NTOC Briefing

Real-Time System Management Information Program

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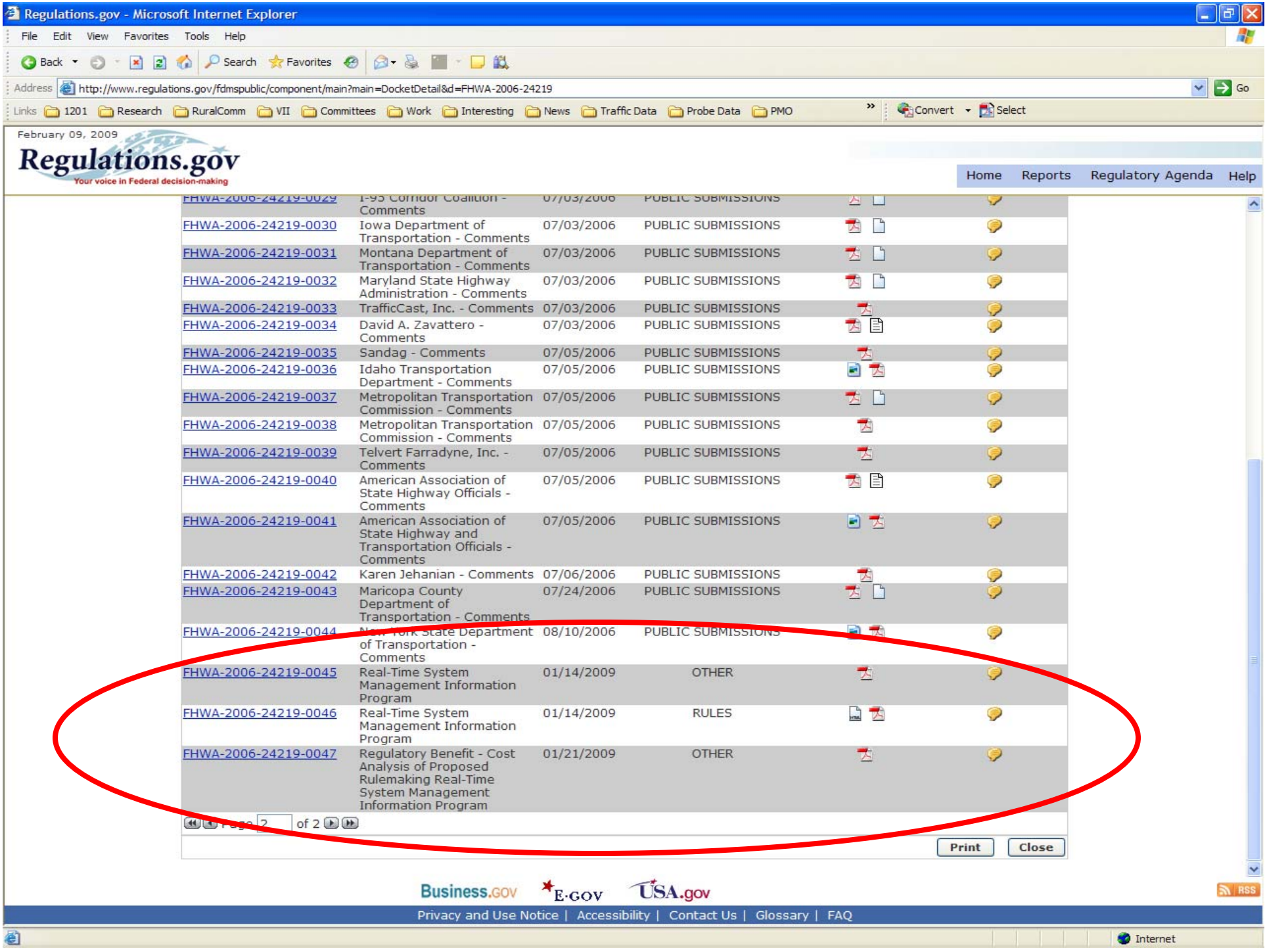
Innovation for a Nation on the Move

U.S. Department of Transportation
Research and Innovative Technology Administration

