PROCURING LOCAL CONTROLLER HARDWARE AND SOFTWARE

A MULTI-AGENCY APPROACH

Presented To:
2012 ITS TEXAS ANNUAL MEETING
Presentation Outline

- Participating Agencies
- Catalysts
- Expected Benefits
- Process
- Requirements
- Procurement
- Testing
- Status
- Next Steps
Agencies

City of Dallas

FORT WORTH

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Catalysts

- Transit signal priority requirements
- Similar systems
- Aging infrastructure
- Need for increased functionality
- Concurrent development of specifications
Expected Benefits

- Benefits of scale
- Ability to push the envelope
- Local users group
- Resource sharing
- Eliminate duplicate efforts
- Better product
Guiding Process

- Systems Engineering Process

![Diagram of the Systems Engineering Process](image-url)
Focused on local signalized intersection operation

Identified Needs

Developed Operational Scenarios
  ◦ Normal operations
  ◦ Complex operations
    • Traffic Responsive
    • Adaptive
  ◦ Multiple intersections
  ◦ Transit operations
  ◦ Preemption
Software

- Developed to meet functional needs described in the operational scenarios
- Defined detailed minimum and desirable requirements
- Comprehensive reviews
Requirements (con’t)

- Hardware
  - Based on ATC Standards
  - Required larger display CALTRANS Type 3D Display
  - Increased FLASH memory to 64Mbytes
  - Optional front panel USB Ports (min 2)
  - Replaced front panel serial port with Ethernet port
Governmental entities utilizing Inter-Governmental Contracts with the City of Fort Worth will be eligible, but not obligated, to purchase material/services under this contract(s) awarded as a result of this solicitation. All purchases by Governmental Entities other than the City of Fort Worth will be billed directly to that Governmental Entity and paid by that Governmental Entity. The City of Fort Worth will not be responsible for another Governmental Entity’s debts. Each Governmental Entity will order its own material/services as needed.
Procurement (con’t)

- Hardware and Software procured separately
  - Advertised approximately one month apart

- Software
  - Request for Proposal
  - 4 proposal received

- Hardware
  - Request to Bid
  - 2 bids received
Testing

- System Acceptance Tests

Did we build the system right?

- System Validation Tests

Did we build the right system?
Testing

- **Software**
  - Initial testing conducted at part of negotiation
    - Confirmed existing functionality
    - Defined roadmap for meeting minimum requirements
  - Future testing with every scheduled release
  - Final acceptance testing
  - Final validation testing

- **Hardware**
  - Sample units tested for compliance to specifications
Local Controller Software
- Negotiations complete
- Expect Council action in November/December 2012

Local Controller Hardware
- Council approved September 25, 2012
- Allows other agencies to move forward with purchase
Next Steps

- **Deployment**
  - Richardson – Spring 2013
  - Fort Worth – Summer/Fall 2013
  - Dallas – Fall 2013
  - TSP – 2014

- **Central System**
  - Requirements currently be developed
  - 4 cities now included in process
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