Coming up....

- **Bad Clouds** – Sinclair Stolle
  - Christmas 2012 storm
  - How did we succeed?

- **Good Clouds** – Mike Haas
  - Pooling efforts for success
  - Cloud hosting 511
'Twas the week before Christmas and storms were brewing out west.... Only to arrive in Iowa during rush hour, during one of the heaviest travel days before Christmas.
The Storm…

- Rain, sleet, slushy snow, temps dropped, froze everything
- Winds picked up (50-60mph) = blizzard and snapped trees and power lines
- Dropped over 1' of snow over most of Iowa
- Closed parts of I-29 and I-35 with Interstate closure gates

Map Valid: Snowfall totals up until 8 AM 21 Dec 2012

Iowa Environmental Mesonet
Map Generated 21 Dec 2012 7:35 AM
Were people going to 511?

- ABSOLUTELY!

December 18-21, 2012
4 days

<table>
<thead>
<tr>
<th></th>
<th>Peak (day)</th>
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</thead>
<tbody>
<tr>
<td>511 Web Visits</td>
<td>929,440</td>
</tr>
<tr>
<td># of Calls</td>
<td>46,506</td>
</tr>
<tr>
<td>Mobile App Downloads</td>
<td>7,189</td>
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<tr>
<td># of Calls</td>
<td>21,525</td>
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<tr>
<td>Mobile App Downloads</td>
<td>2,534</td>
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<td>Twitter (New followers)</td>
<td>287</td>
</tr>
<tr>
<td>Facebook (New Likes)</td>
<td>1,168</td>
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</tbody>
</table>

- 2 days with over 400,000 hits to websites
- Promoted heavily through press releases and social media.
The rest of winter....

- Had several significant storms, but none as big as the Christmas storm.
The rest of winter....
How did we succeed?

- On the DOT side....
  - Communication
  - Monitoring system
- On the Vendor side...
  - Mike will talk about this
CARS Program and Technology Features

BLIZZARD THROUGH THU NIGHT

Snow (Inches)

12-18
6-12
3-6
1-3

Traveler Information
CARS Program and Technology Features

BLIZZARD THROUGH THU NIGHT

Snow (Inches)
12-18
6-12
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1-3

Traveler Information
CARS Pooled Fund Program

- Started by Castle Rock in 1998 as a public/private partnership with 4 states

- Jointly developed and maintained software

- Maintenance Update Program

- Shared Operations and Maintenance
Value of Cloud Computing
Multi-center hosting environment
  - 4 Web hosting centers
  - 8 IVR hosting centers

100% virtualized
  - Automated resource scaling

Multiple Tiers of 24/7 Email & Phone Support
Automated Resource Scaling

1. Monitor Utilization
2. Countdown Timer Expiration
   - Above Threshold?
     - Yes → Turn On Reserve VMs → Reset Countdown Timer
     - No → Are Reserve VMs Active?
       - Yes → Reset Countdown Timer
       - No → Do Nothing
3. Are Reserve VMs Active?
   - No → Are Reserve VMs Active?
     - Yes → Below Threshold for Over 6 hrs?
       - No → Reset Countdown Timer
       - Yes → Deactivate Reserve VMs
     - No → Do Nothing
Contact Information

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