SunGuide^{SM} C2C Coordination

Tuesday, August 17, 2004, 2:30 PM to 4:30 PM EDT
Ft. Lauderdale, District 4
CDRL 1-8.2.9

Attendees:

Liang Hsia, FDOT	Robert Heller, SwRI
David Chang, PBS&J	Meredith Moczygemba, SwRI
John Bonds, PBS&J	Walt Townsend, ITS-Siemens
Dan Baxter, PBF	Gregory Floyd, PBF
Mohammed Hadi, PBS&J	Steve Dellenback, SwRI (phone)
Frank Deasy, PBF (phone)	Nick Adams, FDOT (phone)

Subject: **C2C Coordination Meeting for SunGuide**

Item #1 – Goals for connecting TMCs

- Sharing realtime data at the local, regional, and statewide levels
- Roadside Device Sharing capability
- Backup control of Primary Centers
- Configuration management (inventory)
- Enhancements:
  - Major incident management
  - Hurricane evacuations and emergencies
  - TMC and network security
- Local and regional requirements
  - Traveler, transit, weather, data warehousing, incident management, video, and security support information
- Statewide ITS Architecture (SITSA) used as the basis for Center categorization

Item #2 – How can we connect TMCs?

- Internet, leased facilities, dedicated wireless and wireline, and hybrid networks
- Network topologies are under development
- Applying Florida DOTs Statewide microwave network

Item #3 – C2C LINK Network/Framework

- Every "LINK" has two distinct functions:
  - Data link function – deploy "System to System" connections (Web Services Port 80) to support SunGuide's XML utilities including status and command and control

- SwRI questioned what band width provided for the data link layer – Dan claims that the width is essentially the equivalent of 12 T-1 circuits on a Gigabit Ethernet really on a link-by-link basis
  - Video link function – "Switch to Switch" connections for IP Addressable MPEG 2 & 4 Video Streams
    - SwRI questioned what kind of sizing bandwidth is used for this function – PBF's answer: 1.5 and 4 Megabits per second for MPEG 2 and MPEG 4, respectively
    - Dan claims PBF recommends MPEG 2; documentation will be updated to correct this if necessary
- Priority implications
  - Priority One – Regional TMC connections
  - Priority Two – Adjacent District RTMCs in Corridors
  - Priority Three – Statewide Connectivity
- Network topologies under development
  - Using an open source application used in academia: NS2
  - Pilot Project purpose was to share Daytona Devices for special events and demonstrate hybrid fiber/microwave connectivity

Item #4 – IP Video Codec

- The Camera Chameleon operation is not a solution; need to suggest a recommended encoder/decoder solution for the Districts
- To resolve District differences, need to accomplish statewide objective by providing a migration plan
- Walt explains that Districts will also need to trans-code data when not over MPEG 2 and MPEG 4, e.g. microwave

Item #5 – Video Stream with C2C

- SwRI suggests that "all" should not be used when discussing Barco's compatibility with encoders/decoders; instead specifically list the
- Bonds feels like there is a disconnect with the paper submitted by PBF: SwRI would like to see a blended version of this paper in the next 2 months

ACTION ITEMS

(NOTE: THESE WILL NOT BE TRACKED BY THE SUNGUIDE DEVELOPERS)

Number	Responsible	Text	Due Date
	PBF	Post C2C coordination documents to website, and/or distribute them via email	
	PBF/SwRI	Ensure recommendations are in sync with SunGuide development	
	PBF	Correct documentation to recommend MPEG 2 instead of MPEG 4	
	Dan Baxter	Write an blended issue document, building on SwRI's research on video codec compatibilty before a procurement is made (Steve and Walt will help in this effort)	Within the next 2 months