

APTA Communications Subcommittee Minutes of Meeting

Date: January 10-11, 2006

Time: 8am-4pm

Location: Joint PSC Technical Forum & Communications Subcommittee Mtg., Los Angeles

Facilitator: Jonathan McDonald, Chair - Communications Subcommittee

Attendees:

Name	Organization	Email
Jon McDonald	LTK	jmcdonald@ltk.com
Eric Schneider	Siemens Transportation Grp	Eric.Schneider@sts.siemens.com
Gary Pruitt	Arinc	gpruitt@arinc.com
Bob Evans	Idaho National Labs	Robert.evans@inl.gov
Dave Teumim	Teumim Technical	Dave431@enter.net
Steve Parrott	Lane Transit District	Steve.parrott@ltd.org
Ruben Madrigal	Chicago Transit Authority	rmadrigal@transitchicago.com
Colin Bantin	Alcatel, TSD	Colin.bantin@tas.alcatel.ca
Robert Doty	Caltrain	dotyr@samtrans.com
Chuck Weissman	LA Metro	chuck@weissman.com
Leonid Bukhin	LA Metro	bukhin@metro.net
Ben Lamoreaux	Lamoreaux McLendon	blamoreaux@laeng.com

Agenda Items:

1. *Introductions*

All introduced themselves and provided some insight as to why they came and what they expected to get out of the Subcommittee. Some of the more common answers were:

- Insight into frequency spectrum events (800 MHz rebanding et al.), assistance from APTA in frequency planning, and to provide input or voice to APTA's frequency coordination
- Standards/recommended practices
- Insight into technologies others are using
- Control System Security
- Provide some practical and rational approach to technology for transit

2. *Subcommittee Business*

Group agreed on loose structure based upon working groups. However it was noted that some officers were needed to perform basic club business. Gary Pruitt and Leon Bukhin were elected Vice Chairs.

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Officers will be coming up with by-laws before the next meeting to present to the Subcommittee.

3. *Current Activities.*

- Update of 800MHz Rebanding

i. Status

1. Jon McDonald noted that Phase 2 of Wave 1 was scheduled to go into affect in February according to FCC Public Notice. This will affect the following:
 - a. Wave 1 areas will begin the process of rebanding the 800MHz frequencies
 - b. Those in Wave 1 areas and those within 70 miles of Wave 1 areas will have a freeze on any license applications or modifications for new frequency applications in the affected frequency bands.
2. It was also noted that Sprint (formerly Nextel) has requested a 7 month extension on implementation due to difficulties keeping schedule on Phase 1
3. Additional info found at www.800mhzrebanding.com

ii. Discussion of Agency Impact

1. None of the transit agencies present noted any direct impact from 800 MHz rebanding. However, CTA noted that their channels at 450 MHz were directly affected by the refarming mandate in the 400 MHz Band. Ruben Madrigal stated that they are interested in the 700 MHz band and wanted to know more about how to find out about this.
2. Jon McDonald stated that 700 MHz was already being used. King County Metro in Seattle had already been awarded frequencies and was in the middle of a 700MHz system tender. They are the second such system in the US – the other being in California (he thinks). One of the primary setbacks to use of 700 MHz has been the incumbent TV stations who have had much influence with the political process. Jon recommended getting a hold of the regional 700 MHz administrator.
3. Gary Pruitt discussed the need for APTA input and coordination for frequency planning. NYCT has had great difficulties and undergone significant expense to apply for their own frequencies for CBTC.

- Standards/Recommended Practice Development

- i. Jon McDonald stated that only one paper, on CCTV, has come up for discussion as a recommended practice. It was distributed for comment at the APTA Rail meeting in June and has not received comment as of yet.

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4. *New Business*

- Industrial Control Systems' Security
 - i. Jon McDonald noted that at the APTA Annual in Dallas Dave Teumim presented the field of Industrial Control Systems' (Cyber) Security. It was decided by the various APTA technical committees that it fit best in Communications.
 - ii. Dave Teumim went on to introduce himself, Bob Evans from Idaho National Labs, and some of the work from ISA. Dave also explained, as he did the day before in the general session, that Bob Evans lab's efforts are being funded by the Department of Homeland Security (DHS) who considers Transit, particularly rail, critical infrastructure. His goal within the Communication Subcommittee is to create a recommended practice for the industry and then work to develop some case studies and perhaps some other educational tools to help the industry similar to what is being done in process control with the ISA.
- TCRP Initiatives
 - i. Jon McDonald explained that year the communications arm of the PSC Technical Forum has submitted a problem statement to the Transportation Research Board (TRB) for funding of a study to baseline Transit's Radio and Wireless Data capabilities. This study was approved in the fall of last year and will start the bid and selection process for a contractor to do this work. Jon will pass around the sample questionnaire being developed to the group.
 - ii. Jon noted that the TRB grants were a good way to fund group initiatives up to \$300,000 and is something we will be seeking in the future to support those initiatives.
- Subcommittee Website
 - i. Not much was mentioned here in the meeting other than Jon noted that he will get around to creating one which will be separate but linked to the PSC Technical Forum Website that he currently manages.
 - ii. Some thoughts mentioned by the group for inclusion into the website include:
 1. Web surveys
 2. Library of Conference Proceedings with search capability
 3. Group papers, standards, recommended practices
 4. Discussion forums
 5. Database with industry wide info on what equipment or system each agency has.

