WHERE WE WERE IN 2009.....

- 50 miles in the Charlotte area
- 40 miles in the Raleigh area
- 100 miles on I-95

- 190 miles / 1100 miles = 17% covered
WHERE WE NEED TO BE.....

• ALL INTERSTATES

• 1100 miles of coverage
WHY WE NEED MORE.....

• SECTION 1201 -
  Real-Time System Management Information Program –
  ➢ Within 10 min in Metropolitan Areas
  ➢ Within 20 min in Rural Areas

• CUSTOMERS EXPECTATIONS
  • Our customers expect to have information now.
  • We continually get requests to provide more data on our roadways.

• PERFORMANCE MEASURES

• BETTER MANAGEMENT OF OUR ROADWAYS
HOW WE USE THE DATA.....

- Incident Detection
- Travel Information
  - Website
  - 511
  - DMS
- Route/Corridor Management
- Event and Emergency Management
- Planning
INCIDENT DETECTION

• Detect in areas we don’t have or have gaps in ITS coverage

VERIFY:
• Dispatch IMAP
• Communicate with Law Enforcement
TRAVEL INFORMATION

MIN TO 40/EXIT 306
US 70
US 70 BUS
14-16
26-30

Travel Information Management System

Get real-time information on events that cause severe and unusual congestion on NCDOT maintained roadways in North Carolina by clicking a region icon on the map or by choosing a region, route or county from the drop down list below.

Select by Region:  
Route:  
County:  

Download all Active Incidents into Excel  

© Copyright NCDOT 2007  NCDOT Home  NC.gov  www.ncdot.org
Traffic Congestion

Traffic congestion, average speed of 40 mph on I-40 EB between RALEIGH CHAPEL HILL EXPY/EXIT 289 and NC-54/EXIT 290.
Virtual Message Sign Approach

- Emulates a DMS sign in a voice “report”
  “Travel time on I-95 North from exit 27 to exit 42, 15 minutes”

- Must get input from the caller (Route, Direction and Milemarker)
- Plays the travel time to the next three exits
Next Steps?

• Get feedback from end users and modify if necessary

Flexibility of System

• Playback report is “tunable” and can be modified based on feedback
• Can change what we deliver to customer
• Can change how we deliver to customer

Providing information to callers that are routed to the Statewide Transportation Operations Center from 511
## TRAVEL INFORMATION - DMS

### Table

<table>
<thead>
<tr>
<th>Link</th>
<th>Link Description</th>
<th>Travel Time</th>
<th>Update Time</th>
<th>Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>I-40 WB, MM 28 to TN line MM28 &lt;-&gt; TN Line</td>
<td>24.57</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>5</td>
<td>I-40 WB, mm 21.5 to TN line MM21.5 &lt;-&gt; TN Line</td>
<td>16.38</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>6</td>
<td>I-40 EB, TN line to Exit 27 TN Line &lt;-&gt; Exit 27</td>
<td>25.28</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>7</td>
<td>I-40 EB, mm 28 to Exit 33 MM28 &lt;-&gt; Exit 33</td>
<td>4.97</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>9</td>
<td>I-40 EB, mm 40.5 to mm 46 MM40.5 &lt;-&gt; MM46</td>
<td>5.42</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>10</td>
<td>I-77 SB from mm 22 to mm 14 MM22 &lt;-&gt; MM14</td>
<td>8.15</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>11</td>
<td>I-77 NB, mm 0 to mm 14 MM0 &lt;-&gt; MM14</td>
<td>14.99</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
<tr>
<td>12</td>
<td>I-85 SB, mm 52 to mm 39 MM52 &lt;-&gt; MM39</td>
<td>13.65</td>
<td>01/06 15:41:31</td>
<td>Segments</td>
</tr>
<tr>
<td>13</td>
<td>I-85 NB, mm 28 to mm 39 MM28 &lt;-&gt; MM39</td>
<td>9.50</td>
<td>01/06 15:41:31</td>
<td>Segments</td>
</tr>
<tr>
<td>14</td>
<td>I-77 SB, mm 12 to mm 0 MM12 &lt;-&gt; MM0</td>
<td>10.99</td>
<td>01/06 15:40:02</td>
<td>Segments</td>
</tr>
</tbody>
</table>

