4: Establish Joint Council to implement strategic plan.



Joint Council C-18 Strategic Plan



GOAL 1

Private Communication Systems

- Ensure communications during narrowbanding.
- Ensure communications during 800 MHz re-banding.
- Improve emergency communications through technically neutral open standards and participation in SIEC.
- Establish committee for technology, regulation, and implementation information

GOAL 2

Commercial Systems

- Develop/ disseminate educational materials on capabilities, procurement methods, cost, and performance by service area.
- Establish working group to identify/influence trends and technologies for transit / passenger needs.
- Assist in selection, purchase, and financing of equipment and services.
- Improve interoperability

GOAL 3

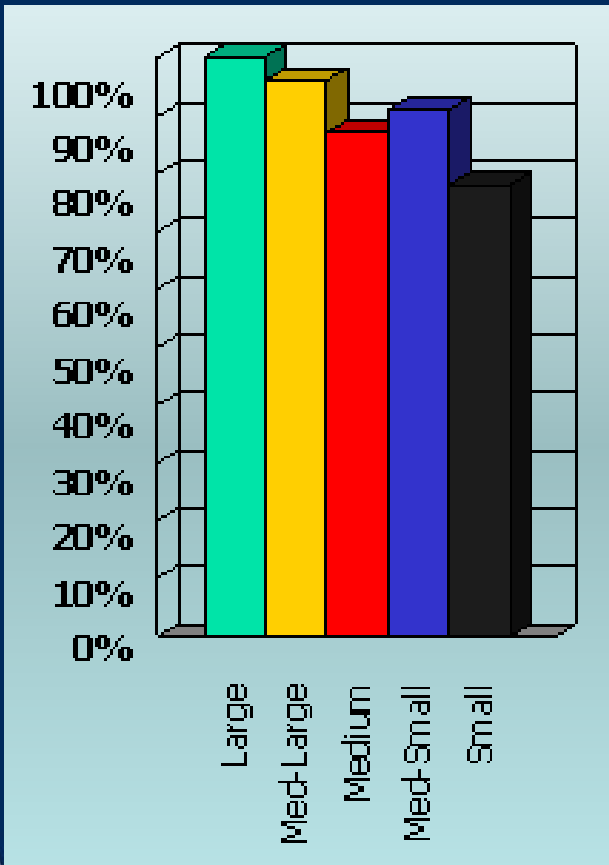
Industry Representation

- Establish specific working group to represent the transit industry to government
- Establish specific working group to represent the transit industry to other industries and other groups

