

CLARUS and Work Zone

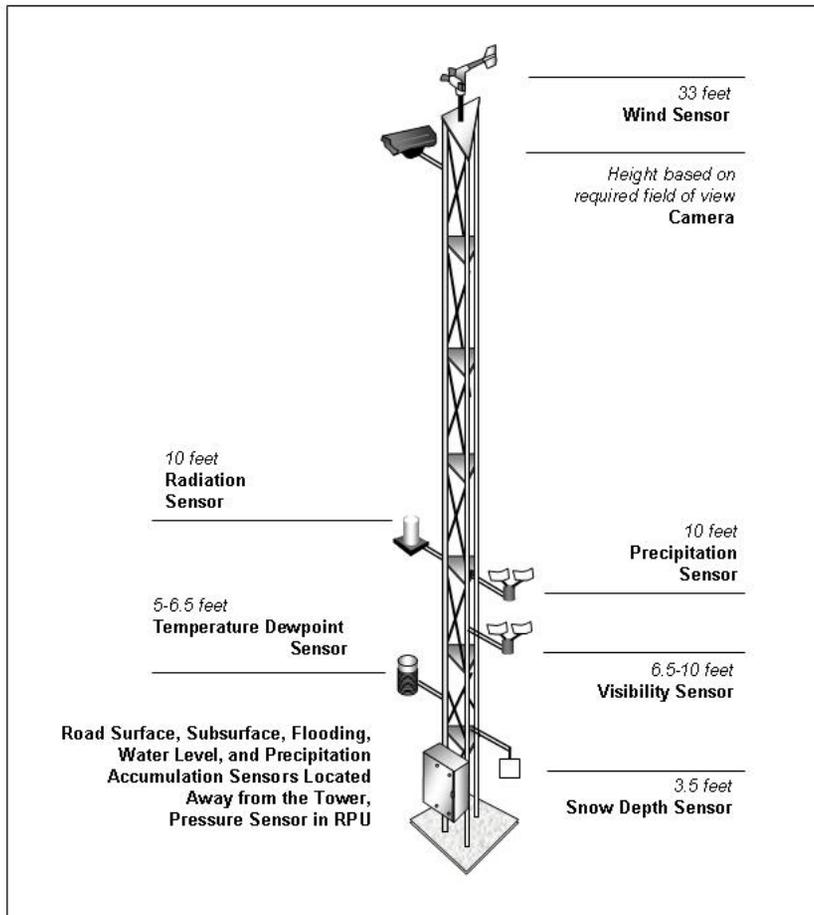
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The *Clarus* Initiative

