Rocky Mountain National Park (ROMO) Pilot Intelligent Transportation System

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Overview

• Background
  – Congestion at Bear Lake, Visitation, Existing shuttles

• For what can an intelligent transportation system (ITS) be used?

• Has ITS been used in other National Parks?

• The Partnership

• ROMO ITS Setup

• Goals for ROMO ITS

• Evaluation Overview
Congestion at Bear Lake

2010 Recreational Visits

- January: 100,000
- February: 200,000
- March: 300,000
- April: 400,000
- May: 200,000
- June: 600,000
- July: 800,000
- August: 300,000
- September: 400,000
- October: 200,000
- November: 100,000
- December: 300,000
Visitation

- About 3 million annual visitors\(^1\)
- Most visited National Park in Colorado\(^2\)
- Estes Park is the gateway community for ROMO on the east side
- About 40% of visitors are from the “front range”\(^3\)
ROMO Shuttles

- Hiker Shuttle
- Bear Lake Route
Estes Park Shuttles

- Shopper Shuttles
  - Blue
  - Red
- Campground Shuttle
  - Brown
- The Fairground Connector (new)
For what can an intelligent transportation system (ITS) be used?

- Dissemination of visual and/or audio information
- Advise motorists of hazardous traffic conditions
- Construction information
- Route diversion
- General park information
- Parking information
- Shuttle bus service information
- Mode shifting
Has ITS been used in other National Parks?

- Intelligent Transportation Systems in the NPS: 2005 Baseline Inventory and Preliminary Program Assessment (Volpe)
- Highway Advisory Radio (HAR)
  - Yellowstone, Bryce Canyon, Shenandoah, and Great Smoky Mountains NP
- Dynamic Message Signs (DMS) & HAR Combination
  - Grand Canyon National Park
  - Golden Gate National Recreation Area
- 511
  - Yellowstone and Glacier National Park
The Partnership

- Rocky Mountain National Park (ROMO)
- Town of Estes Park
- Colorado Department of Transportation (CDOT)
- Central Federal Lands Highway Division (CFLHD)
- Western Transportation Institute (WTI)
- Paul S. Sarbanes Transit in Park Technical Assistance Center (TAC)
ROMO ITS Setup

4,6,7
Goals for ROMO ITS (1)

1) Mode shift a visitor’s access to the park from private vehicles to a shuttle bus
2) Quantify the reduction in air pollution as a result of the mode shift
3) Intercept visitors east of their arrival to the Town of Estes Park
4) Peak spread the arrival of vehicles and people into Rocky Mountain National Park
Goals for ROMO ITS (2)

5) Improve the visitor experience through better dissemination of traveler information

6) Successfully collaborate with the Town of Estes Park, CDOT and CFLHD

7) Introduce ROMO to ITS

8) Keep the operations and maintenance of the DMS and HAR simple

9) Analyze to determine differences between localized and regional ITS configuration
ROMO ITS Setup

4, 6, 7
Evaluation Overview

• Data
  – Counts
    • Ridership
    • Traffic
    • Entrance
  – Surveys
    • User
    • Stakeholder
  – Frequency and Type of DMS&HAR Messages Used
Questions?

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References


3) 12/14/2010 Conference call


6) Photo taken from Grand Canyon National Park Pilot Shuttle Visitor Information System presentation

7) Photo courtesy of Vaisala


9) Photo courtesy of Central Federal Lands Highway Division

10) NPS Stats: http://www.nature.nps.gov/stats/viewReport.cfm
### Operational Schedule

- **July 15, 2011 through September 5, 2011**

#### Schedule Details:

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAR devices installed</td>
<td>1-15</td>
</tr>
<tr>
<td>Shuttle operations begin</td>
<td>16</td>
</tr>
<tr>
<td>CDOT DMS installed</td>
<td>17-24</td>
</tr>
<tr>
<td>Vendor DMS installed</td>
<td>25</td>
</tr>
<tr>
<td>Full ITS operations begin</td>
<td>26-30</td>
</tr>
<tr>
<td>CDOT DMS removed, ITS turned off</td>
<td>1-5</td>
</tr>
<tr>
<td>Partial ITS turned on (Location 2 &amp; 3)</td>
<td>6</td>
</tr>
<tr>
<td>CDOT DMS returned (ITS partial operations)</td>
<td>7-13</td>
</tr>
<tr>
<td>Full ITS operations</td>
<td>14</td>
</tr>
<tr>
<td>No ITS, all DMS removed</td>
<td>15</td>
</tr>
<tr>
<td>HAR devices removed</td>
<td>16-30</td>
</tr>
</tbody>
</table>

#### Months:

- **June**: 1-15, 16, 17-24, 25, 26-30, 1-5, 6, 7-13, 14, 15, 16-31
- **July**: 1-13, 14, 15-22, 23, 24-30, 31, 1, 2-5, 6, 7-14, 15, 16-30
- **August**:
- **September**: