

**ITS National Architecture -- Rural Issues Workshop
June 15/16, 1995
Idaho National Engineering Lab (INEL), Idaho Falls**

This is a basic package of information on the above upcoming workshop.

Purpose

The purpose of the workshop is to bring together a diversity of people interested in how the National ITS Architecture is addressing issues that impact implementation of ITS in rural areas (and to what degree it addresses them).

The two-day agenda: discusses the concept of architecture; attempts to raise the issues of interest to this large stakeholder community; presents the issues to the architecture developers; and then entertains discussion.

Please see the attached draft overview and agenda for further detail.

Organizers/Contacts

The workshop is being organized as an official ITS America Advanced Rural Transportation Systems (ARTS) Committee function; the actual planning is being handled by individuals at INEL.

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**Basil Barna (INEL) Sponsor
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**Dennis Foderberg (U Minn) ARTS Committee Chair
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**Donna Nelson (ITS America) ARTS Committee Liaison
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Participation by the Teams

Presence of at least two representatives from either the Rockwell or Loral team is desired. This activity will be considered a Topical Workshop ("focus group") for contractual purposes. Participation will consist of a presentation on the status of the architecture and the teams' perspective on rural issues in general (~ 40 minutes, not to exceed one hour), and then participation on a personal level as required throughout the Workgroup activities and following discussions.

Representatives from the government team (including USDOT, JPL, and ITS America) will also be attending.

Attachments

Following are:

Draft Overview & Agenda; Presentation of rural issues from the ARTS Committee meeting at the ITS America Annual Meeting in March 1995; partial list of invitees to rural workshop



A National Architecture For the ITS - A Workshop on Rural Issues

Overview

The format and structure of the workshop is presented to aid in preparation for discussion and work sessions. The focus of this workshop is to provide specific input to architecture design teams and program management that identifies issues of unique concern to rural stakeholders.

I. Workshop Purpose

The purpose of the workshop is to bring together stakeholders from rural areas to discuss the implications of the national architecture for the ITS and to identify significant rural issues to be addressed by developers.

II. Workshop Attendees

The current list of attendees will provide a broad cross-section of stakeholders that include: transportation professionals; emergency response professionals; scientists and engineers from academia, government, and the private sector, commercial vehicle operations; and those responsible for design and implementation of the national architecture for the ITS. Attendees will be generally from the Western region of the United States. Canadian and Mexican authorities with interests in ITS and border issues have also been invited

III. Workshop Format

The format of the workshop will be set to: 1. Achieve a general understanding of the National Architecture and relevance to rural issues associated with its implementation, operation, and maintenance; 2. Provide an injection of perspectives from a broad subset of stakeholders to stimulate discussion and focus on rural issues; and 3. provide facilitated work sessions that will provide a concise set of prioritized issues/concerns in a form that can be presented to the National Architecture Team for resolution. The workshop agenda with its selection of topics and speakers is presented that specifically reflects this format.

IV. Speakers

Each of the morning speakers were chosen to provide a base of information and exposure to what the National Architecture is and its relationship to ITS services and rural issues. A brief synopsis of the intended message for each agenda item follows:

- **Morning Welcome** - The workshop is being held at the Idaho National Engineering Laboratory in the Engineering Research Office Building and at the adjacent University Place campus. A welcome to the INEL on behalf of the Department of Energy will be made by John Wilcynski, manager. Basil Barna INEL Transportation Infrastructure manager, will provide an overview of the agenda and review a few housekeeping rules.
- **Workshop Overview**- Dennis Foderberg is the current chairman of the Advanced Rural Transportation Systems committee of the Intelligent Transportation Systems of America. Dr. Foderberg will discuss the focus of the workshop, why it is needed, expectations for the work sessions, and the use of the resulting output.

- **Introduction to the National Architecture Program** - Ron Heft of the NASA Jet Propulsion Laboratory is the Architecture Manager for the program, Mr. Heft will provide an overview of the program, who the architecture teams are, the outreach process, and the plan for implementation.
- **Architecture Team Perspective** - Members of the Loral and Rockwell team will present an overview of the conceptual designs and current status of the technical evolution and relationship to the user bundled services.
- **Rural ATIS and the National Architecture** - Moe Zarien and Michael Kreuger from JHK Associates presented this paper at the ITS AMERICA conference this past March. It is very relevant to the current task for the workshop and will provide a rural perspective of issues associated with the ATIS user service.
- **ARTS Concerns** - Russell Steele, formerly of TRW, led a subcommittee review of the Lord and Rockwell conceptual design for the ARTS committee and presented it at the last meeting at the ITS AMERICA conference in March. This review provides an additional rural perspective of issues with implementation to a rural environment.
- **Panel Discussion** - A panel has been assembled that represents a broad spectrum of users and professionals that will provide their perspective of the issues associated with rural ITS by responding to the question: *One vision of the ITS is to provide user - services across the nation with equal access and performance to the user as they transit states, regions, and locales. What are your priorities and how do you see your role in the ITS implementation process that assures rural stakeholders equal access to services and that of transient users in rural areas?* A moderator will solicit and direct questions to the panel members from the attendees. This goal of this discussion is to stimulate thinking relative to concerns and rural issues.
- **Work Sessions** - Facilitated work sessions on late Thursday afternoon and on Friday morning will be the culmination and end purpose of the workshop. The next section will discuss this in detail.