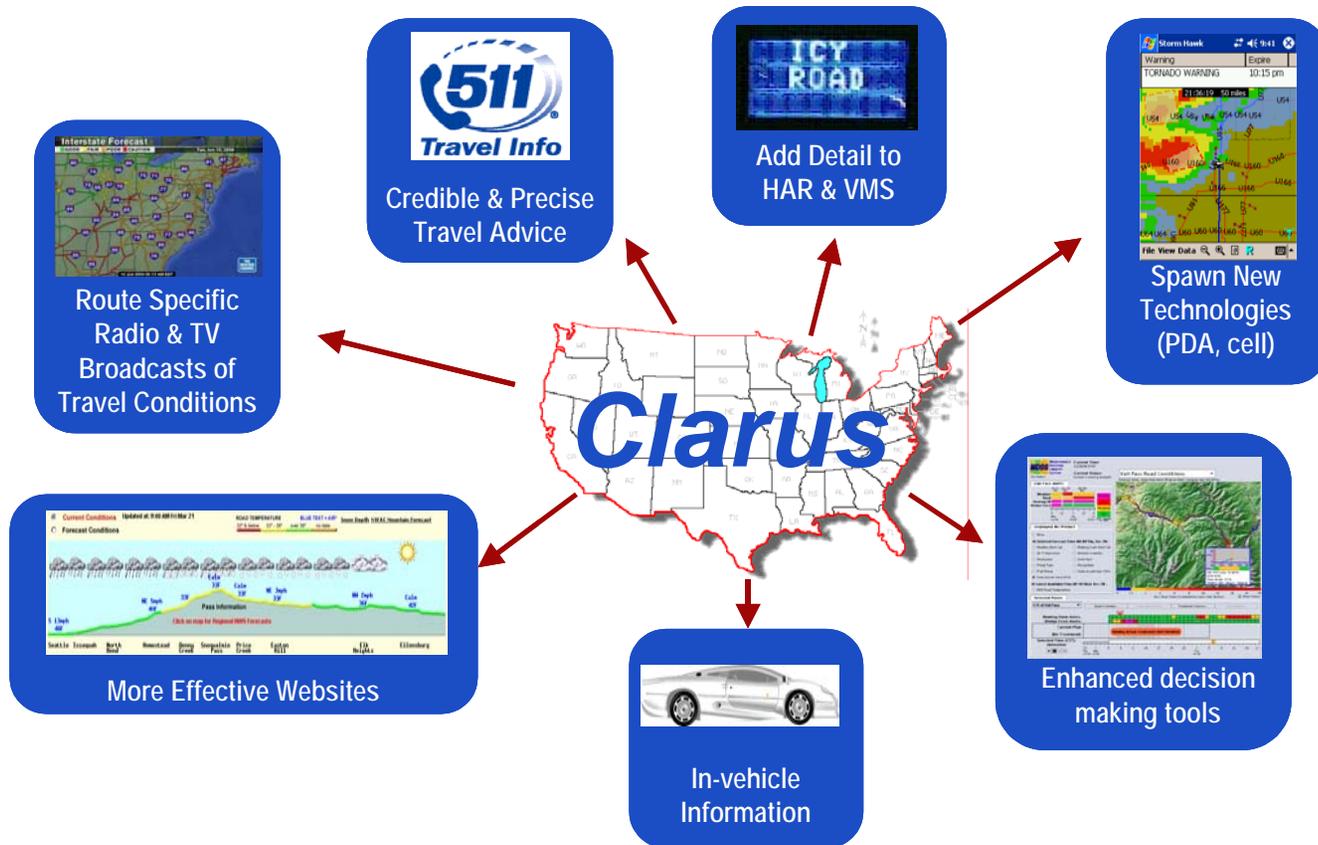
- Clarus (which is Latin for “clear”) is a USDOT initiative to demonstrate and evaluate the value of “Anytime, Anywhere Road Weather Information” that is provided by both **public agencies and the private weather enterprise** to the breadth of transportation users and operators.

Environmental Sensor Station (ESS) for Surface Transportation



- Began to be deployed in the 1970's
- Initial usage was to support winter maintenance
- Can be used to measure atmospheric, pavement and subsurface conditions

Clarus enhanced technologies



Clarus Connection Map (as of March 2008)

Participation Status in *Clarus*
as of 31 March 2008



- Connected to Clarus
- Partially Connected*
- Pending Connection
- Considering Connection
- Participated in Stakeholder Meetings

*Not shown: Alberta,
British Columbia & Yukon

New FHWA Initiative

- Purpose
 - Explore possibilities of using sensor data from commercial vehicles for weather observations
- Objectives
 - Determine utility of sensor data
 - Determine practicality of larger project
 - Engage the greater weather research community

Smart Roadside and Weather

- Assist with platform to gather sensor data as well as provide truckers timely weather data

Work Zones & Delay

- Traffic Jams
 - Lose 3.7 billion hours of productive time
 - Use 2.3 billion gallons of fuel
- Work zones contribute
 - 24% of the delay
 - 482 million hours of lost productive time

Smart Work Zones

- ITS technologies to manage traffic and mitigate impacts of lane closures etc.
- Survey showed 50-85% changed route of travel in response to advance information
- Queue lengths can be reduced 55-60%
- System wide reductions in delay were noted up to 75%

Automated Work Zone Information System (AWIS)

- AWIS
 - Provides real time information to travelers
 - Encourages diversion to less congested alternate routes
 - Posts info on dynamic message sign
 - Data collected and evaluated
 - Speed data and current travel times
- Performance
 - Average daily traffic reduced in work zone 19%
 - Average daily traffic reduced on alternate routes 15%

AWIS Examples

- California
- Illinois
- Michigan
- New Mexico
- Arkansas
- New Hampshire
- Washington, DC
- Minnesota

Smart Roadside and Workzone

- Foundation in place to communicate to truckers in route