

Breakout Session 3

Group D

Getting to the INFOstructure

Order of Discussion

- Initial group comments (around room)
- A definition of INFOstructure to help focus our discussion
- Overall Barriers
- Ownership/Leadership
- Policy Changes/Implications
- Implications of Differing Data Collection Activities
- Privacy/Security/Liability Implications
- National Architecture Implications
- What Next?

Initial Group Comments

- The INFOstructure is a tool to enhance emergency response
- Much of the INFOstructure is already provided by the national ITS architecture
 - Focus needs to be on rapid deployment of solutions
- We don't really know how well the "system" is performing
- Need to incorporate the perspectives of mid-level stakeholders
- 33 states have ITS programs but only 13 states use data generated by it for planning purposes, because (they believe):
 - Data is poor quality, or
 - Data is hard to obtain

Initial Group Comments (2)

- Need to update the INFOstructure in Japan. Currently only have loop/pulse data, which is not sufficient for traveler information and advanced applications
- Our preconceptions have changed:
 - Caltrans isn't necessarily as backward as previously thought (actually, way ahead of everybody else)
 - Security is a key element
 - People are beginning to see a “win-win” notion about sharing data
 - “Unintended consequences” are that people are beginning to realize the myriad ways they can use the data
- Adoption is a key issue and is often based on prejudices that may not be rooted in reality

Initial Group Comments (3)

- Sharing data across borders (Canada, Mexico) is key, and different departments (Customs, Immigration) may have different approaches
- Are potential users (agencies) of advanced data ready to accept it?
- In Germany, INFOstructure-type programs are usually led by the car companies, not the government. Need an INFOstructure for a new application to reduce roadway fatalities (using DSRC)

A Definition of the Infostructure

- INFOstructure will enhance..
 - System performance
 - Safety
 - Security
 - Customer Satisfaction
- Themes
 - Operations
 - Real-time info to customers (amended to: whatever they need, not necessarily only real-time)
 - Planning
 - Security

Overall Barriers

- What stands in the way of this program?
 - Money is always the limiting factor
 - A lack of clarity is standing in the way
 - May be opposing group (roadbuilders) competing for a fixed amount of funds
 - Commitment on the part of the people who have the resources (e.g., maintenance depts.)
 - A lot of telecom resources are available, but we need a clearer picture of what it (INFOstructure) is.
 - Privacy concerns: As you increase detectorization, people (e.g., ACLU) will be more concerned that their privacy is being invaded

Overall Barriers (2)

- Institutional issues when spanning jurisdictions
 - I95 Corridor example as a success story
 - Federal-State collaboration could be an opportunity
- Lack of truly available ITS standards (e.g., NTCIP)
 - Which specific standards are key to the INFOstructure?
(Again requires clarity about what the INFOstructure is)
- We're not taking full advantage of currently available technologies (e.g., tolltags)
- Emergency priority routes end at the state line; the INFOstructure could help solve that (or take a step in the right direction)
- Recognize that INFOstructure is bigger than just transportation (MIS, others)

Overall Barriers (3)

- Waiting on FCC rules to allow multiple applications to utilize 5.85 GHz
- Auto industry needs to be a stronger partner with the DOTs

Ownership / Leadership

- Who is motivated to do what it takes to make the INFOstructure happen?
 - Depends on who you're talking to and what scenario you're talking about.
 - Hard to answer this question when we don't know where the INFOstructure stops (signal timings?)
 - INFOstructure may be the “core” information element, but that's not sexy to the public, policymakers, etc.
 - May need one initial champion to show folks what can be done with the data
 - Caltrans' Director is interested in enhancing operational efficiency and the INFOstructure will be a key element
 - The whole structure of AASHTO is changing to reflect concern with operational efficiency

Ownership / Leadership (2)

- Perhaps homeland security should be the first user of the INFOstructure (best strategy)
 - A lot of money (\$5B) has been set aside for border security

Policy Changes

- What policy changes are needed to make the INFOstructure succeed?
- OneDOT™ – need to own the INFOstructure policy to solve/look at travel from state to state.
- At FHWA
 - Don't repeat the consistency issues we currently have with AADT (annualized average daily traffic)
- State Policies
 - What should be public, what should be private?
 - When the data becomes available and new applications emerge, there could be legal challenges about who owns the technology (example: California lawsuit about route guidance)

Policy Changes (2)

- General
 - Policies should ensure that data is accurate and reliable
 - Policy that information can be shared nationally
 - The DOT should develop a strategy to work with the Homeland Security Office and the auto industry
 - Recognize that DOT roles have changed
- Academia-DOT partnerships have a lot of potential.
 - Fund through foundations?
- Policy change so that countries will work together to share information (specifically Canada and Mexico)
- Partnerships between DOTs and the cellular industry
- Use public rights-of-way to pump data into vehicles (potential partnership)

Implications of Differing Data Collection Activities

- Infrastructure vs vehicle?
 - Change in mindset required to share information originally captured for a specific application
 - If cars could collect data, they could share it via a vehicle-to-vehicle infrastructure (“tag team” approach) – may not need large infrastructure – “data CB”
 - Cost/reward issue for car companies to do this
 - A couple data repositories could be managed by the private sector
 - Could the private sector (e.g., Tele Atlas) manage a clearinghouse to clean/sanitize data?

Implications of Differing Data Collection Activities (2)

- Public vs private?
 - Private companies could manage all data (example: Intrado)
 - Need a business understanding between the public and private sectors
 - Data has to be auditable (problem with companies' proprietary info)

Implications of Differing Data Collection Activities (3)

- Who owns the rights to what data?
 - Companies own the right to any value-added data
 - All generally have right to raw public data (except data that could lead to further accidents, etc.)
 - May need to establish a public policy about what data is generally available, what data is restricted for safety reasons, etc.
 - May be a scenario where users are giving away information that they don't have the rights to (the “Napster” problem)

Privacy, Security, Liability Implications

- “Enormous implications”
- What kind of data can be sent out (vehicle-to-vehicle)?
 - Who’s liable when there are problems?
- Bill Gates as the “terminator”
- Private sector (e.g., Onstar) may want the government to take over some responsibilities (and liability) – example: “National Clearinghouse of Transit Information”

Implications Regarding the National ITS Architecture

- What are the implications for the National ITS Architecture
 - Use the architecture as a shopping list for what might be in and out of the INFOstructure
 - Security will be added to the architecture in the next year (and will be needed for the INFOstructure)
 - Do we want to completely rely on the INFOstructure, because what happens if someone messes with it? May need to have a security function.

What Next?

- Need a symposium with our potential partners and potential adversaries
- Need to get cozy with the Homeland Security office (after we get our own act together)
- Roll a “small wheel” to start out.
- Workshop with the automobile industry
- Explore partnerships with national research programs (e.g. NCHRP), which could be springboards for gaining support for the INFOstructure
- Involvement with public about tradeoff between privacy and homeland security

What Next? (2)

- Perhaps a panel (open dialogue) at the TRB Annual Meeting
- Start building a description of “Transportation Systems Structural and Historical Data” (from the 10-year Vision). Will identify incompatibilities at the state boundaries, for example. We need to pay more attention to this effort. The INFOstructure adds to it and enlightens it.
- Explore opportunities for new alliances with the telecom industry (which now has a lot of excess capacity) to address the communications needs of the INFOstructure.