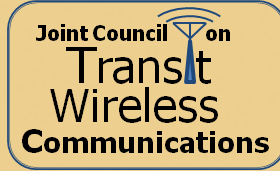


# The Joint Council on Transit Wireless Communications



**Karl Witbeck, PMP**  
*Vice-Chair*

*The Joint Council on Transit Wireless  
Communications*

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# 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 was the Joint Council Formed?



### 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 transit agencies were queried (36% responded)
- Key conclusion: Need a strategic plan to address transit industry wireless communications.

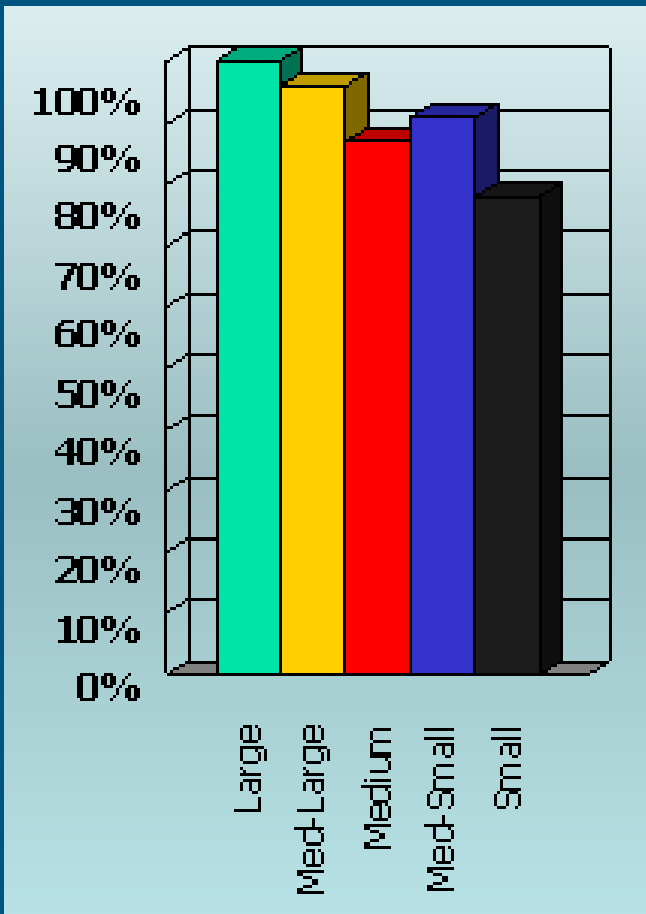
### 2009 TCRP Project C-18, Strategic Plan for Transit Industry Wireless Communications