Purpose of Briefing

- General understanding of the Real-Time System Management Information Program
- General understanding of the Regulatory Benefit-Cost Analysis
- Next Steps / Actions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FHWA-2006-24219-0041 American Association of State Highway and Transportation Officials - Comments 07/05/2006 PUBLIC SUBMISSIONS
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FHWA-2006-24219-0043 Maricopa County Department of Transportation - Comments 07/24/2006 PUBLIC SUBMISSIONS
FHWA-2006-24219-0044 New York State Department of Transportation - Comments 08/10/2006 PUBLIC SUBMISSIONS
FHWA-2006-24219-0045 Real-Time System Management Information Program 01/14/2009 OTHER
FHWA-2006-24219-0046 Real-Time System Management Information Program 01/14/2009 RULES
FHWA-2006-24219-0047 Regulatory Benefit - Cost Analysis of Proposed Rulemaking Real-Time System Management Information Program 01/21/2009 OTHER
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SAFETEA-LU, Subtitle B, Section 1201

Real-Time System Management Information Program

- Establish a real-time system management information program in all States
- Capable of monitoring, in real-time, the traffic and travel conditions of the major highways
- Capable of sharing real-time information to address congestion problems and to facilitate national & regional highway traveler information.
- As regional ITS architectures are developed / updated, they will explicitly address real-time highway & transit information needs and the systems needed to meet such needs.

About the Proposed Rule

- Technology neutral
- Approach neutral
- Encouraged partnership with the private sector

- Focus on program characteristics

Characteristics of Traffic and Travel Conditions Information

Category of Information	Timeliness for Delivery		Availability	Accuracy
	Metropolitan Areas	Non-Metropolitan Areas		
Construction activities: implementing or removing lane closures	10 minutes	20 minutes	90 percent	85 percent
Roadway or lane blocking traffic incident information	10 minutes	20 minutes	90 percent	85 percent
Roadway weather observation updates	20 minutes	20 minutes	90 percent	85 percent
Travel time along highway segments	10 minutes	NA	90 percent	85 percent

Proposed Time for Compliance

- Two-stage deployment
- All Interstate highways within 2 years of Final Rule
- State-selected highways within 4 years of Final Rule
  - Emphasis on diversion and evacuation routes

Metro areas over 1 million people

1	New York-Northern New Jersey-Long Island, NY-NJ-PA	18,323,002
2	Los Angeles-Long Beach-Santa Ana, CA	12,365,627
3	Chicago-Naperville-Joliet, IL-IN-WI	9,098,316
4	Philadelphia-Camden-Wilmington, PA-NJ-DE	5,687,147
5	Dallas-Fort Worth-Arlington, TX	5,161,544
6	Miami-Fort Lauderdale-Miami Beach, FL	5,007,564
7	Washington-Arlington-Alexandria, DC-VA-MD	4,796,183
8	Houston-Baytown-Sugar Land, TX	4,715,407
9	Detroit-Warren-Livonia, MI	4,452,557
10	Boston-Cambridge-Quincy, MA-NH	4,391,344
11	Atlanta-Sandy Springs-Marietta, GA	4,247,981
12	San Francisco-Oakland-Fremont, CA	4,123,740
13	Riverside-San Bernardino-Ontario, CA	3,254,821
14	Phoenix-Mesa-Scottsdale, AZ	3,251,876
15	Seattle-Tacoma-Bellevue, WA	3,043,878
16	Minneapolis-St. Paul-Bloomington, MN-WI	2,968,806
17	San Diego-Carlsbad-San Marcos, CA	2,813,833
18	St. Louis, MO-IL	2,698,687
19	Baltimore-Towson, MD	2,552,994
20	Pittsburgh, PA	2,431,087
21	Tampa-St. Petersburg-Clearwater, FL	2,395,997
22	Denver-Aurora, CO	2,179,240
23	Cleveland-Elyria-Mentor, OH	2,148,143
24	Cincinnati-Middletown, OH-KY-IN	2,009,632
25	Portland-Vancouver-Beaverton, OR-WA	1,927,881
26	Kansas City, MO-KS	1,836,038
27	Sacramento--Arden-Arcade--Roseville, CA	1,796,857
28	San Jose-Sunnyvale-Santa Clara, CA	1,735,819
29	San Antonio, TX	1,711,703
30	Orlando, FL	1,644,561
31	Columbus, OH	1,612,694
32	Providence-New Bedford-Fall River, RI-MA	1,582,997
33	Virginia Beach-Norfolk-Newport News, VA-NC	1,576,370
34	Indianapolis, IN	1,525,104
35	Milwaukee-Waukesha-West Allis, WI	1,500,741
36	Las Vegas-Paradise, NV	1,375,765
37	Charlotte-Gastonia-Concord, NC-SC	1,330,448
38	New Orleans-Metairie-Kenner, LA	1,316,510
39	Nashville-Davidson--Murfreesboro, TN	1,311,789
40	Austin-Round Rock, TX	1,249,763
41	Memphis, TN-MS-AR	1,205,204
42	Buffalo-Niagara Falls, NY	1,170,111
43	Louisville, KY-IN	1,161,975
44	Hartford-West Hartford-East Hartford, CT	1,148,618
45	Jacksonville, FL	1,122,750
46	Richmond, VA	1,096,957
47	Oklahoma City, OK	1,095,421
48	Birmingham-Hoover, AL	1,052,238
49	Rochester, NY	1,037,831