V. Work Group Structure

The work groups will be structured along the ITS bundled services as presented in the Program Plan. A survey at registration will provide some initial grouping for work sessions anticipated by the attendees. Each group will have a facilitator to keep the focus on identifying issues and to assist in refining the results to present at the conclusion of the workshop. A spokesman will be appointed in each group to make this presentation. Members of the ARTS committee will generate the position paper from these results. The work sessions will be held in classroom areas at the University Place campus adjacent to the INEL office complex. The selection of groups and overview of the process will be presented Thursday afternoon. The facilitated work sessions will begin on Friday morning.

VI. Workshop Product Deliverable

The end result of the workshop will be an assembly of concerns stated as precise and focused as possible that will be used to generate a position paper authored by the ARTS committee of ITS. This position paper will be presented at the next regional architecture stakeholder's meeting to be held in Denver, Colorado in August. It is also expected to also be discussed at the rural ITS conference in Duluth, Minnesota this fall. This workshop will provide the only focused input from a stakeholder group – the rural group.

Agenda:

Thursday, June 15

- | | | |
|------------|--|--|
| 8:00 A.M. | Welcome to INEL | Basil Barna, INEL Transportation Infrastructure
Dennis Foderberg, Chairman, ITS-ARTS
Committee |
| 8:45 A.M. | Introduction to National
Architecture Program | Ron Heft, Architecture Manager, Jet Propulsion Laboratory |
| 9:15 A.M. | Architecture Team
Perspective | Rockwell/Loral Team |
| 10:15 A.M. | Break | Exhibits will be presented in the adjacent area |
| 10:30 A.M. | Rural ATIS and the
National Architecture | Moe Zarien, JHK Associates |
| 11:00 A.M. | ARTS Concerns
Subcommittee Report | Russ Steele |
| 11:30 A.M. | Lunch | Catered Lunch at EROB |
| 1:00 P.M. | Panel Discussion : | Introduction/moderator: Dennis Foderberg/Donna Nelson, ITS
Potential Panel members:

Joe Armijo, MSU, Dwight Bower, Director Idaho
Transportation Department, Tom Griffith,
Clark County Washington Emergency
Services, Phillip Heerann, Sandia National Laboratory
Scott Sannis, Minnesota Guidestar, Moe Zarien, JHK,
Bill Greeny, Director Of Transportation Studies,
Utah State University, Chris Hill, Castle Rock
Consultants, Ron Heft, Jet Propulsion Laboratory |
| 3:00 P.M. | Afternoon Break | |
| 3:30 P.M. | Work Sessions | |
| 5:00 P.M. | Adjourn | |

Friday, June 16

- | | | |
|------------|--|--|
| 8:30 A.M. | Facilitated Worksessions (Breaks up to groups) | |
| 11:00 A.M. | Reporting of Workgroups | |
| 12:00 N | Adjourn | |

Rural Architecture Issues

- **Communications coverage:**
 - Two way
 - Compatible
 - Interoperable
 - Affordable
 - Low power consumption
- **Jurisdictional resolution process for architectural conflicts**
 - Limited TMC over large region, opportunity for virtual TMCs
 - Multiple agencies not used to working together
- **Vehicles as sensor probes for highway conditions, weather, hazard warning, etc.**

Rural Architecture Issues

- . Maximum use of existing infrastructure, to include common- gateway for legacy systems.**
- . Integration of rural architecture with other initiatives :**
 - National Information Infrastructure**
 - National Weather Modernization**
 - GIS Transportation Study**
 - Differential GPS**
 - Common data exchange**

Rural Architecture Issues

- **O&M requirements of rural environment to include:**
 - Remote diagnostics
 - Reliability/redundant capability
 - Maintainability, modular pull and replace
 - Supportable, standard modules
 - Bullet Proof

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