McCain’s Omni eX ATC

Corona’s Introduction to a New Traffic Controller

September 19th, 2013
Presentation Outline

- How Corona’s Traffic System Evolved
- Why The Omni eX ATC?
- What Can The Omni eX ATC Do?
- How Corona Assisted With Testing
- Where We Are Now
- What Will The Future Bring?
Corona’s Traffic System Evolution

- Corona’s strong focus on Transportation
- Intersected by SR–91 & I–15
- Caltrans 170 Infrastructure

- NEMA 390 Infrastructure

- No Communication

Our Old TMC →
Corona’s Traffic System Evolution

- The answer? The 2070!
- Not so much.
- Issues with the 2070
- 170 ATC – Coldfire

Our New TMC ->
Why Omni eX ATC Was Chosen

- BiTran’s DOS QuicNet
- QuicNet Can Send Commands to Caltrans
- GUI QuicNet Improvements
- McCain Support
- 2070 Too Bulky
McCain’s Omni eX ATC
What Can The Omni eX ATC Do?

- 16 Phases, Peds, Overlaps & Ped–Overlaps
- 4 Customizable Timing Rings
- 4 Timing Sets, 8 Customizable Preempts
- 128 Local Detectors, 32 System Detectors
- 64 Schedules, 64 Day Plans, 128 Actions
- 253 Coordination Patterns & 253 Split Tables
- Coordination Sync’d to Start or End of Green
- Built–In Timing Parameter Error Checking
- Customizable I/O Ports, 64 Logic Gates
What Can The Omni eX ATC Do?

- Built-In Logging for Operations, Alarms, Detector Data, Comm, MOEs
- NEMA Controller
  - 4 Ethernet Ports, 4 USB Ports, 3 Serial Ports
  - 16 Line Display, SDLC Port
- 2070 Controller
  - 4 Ethernet Ports, 2 USB Ports, Serial Ports via Comm Modules, 8 Line Display
- Industry Standard Communication Protocols
  - NTCIP – Transparity
  - AB3418E – QuicNet
- Special Event Programming – 4th of July
  - Exit Delays Cut In Half
How Corona Assisted With Testing

- Unlearn the 170 Coordination
- NTCIP 1202:2005
- NEMA Terminology
- Early Coordination & Preemption Issues
- Logging & Alert Features
- Communications
- Bench Testing
- Test Cabinet Testing
- Field Testing
- QuicNet Testing
Where We Are Today?

- 116 Omni eX ATC Controllers Deployed
- Final Firmware Upgrade Deployment
- Nearing the End of Beta Testing Transparity, McCain’s New ITS Central Control Software
  - Omni eX Integration
  - Legacy Support
  - Supports NTCIP ITS Elements
What’s Next?

- Complete Testing
- Live Arterial Status
  - Volume, Occupancy & Speed
- Detection Data Collection
  - 24/7 Turning Movement Counts
  - Seasonal Trend Identification
- Mobile Device Controller Status
  - Why did that light just turn red?
  - Live feedback during floating car coordination testing.
  - Mobile Phone Alerts
Thank you

Questions & Answers

Corona TMC Tour to Follow After the Meeting