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

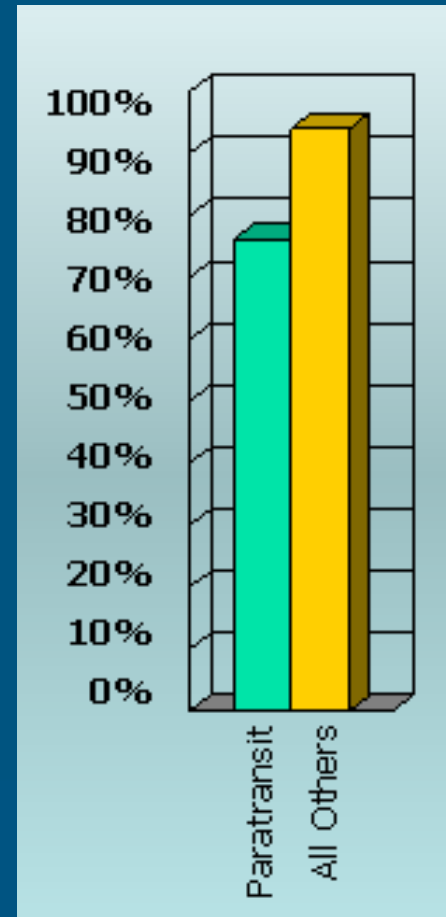
# TCRP J6 Transit Industry Survey

## 2-Way Radio Use

### BY FLEET SIZE



### BY MODE



# Joint Council TCRP Project 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

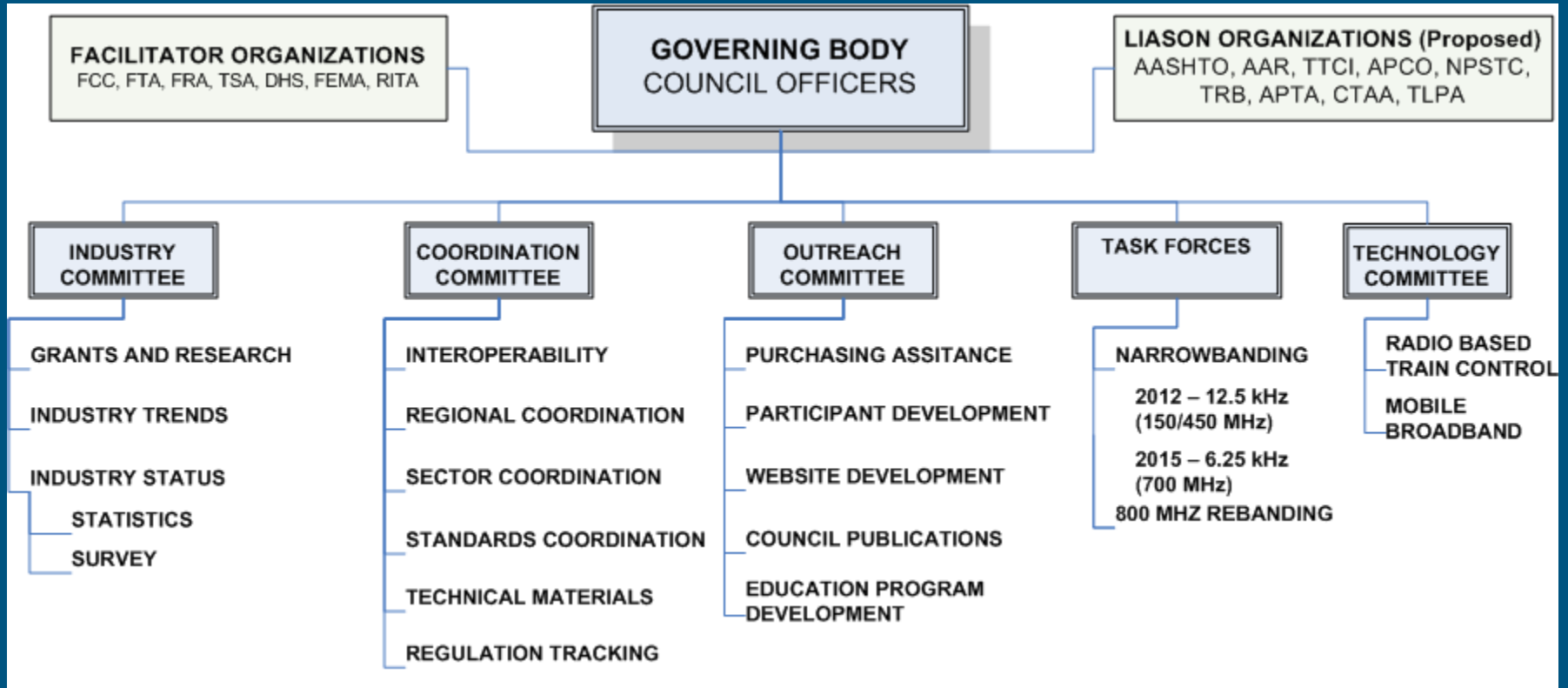
- Establish specific working group to represent the transit industry to government
- Establish specific working group to represent the transit industry to other industries and other groups

# Joint Council Scope/Funding



- All things wireless for all modes of passenger transport.
- Current issues
  - ✓ PTC Radios/Spectrum
  - ✓ GPS
  - ✓ High speed rail
  - ✓ Narrowbanding (VHF/UHF)
  - ✓ Rebanding (800 MHz)
  - ✓ Mobile data/voice spectrum
- Membership
  - ✓ Open membership - no membership fees.
- Funding
  - ✓ Currently via TCRP for 2011. Seeking sustaining funding.
- Web Site
  - ✓ <http://www.transitwireless.org>

# Joint Council Organization



# Joint Council Current 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)
- TECHNOLOGY COMMITTEE CHAIR: Jim Baker, CEO Xentrans
  - ❖ Vice Chair: Jim Allison, BART
- NARROWBANDING/RE-BANDING TASK FORCES CHAIR: Alan Tilles



# Joint Council 2011 Update



- A Technology Committee has been added and a Chair, Vice Chair and Secretary appointed.
- Experienced significant growth during the last 12 months.
  - ✓ 138% growth since April of 2010 to about 133 members representing about 45 organizations.

Organization Type	% of Membership
Association	8%
Government	5%
Transport Provider	23%
OEM Manufacturer	9%
Support	53%

- Council Charter and By-laws have been issued for comment and ratification later this year.
- Held 4 meetings: 2010 APCO, AASHTO SCOPT | 2011 IWCE, APTA Bus
- Two more scheduled for 2011 (APCO, APTA Annual)

# Joint Council Coordination Committee Recent 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 statistics.

# Joint Council Coordination Committee Recent FCC Filings



- April 11, 2011, Eligibility of entities to 700 MHz Public Safety Spectrum (Section 337)
  - Filed comments jointly with ASSHTO to define transportation as eligible.
- May 5, 2011, Spectrum needs for implementation of PTC. Request for comment.
  - Plan to file comments.