http://www.census.gov/population/www/cen2000/phc-t29.html

Structure of the NPRM

- A Brief Description of the Proposed Rule
- Background
- May 2006 Request for Information
- Transportation System Operations Enhancements Enabled by the Proposed Rule
- Section-by-Section Discussion
- Rulemaking Analyses and Notices
- Proposed Regulatory Language

Proposed Regulation

- Purpose.
- Policy.
- Definitions.
- Eligibility for Federal Funding.
- Provisions for traffic and travel conditions reporting.
- Real-time information program establishment.
- Metropolitan area real-time information program supplement.
- Program administration.

Regulatory Benefit Cost Analysis

- Required of all significant rules
- Extensive review with OST
- Estimates capital, operating and maintenance costs
- Establishes a Net Present Value applying accounting techniques of OMB Circular A-94

Basis of the RBCA

- Atlanta NaviGAtor analysis
  - Provided a detailed benefit cost analysis based on delay reduction from the system
- Results extrapolated to estimate capital and operating costs
  - "Low cost" cities that have 511 and 80% monitoring
  - "Medium cost" cities that have limited 511 and 50-80% monitoring
  - "High cost" cities that have monitoring on less than 50% monitoring

A Few Good Measures

ITS Program Area Goals	Benefit Measures	Quantitative	Qualitative	Not Included In Study
Mobility	• Reduction in travel time and delay • Reduction in travel time variation	√		√
Safety	• Reduction of crash rate		√	
Capacity/Throughput	• Increase in throughput			√
Customer Satisfaction	• Level of Service • Survey responses		√	√
Energy and Environment	• Reduction in emissions • Reduction in fuel consumption	√ √		
Productivity/Cost Savings	• Money Saved due to delay reduction • Money Saved due to secondary crash reduction • Money Saved due to emission reduction • Money Saved due to fuel consumption reduction • Money Saved due to motorist assistance	√ √ √ √ √		

http://www.ops.fhwa.dot.gov/travelinfo/gdotbenefit/index.htm

Net Present Value of traveler information

- Traveler information, coupled with a response mechanism, yields a high BC ratio (24.7) with an NPV of nearly $29 Billion
- Assuming only traveler information with no response mechanism
  - 1/3 delay reduction attributed only to traveler information: BC is 8.2, NPV is $8.8 Billion
  - 1/10 delay reduction attributed only to traveler information: BC is 2.5, NPV is $1.8 Billion

Next Steps / Actions

- **All comments on NPRM and RBCA due on or before April 14, 2009**
- Final rule development
  - Based on comments received
  - Revised regulatory analysis
  - Aligned with DOT programs
  - Possible release in late CY 2009

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- http://www.ops.fhwa.dot.gov/travelinfo/about/rtsmip.htm