### Constituent Segments for Link: I-40 WB, MM 28 to TN line

<table>
<thead>
<tr>
<th>Segment</th>
<th>Length</th>
<th>Speed</th>
<th>Travel Time</th>
<th>Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>125-05294 EXIT 27 Mile 30.90 to Mile 27.70</td>
<td>3.19 miles 72% factor</td>
<td>64</td>
<td>2.16 minutes 72% of 2.99 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125N05294 EXIT 27 Mile 27.70 to Mile 27.30</td>
<td>0.41 miles 100% factor</td>
<td>63</td>
<td>0.39 minutes 100% of 0.39 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125-05293 NC-209/EXIT 24 Mile 27.30 to Mile 24.26</td>
<td>3.02 miles 100% factor</td>
<td>63</td>
<td>2.88 minutes 100% of 2.88 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125N05293 NC-209/EXIT 24 Mile 24.26 to Mile 23.80</td>
<td>0.48 miles 100% factor</td>
<td>62</td>
<td>0.46 minutes 100% of 0.46 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125-05292 US-276/EXIT 26 Mile 23.80 to Mile 20.30</td>
<td>3.50 miles 100% factor</td>
<td>60</td>
<td>3.50 minutes 100% of 3.50 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125N05292 US-276/EXIT 26 Mile 20.30 to Mile 20.04</td>
<td>0.27 miles 100% factor</td>
<td>58</td>
<td>0.28 minutes 100% of 0.28 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125-05291 FINEG CREEK RD/EXIT 15 Mile 20.04 to Mile 14.00</td>
<td>5.16 miles 100% factor</td>
<td>53</td>
<td>5.84 minutes 100% of 5.84 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125N05291 FINEG CREEK RD/EXIT 15 Mile 14.88 to Mile 14.56</td>
<td>0.32 miles 100% factor</td>
<td>53</td>
<td>0.36 minutes 100% of 0.36 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125-05290 HARMON DEN RD/EXIT 7 Mile 14.56 to Mile 6.79</td>
<td>7.77 miles 100% factor</td>
<td>50</td>
<td>9.33 minutes 100% of 9.33 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125N05290 HARMON DEN RD/EXIT 7 Mile 6.79 to Mile 5.40</td>
<td>0.31 miles 100% factor</td>
<td>47</td>
<td>0.40 minutes 100% of 0.40 min</td>
<td>01/06 15:40:02</td>
</tr>
<tr>
<td>125-05289 NC-TN STATE BORDER Mile 6.49 to Mile 0.00</td>
<td>6.49 miles 100% factor</td>
<td>0</td>
<td>-1.00 minutes 100% of -1.00 min</td>
<td>01/06 15:40:02</td>
</tr>
</tbody>
</table>
TRAVEL INFORMATION
WHAT’S NEXT???

• WEB
  – Show speeds on segments when they drop below a certain threshold

• NC 511
  – Web based subscription component for commuters?
    o Coming with the New NC 511 RFP award
  – Origin/Destination Travel Times

• DMS
  – Automated Travel Times
I-85 CONSTRUCTION IN GRANVILLE AND VANCE COUNTIES
Delays Expected; Motorists Encouraged to Use Alternate Route Below

AREA OF I-85 UNDER CONSTRUCTION (BETWEEN MILE MARKERS 210 AND 214)
PRIMARY ALTERNATE ROUTE FOR NORTHBOUND AND SOUTHBOUND I-85
MAP NOT DRAWN TO SCALE

* PRIMARY ALTERNATE ROUTE IS 45 MILES LONGER, BUT WILL HELP AVOID THE HEAVY TRAVEL DELAYS EXPECTED, ESPECIALLY ON THURSDAY, NOV. 28 AND SUNDAY, NOV. 30. *
EVENT AND EVACUATION MANAGEMENT

- Weather Events
- Inauguration
- etc....

Revised North Carolina Hurricane Evacuation Routes
OTHER BENEFITS.....

IMPROVED COMMUNICATION AND COORDINATION

• NCSHP
• Law Enforcement
• Emergency Responders
• Municipalities
• Other States
• NCDOT
Other Data Use Applications

- Utilize the data for NCDOT’s Dashboard

Incident Duration

Making our transportation network move people and goods more efficiently: This is defined as the average time it takes to clear a major accident (i.e. one that causes significant or unusual delays) from a North Carolina highway. The gauge is accompanied by performance information for Highways, Rail, Ferry and Public Transportation.

Click here for additional performance information

Our mission is connecting people and places in North Carolina — safely and efficiently, with accountability and environmental sensitivity.
Other Data Use Applications

• Performance Measures
  • Actual Travel Time for a specific link
  • Travel Time Index –
    NCDOT will use the Speed Limit instead of free flow speed;
    This gives a fixed level of base performance that
    has a fixed reference point and is repeatable
• Extent of Congestion

• Planning Department may utilize the VP data
North Carolina’s Application of the INRIX data

QUESTIONS ????

Jo Ann Oerter
State ITS Operations Engineer
NCDOT
joerter@ncdot.gov
919-771-2520