5. *Working Groups*

The afternoon of the meeting was primarily devoted to discussing, which working groups the Subcommittee would be supporting and what those would entail. There was much lively discussion. The following list describes the proposed working groups as they were discussed:

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- i. Interfaces and System Integration Working Group
 1. As communications is the glue that touches all the parts of the transit system, some means needs to be implemented to ensure that everything works together.
- ii. Control System Security
 1. This is an outflow of Dave Teumim's introduction to the field and the prior work done by ISA. This group will be developing a recommended practice for transit and will endeavor develop follow on case studies.
 2. Dave Teumim and Bob Evans volunteered and were designated to lead this Working Group.
- iii. Wireless and Radio Working Group
 1. This group proposed to track issues relating to rebanding and other spectrum management issues. Additionally it was noted that some recommended practices will likely be needed in the areas of applications for licenses, designing a system, and maintenance of a system.
 2. Gary Pruitt volunteer and was designated to lead this Working Group. Steve Parrott offered to help out.
- iv. Value Engineering Working Group
 1. This group was proposed to deal with recommended practices and guidance dealing with sharing resources such as VoIP and other means to achieve cost savings on communication system implementation.
- v. Description of Communications Working Group
 1. This group is tasked with identifying the niche called Communications in transit. The description is that Communications is not vital but is mission critical and must operate 24/7. It was decided that this should differ from the typical office type of IT services which many Transit CEOs tend to lump with Communications.
 2. Jon McDonald volunteered and was designated to lead this Working Group. Bob Doty and Ben Lamoreaux agreed to help.
- vi. Reliability Working Group
 1. This group was proposed to identify a common means to model and predict reliability of a communication system. It was noted that is intended to serve as a tool to both improve and manage mission critical communications systems which have had a tendency to be either under or over funded by agencies without a rationale as to what affects the system.
 2. Jon McDonald volunteered and was designated to lead this Working Group. Bob Doty and Gary Pruitt agreed to help.
- vii. Documentation Working Group
 1. This group was proposed to develop a recommended practice for documenting a communication system. This was deemed

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necessary to both manage the expectations of contractors across the industry and also to help maintenance organizations get the tools they need to maintain the contractors work after it is accepted.

2. Jon McDonald volunteered and was designated to lead this Working Group.
- viii. Testing Working Group
 1. This group was proposed to develop a recommended practice for testing the communication system and the various components that make up the comm. system.
 - ix. ITS Working Group
 1. This group was proposed to coordinate the various passenger information methodologies amongst transit modes and with Highways. It was also noted that this needed to work with the IEEE standards already developed for this purpose and with ITS America.
 - x. Technical Standards Working Group
 1. This group was proposed to tackle the development of recommended practices and standards in various technical applications such as CCTV, PA, and others.
 - xi. Technology Management Working Group
 1. This group was proposed to tackle the complex question of how to manage technology in transit and develop a best practices guide or recommend practice.
 - xii. Disaster Communications
 1. This group was discussed to develop a recommended practice for preparing for a Katrina type emergency. It was basically decided that it was primarily an operational issue and is typically a problem with the first responders and not the transit agency. No Working Group was proposed for this issue.
 2. It was noted, however, that Agencies should be trying to work with their local first responders to get written into the regional emergency preparedness plan.
- Although much of the work will be developed by each working group at its own pace, it was noted by the Subcommittee that the Description of Communications should come first so that this can be presented to the transit CEOs and others to explain our position in the technical food chain.

6. Action Items:

- Jon McDonald had the following action items:
 - i. Send out Radio Questionnaire from TCRP Study
 - ii. Send out Emergency Communications article on lessons learned from Katrina
 - iii. Send out prior work on describing Communications in diagram form

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- iv. To work with Vice Chairs on by-laws
 - Dave Teumim is to organize his Working Group
 - Gary Pruitt is to organize his Working Group

- 7. Next Meeting will be at APTA BUS, April 30th – May 3rd, in Orange Co., California