“Bringing maintenance and operations together in a rural setting”

Rural ITS Conference 2012

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QUESTION: Is it possible to predict when and where an accident will occur?
Presentation:

- Operations and Maintenance - coming together
- RWIS: updating application, new customers, influencers and expanded needs
- Influences that effect RWIS/Rural ITS expansion
- Funding “follow the money”
- Shareholders and customer needs from Rural ITS
- Managing and reporting-Example
- Answer the question; “predicting accidents”
- Conclusion
The Current State of RWIS Application

- Upgrade of RPU
- Non-invasive devices
- Addition of 360 degree HD cameras
- “End of life” replacements
- “Specialized RWIS Deployments”
- Localized detection and command/control
- Program expansion
- Portable Applications
- Interoperability with ITS Systems
Operations and Maintenance:
Defining a new partnership around RWIS and Rural ITS
Operations:
Bringing us together

- Operations: Manage deployment, integration, interoperability
- Operations: ITS Application oversight
- Operations: Deployment and system maintenance
- Operations: Funding facilitator
- Operations: Understanding new ITS applications that were hosed elsewhere
- Operations: Responsible in part for finding money
- Operations: Responsible for educating their internal staff
- Operations Responsible to their new customers
Maintenance: Shift in ownership

- Maintenance: Original RWIS application owner
- Maintenance: Original system purchaser
- Maintenance: Now; Main customer for RWIS (operations)
- Maintenance: Educate Operations on the application
- Maintenance: Work with Operations to expand system and application (RWIS)
- Maintenance: Understand how operations will use their information
- Maintenance: Partner with operations
RWIS How each one uses data:

**Operations:**
- Camera for verification
- Camera for Incident Management
- Pavement Condition for Traction
- Traction as impute into Traffic Control Devices
- Pavement Conditions/reporting
- Influence Trip Time (travel time)
- General Traveler Information (Example; 511)
- Overall ITS System

**Maintenance:**
- Traditional RWIS application
- Response to winter event
- Maintenance Decision Support
- Bridge Spray System (trigger)
- CLARUS impute
- Rural Transportation Systems
- Other Weather Systems
Influences that effect Rural ITS expansion

- Communication and power issues drive expense of deployment up
- Competition for dollars from other needs, lack of budgets, funding
- Cooperative effort from larger group that can benefit from an expanded application/user effort
- Limited number of shareholders vs. other options for that funding
- Island system vs. integrated approach
- Not knowing your customers and their needs
Follow the money-Funding

• Funding criteria is changing and criteria needs to benefit larger group
• Regional approach vs. single entity or application approach
• Simplified and focused response vs. complex and all inclusive
• Technology issues of MAP21
• Cooperation with funding source groups (COGs)
• Support and maintenance after deployment (costs)
• Think big
Example: Responding to a rural highway incident
Shareholders

• Emergency responders/first responders
• Local/state law enforcement
• Rural hospitals
• Transportation and Emergency Management
• Homeland Security (in some cases)
• Military, Indian and other jurisdictions if incident is in or adjacent to their areas.
• Traveling Public
• Media (radio, TV, paper, etc.)
• On-call general contractors as response teams
• Rural transit
• Other response teams as identified by need
Uniting Island Systems for all-purpose Command and Control

DN2K Technology Advantage

1. Field asset produces operational data and passes it to the DN2K Soft Gateway
2. DN2K Soft Gateways apply business rules and packages the data for transport via any network connection
3. Operations Center computer receives flows. Data streams are monitored 24x7 for data integrity and security
4. Software encrypts and stores files for access by system users via a secure internet or private line connection

DN2K Cloud

Vendor A
Vendor B
Vendor C
DN2K Network Operations Center (NOC)
Worldwide End Users
Question: Accident prediction?
Questions?