# Joint Council PTC Initiatives



- Initiated TRB/TCRP Project J6 Task 79 to develop a national PTC 220 MHz band spectrum plan for use by the 26 commuter rail operators.
  - *Will identify service corridor areas where PTC spectrum is needed.*
  - *Recommendations will be published. FCC has expressed an interest in the information.*
  - *Project underway (May 2011).*
- Planning a commuter rail PTC Webinar focused on wireless issues. . . Coming soon . . .
- Proposing the development of a passenger rail specific message set to be integrated into the ITC messaging standards being developed by freight RR.
  - *Grade Crossing advanced warning/monitoring*
  - *Train Schedules Adherence*
  - *Station stop enforcement*

# Joint Council Narrowbanding Initiatives



- Completed TCRP Project J6 Task 078 to develop a list of commuter rail operators holding wideband FCC licenses.
  - *Identified all Transit Agencies in the FCC database that still have wideband emissions.*
  - *List used for mailings to notify license holders of the FCC NB 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)*
  - *See website for other dates and times*
- Narrowbanding seminars held at:
  - *APTA BUS, APTA Rail and IWCE*
  - *APCO Regional meetings (Many commuter rail operators use public safety spectrum)*

# 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*

# Joint Council Technology Committee Initiatives



- Coordination with cellular carriers to facilitate understanding of transit industry needs.
- Created illustrative white papers and presentations regarding passenger-centric wireless applications.
  - ✓ Train Control
  - ✓ IP-CCTV
  - ✓ Wi-Fi
  - ✓ Social media
  - ✓ Passenger Information
- Participated as speakers in international wireless organizations conferences in Europe and Asia to communicate and understand the wireless needs of transit operators.

# Joint Council Current Technology Trends

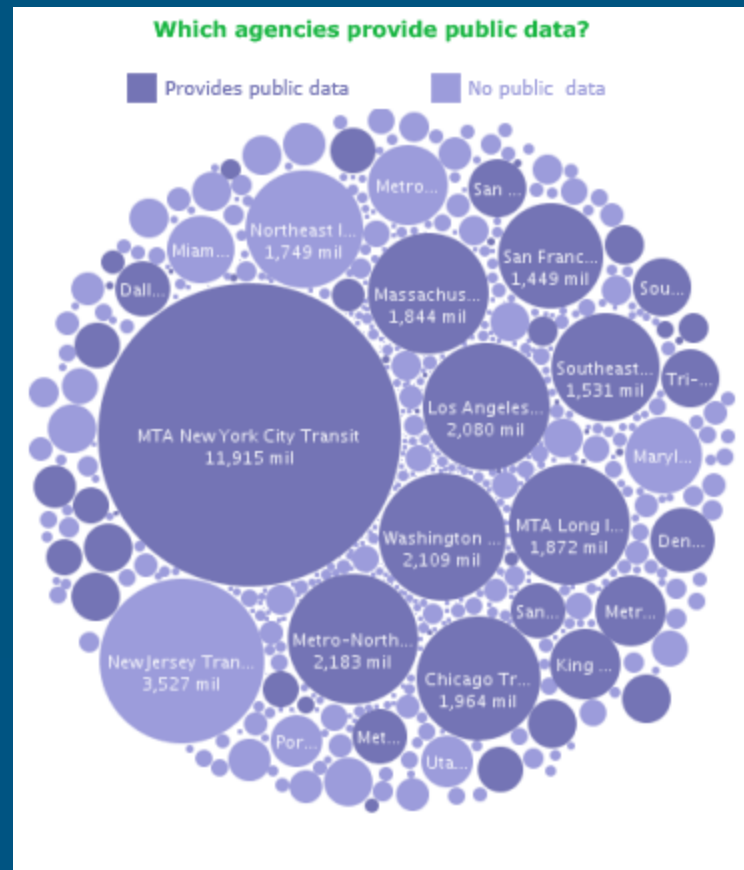


- 4G commercial networks
  - ✓ LTE
  - ✓ WiMAX
- Near Field Communications (NFC).
  - ✓ Fare Collection Payment via Cell phone embedded chips
  - ✓ Point of sale payment of other goods and services
  - ✓ Interact with home electronics
- Transit Applications
  - ✓ Smart phone apps
    - Travel route planning
    - Real time train/bus arrival
  - ✓ Internet apps
    - Third party travel route planning (ie UC Berkely's PATH2Go)
    - Provider website maps and planning tools
  - ✓ Social Media
    - Face Book
    - Twitter (250% growth in last 12 months)
    - Text Messaging



# Joint Council Transit Public Data

- Use of open formats such as GTFS (General Transit Feed Specification) is gaining popularity. As of April 2011 about 170 of 750 agencies in the US have published their transit data.



# Joint Council Closing Remarks



- We are very pleased with the response by the transit industry to our initiatives to date.
- We look forward to increased participation by more transport providers in particular.
- We value your input and feedback.

# Thank You!

Karl Witbeck, PMP

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