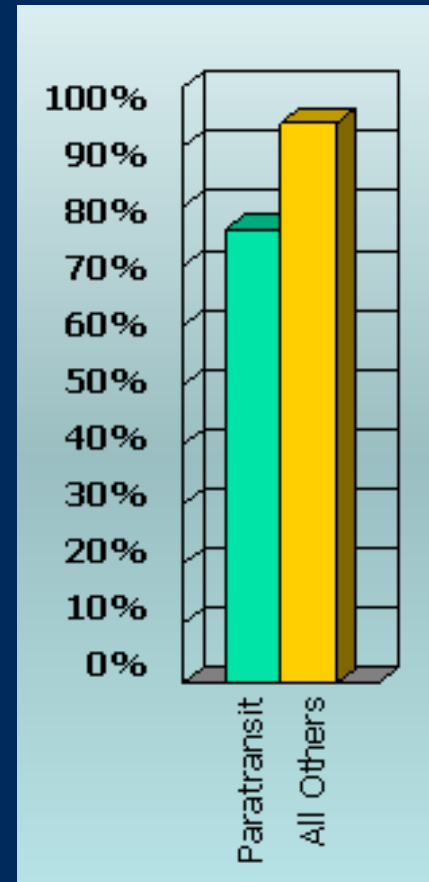


TCRP Transit Industry Survey 2-Way Radio Use

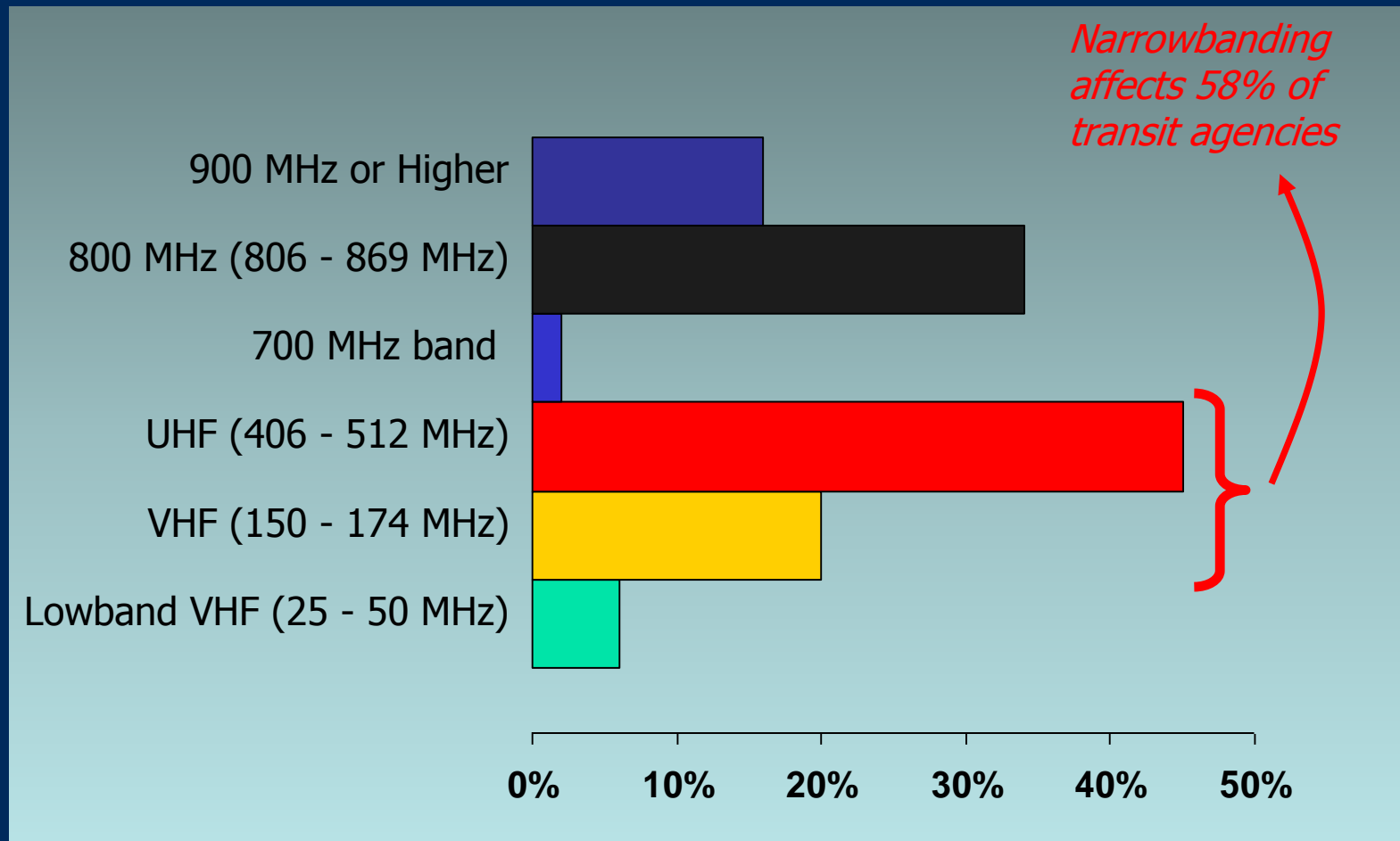
BY FLEET SIZE



BY MODE



TCRP Transit Industry Survey Spectrum Use



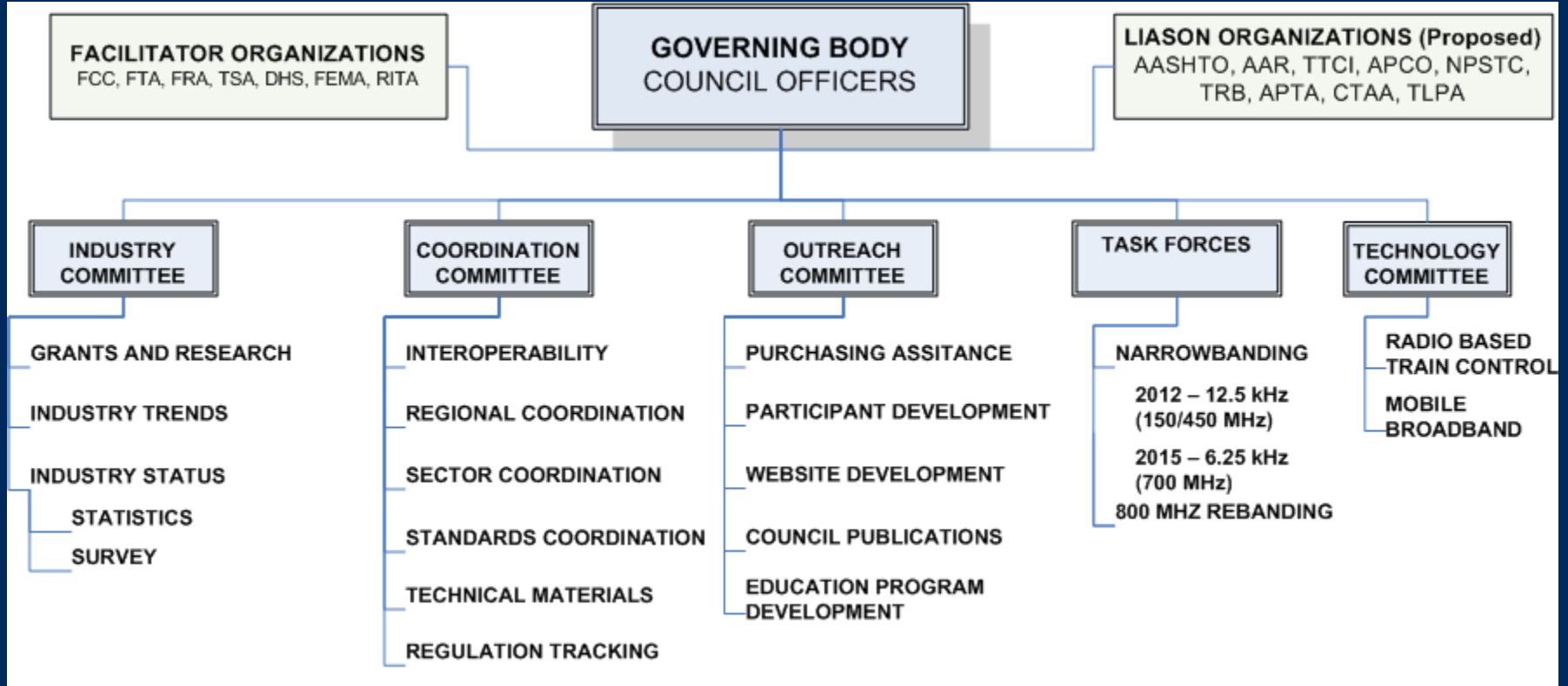
Joint Council Scope/Funding



- Established October 2009 to support all modes of land passenger transport providers.
- Membership open to both Agencies and commercial. No membership required.
- Key issues
 - ✓ PTC Spectrum and Systems
 - ✓ High speed rail
 - ✓ Narrowbanding (VHF/UHF)
 - ✓ Rebanding (800 MHz)
 - ✓ Mobile data/voice spectrum
- Funding
 - ✓ TCRP, Seeking sustaining funding from FTA-USDOT
- Web Site
 - ✓ <http://www.transitwireless.org>



