Clarus Initiative

Clarus Initiative Update

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Road Weather Management
Clarus Initiative

- *Clarus* is a system that assimilates, quality checks, and disseminates the nation’s road weather observations

- Initiative Objectives:
  - Design, develop and demonstrate these capabilities
  - Work with our public and private partners to develop and evaluate the value-added road weather information products that *Clarus* enables
  - Establish partnerships to move from demonstration to deployment of a nationwide network
The Process

Transportation Resources & System Status

Weather Forecast Models

Observing Systems

Decision Support Systems & Assessments

Management Decisions

Policy Decisions

Societal Benefits

Clarus Initiative

On-going feedback to optimize value and reduce gaps
Vision for Clarus

- Nationwide participation of all transportation agencies in Clarus
  - Consensus on dissemination and claimers
- Sustainable system functionality through transition to NOAA
- Implement a new generation of QCh algorithms
- Provide meaningful ESS network health summary for DOT administrators
- Anytime, Anywhere road weather information
Clarus Timeline

FY04 FY05 FY06 FY07 FY08 FY09

Track 1

Stakeholder Coordination

Track 2

System Design

Track 3

Multi-state Regional Demonstrations

Current
Clarus Proof of Concept

- Implementation of the requirements and design process
- Partnership with 3 Aurora states: Alaska, Minnesota, Utah
- Implementation – Spring 2006
- Demonstration – Summer 2006
Regional Demonstration Objectives

• Understand stakeholder needs through open discussions
• Recognize operational characteristics needed to support users
• Identify personnel and skills needed to use, operate, and maintain Clarus-related solutions
Regional Demonstrations

- Phase 1 - Concept of Operations by teams of transportation agencies. Propose new ideas for products and services
- Phase 2 – Connection Incentive Program. Incentivize DOTs to participate in the program
- Phase 3 – Potential implementation of concepts from Phase 1
Stakeholder Groups

- State Transportation Decision-Makers
- Weather Service Providers
- Travelers
- Non-Transportation State Decision Makers
- Non-Surface Transportation Weather Interests
- Research Community
Alaska - Canada Highway

Clarus Regional Demonstration

Alaska DOT
NWS Alaska Division
Environment Canada
Alberta Infrastructure and Transportation
British Columbia Ministry of Transportation
Yukon Department of Highways and Public Works

Road Weather Management
Clarus ConOps

• Phase 1 Review
  – Period of Performance ends 31 January 2008
  – Each team shall deliver a ConOps
  – Containing one or more concepts for implementation
  – Must use *Clarus* data to create new products, techniques, or services that benefit the transportation system managers and operators
  – The ConOps will be made available to the community via the *Clarus* Initiative web site
• FHWA shall review each ConOps
• Each ConOps will be evaluated on:
  – Strengths and weaknesses
  – Similarities with the other proposals
  – Probability of successful implementation
  – Potential business model
• FHWA reserves the right to keep, discard, or combine any or all of the concepts
Clarus ConOps Review

- Target data for RFP posting is Spring 2008
- Period of performance shall be 24 months
- Number of awards shall be a function of the number of concepts
- The project(s) shall be independently evaluated
Clarus and VII

- FHWA Road Weather Management is very interested in VII
  - Potential new sources of road weather information
  - May be able to add new detail for driving and road condition information
  - *Clarus* may be a repository for the new vehicle-based observations
Why You Should Join In

- **Metadata** - promotes standards for both operational and informational applications
- **Quality Checking** - real-time checks to address system performance and sensor reliability
- **Cross-jurisdictional data sharing** - value added traveler information and forecast products
- **Agency Integration** - build your weather program into agency operations and regional ITS architecture
Why You Should Join In

- Refined and new quality checking algorithms - get a place at the table
- Climate range & extremes established - alerts when new extremes met
- Aurora research projects to integrate with Clarus System output
- Multi-modal connection
- Power of multi-state/province queries
- $$$$$$