Joint Council Organization



Joint Council Staff



- CHAIR: Barry Einsig 
- VICE CHAIR: Karl Witbeck 
- SECRETARY: Delma Bratvold 
 - INDUSTRY COMMITTEE CHAIR: Raj Wagley 
 - ❖ Vice Chair: David Cruise
 - COORDINATION COMMITTEE CHAIR: Karl Witbeck
 - ❖ Vice Chair: Dan Deveson, Cooper General
 - OUTREACH COMMITTEE CHAIR: (Currently Vacant)
 - ❖ Vice Chair: Chad Huffman, ACS/Xerox
 - TECHNOLOGY COMMITTEE CHAIR: Jim Baker, CEO Xentrans

SHULMAN
ROGERS

GANDAL
PORDY
ECKER



NARROWBANDING/RE-BANDING TASK FORCES CHAIR: Alan Tilles

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Joint Council Coordination Committee FCC Filings



- Nov 23, 2009, NPSTC petition to stay interim Narrowbanding dates
 - Supported this petition
 - FCC granted in part this petition.
- Nov. 24, 2009, EWA petition to add interstitial Narrowband channels to the 800 MHz band plan
 - Did not support this petition to add 12.5 kHz narrowband Channels. Bad timing due to re-banding and potential cost impact to transit agencies.
 - No action yet taken by the FCC
- Dec. 21, 2009, FCC National Broadband Plan NOI
 - Recommended that passenger transportation sector be included in allocations, not just for commercial use.
 - National Broadband Plan Published to Congress by FCC (3/16/2010)
- Feb. 5, 2010, Notice of Inquiry re: Signal Boosters
 - Recommended rule changes to require signal boosters be licensed as transmitters and outlaw use of boosters without the consent of licensee.



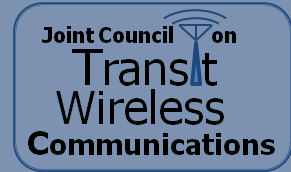
Joint Council Coordination Committee FCC Filings



- June 9 2010, FCC notice of auction #89 IVDS (218-219 MHz) spectrum
 - Requested auction be delayed pending further study.
 - FCC granted this request and issued a stay. Additional information regarding Commuter rail usage was requested.
- Aug. 19 2010, FCC request for comment regarding improving Public Safety Interoperability
 - Filed comments offering suggestions
- Aug. 31 2010, AAR waiver request for UHF EOT power (ERP) limit.
 - Filed comments in support of this petition.
 - FCC granted waiver
- Dec. 3, 2010, FCC proposed flexible use of NB and GB 700 MHz spectrum for broadband use.
 - Filed comments asking the FCC to essentially stay the course with the 700 MHz voice spectrum plan and provided transit use.



Joint Council PTC Initiatives



- Briefing of the APTA Commuter CEO Rail Committee regarding the need for PTC spectrum to be secured and status on FCC activities.
- Working with the TRB/TCRP to research and develop a national 220 MHz band spectrum plan for commuter rail PTC use
 - *Focus is on identifying the spectrum needs of the passenger service corridors of all 25 commuter rail roads in the continental US.*
 - *These recommendations will then be forwarded to the FCC for allocation or other action.*



Joint Council PTC Initiatives



- Scheduling a joint ITC/JC PTC Webinar focused on wireless Commuter rail issues. . . Coming soon.
- Proposing the development of a passenger rail related message set to be integrated into the Freight ITC messaging standards being developed.
 - *Grade Crossing Control*
 - *Train Schedules and station stops*



Joint Council Narrowbanding Initiatives



- Worked with TRB to develop a NB Quick Study Research Program.
 - *Identified all Transit Agencies in the FCC database that still have wideband emissions.*
 - *List will be used for mailings to notify license holders of the FCC mandate.*
- Worked with NTI to develop a webinar (1 hour) and helped developed material for seminars.
 - *Webinars held Oct 19, and Nov 4. 2010*
 - *Seminars held Nov 8 (Tampa), Dec 6 (SF), and Dec 8 (LA) 2010.*
 - *2011 Dates are 4/4 (Washington DC), 5/9 (Waco TX)*
- Other Narrowbanding seminars held at:
 - *APTA BUS (April 2010) and APTA Rail (June 2010)*
 - *APCO Regional meetings (Many commuter rail operators use public safety spectrum)*
- Developing a contact list of commuter rail operators in the US to increase awareness of impending deadlines and interoperability to freight rail roads and Amtrak.



Transportation Challenges to Meeting the NB Deadline

- Depth on Knowledge by key decision makers within the agencies
 - *Additional Costs Associated with meeting the deadline*
 - *Access to other spectrum such as 700 MHz*
 - *Interoperability with Freight Rail Roads and Amtrak*
- Planning Horizons for Large Capital Programs
- Complexity of Design and Deployment in Operating Transportation Systems
- Intelligent Transportation Systems operating over the channels
 - *Data over narrowband channels*
 - *Migrate to Broadband or Narrowband*
- Other complex issues diverting the attention of key decision makers within the Transportation agencies
 - *Reauthorization of Federal funding*
 - *Positive Train Control*
 - *State and Local Fiscal Crises*
 - *Staff Reductions*



Industry Committee

Chair: *Jim Baker, Xenventure*

Vice-Chair: *Jim Allison, Capitol Corridor Joint Powers Authority*

The Technology Committee is responsible for researching and analyzing current and emerging wireless broadband technologies, assessing their impact on wireless communications within the passenger surface transport sector, and providing independent and unbiased opinion to transit operators in conjunction with other Joint Council committees. This committee will also:

- Author white papers and pertinent technical reference materials regarding wireless technologies and infrastructure that address the future of transportation, and their scalability to suit a full range of needs within a transit organization;
- Develop business case studies for mobile data applications pertinent to road and rail transport systems, and relevant financial and technical planning tools for deployment and monetization;
- Establish and maintain close technical cooperation and information exchange with mobile network operators, and mobile industry associations;
- Interact with academic institutions, technology vendors, vehicle manufacturers, integrators, mobile carriers and mass transit operators on technical matters;
- Work towards the formulation of a technical roadmap and blue print for wireless communication best practice within the passenger transport industry.



Industry News

Request for Information on Wireless Innovation for Transportation

The Research and Innovative Technology Administration (RITA) of the US DOT has posted a request for information (RFI) from the public regarding optimal use of the Wireless Innovation (WIN) Fund. The purpose of WIN is to expedite the investment, development, deployment, and use of broadband wireless applications to address transportation needs. The transportation portion of the WIN Fund (WIN for Transportation) will focus on initiatives beyond the existing core Intelligent Transportation Systems (ITS) programs at USDOT, and will provide an additional \$100 million in funding to create an ITS Wireless Innovation for Transportation program. While all feedback is welcomed, the RFI includes several questions on which the USDOT is particularly interested in feedback.

Public Transit ITS Implementations – Lessons Learned Webinar

Date: June 2, 2011

Time: 1:00 PM – 2:30 PM ET

Register: http://www.pcb.its.dot.gov/t3/s110602_itstransit.asp

The Research and Innovative Technology Administration (RITA), which is part of the US DOT, has announced a new free Webinar about how Intelligent Transportation Systems (ITS) technology can be used to help public transit systems. The Webinar will:

Focus on lessons learned from the institutional coordination, procurement, implementation, and operation of Transit ITS for fixed route and paratransit systems;

Describe the challenges encountered and will provide costs and solutions;

Provide insights, with examples, for any agency seeking to deploy new dispatch flex route systems; and

Educate attendees on suggested methods to avoid lengthy technology deployments.



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Outreach Committee

Chair: *Mark McGregor, Virginia Transit*

Vice-Chair: *Chad Huffman, ACS Transportation Management Solutions*

The Outreach Committee is responsible for developing informational products on wireless communications with technical assistance from other Joint Council working groups, and dispersing information to transportation providers. This committee is also responsible for expanding Joint Council participation to ensure our ability to assist in meeting the wireless communications needs of the broad spectrum of passenger surface-transportation providers.



Technology Committee

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Global World Forum on Transit Communications and Wireless Applications 2011

November 1-3 2010

The Stanford Court Renaissance San Francisco
Hotel

905 California Street - Nob Hill - San Francisco,
California 94108



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Thank You



Barry C. Einsig

Barry.Einsig@Harris.com

717-855-7896

Chair

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www.transitwireless.org



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