Federal Report
to the
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TEA-21 ITS Update

(Updated as of 7/19/99)

ITS Deployment Program *Sec. 5208*	Status
The ITS deployment program authorized in TEA-21 includes two components: integration and CVISN. The ITS Integration component provides Federal ITS funding for the integration of multimodal ITS components in a variety of settings, including large regional or multi-state areas, metropolitan areas, and rural areas. It is defined in Sec. 5208.	About 66 project proposals have been received from the geographical areas identified in the 1999 appropriation to participate in the ITS integration program. Satisfactory US DOT reviews have been completed on approximately 70% of the proposals. Revisions are being made to the remaining proposals. Once approved, the proposals must go through a congressional notification process before funding memos are sent to US DOT field offices so that funds can be obligated by the end of the fiscal year.
CVISN Deployment Program *Sec. 5209*	**Status**
The Commercial Vehicle Intelligent Transportation Infrastructure Deployment component is defined in Section 5209. It supports complete deployment of Commercial Vehicle Information Systems and Networks (CVISN) in a majority of States by September 30, 2003.	TEA-21 established the goal of CVISN Level 1 Deployment in a majority of States by September 30, 2003. The ITS Deployment Program of TEA-21 contains two components: the ITS Integration Program and the CVISN Program. On March 22, 1999, the U.S. DOT requested preliminary applications from public/public or public/private partnerships to determine qualifications for participation in each of these programs.
	Thirty-two (32) States submitted preliminary applications, or statements of qualifications for the CVISN Program. The applications were reviewed by an independent panel of experts convened by ITS America. Those applications that demonstrated an ability to meet the criteria established by TEA-21 were forwarded to Congress as potential candidates for funding in FY 2000.

	TEA-21 provides $30,200,000 in Federal ITS funding for CVISN program in FY 2000. The number of applicants funded, if any, will depend on the availability of funding in FY 2000. The House and Senate appropriation bills are currently being reconciled in conference. Prior to the receipt of funds, a more detailed technical proposal and financial plan will be requested from the States which FHWA deems to be qualified.
TEA-21 requires the Secretary to carry out a comprehensive program to deploy ITS that improve the safety and productivity of commercial vehicles and drivers; and reduce costs associated with commercial vehicle operations and Federal and State commercial vehicle regulatory requirements. The purpose, priority areas and Federal share are described.	There has been no change in status. Maryland, Virginia, and Kentucky continue to be expected to complete development of CVISN Level I by December 1999. Seven additional states are expected to reach completion by December 2000. In total, over 40 states are in several stages of CVISN deployment. *A detailed update is included in the CVISN section of this report.*
Architecture Consistency Sec. 5206(e)	**Status**
TEA-21 contains a provision requiring ITS projects implemented with funds from the Highway Trust Fund (including the mass transit account) to conform to the national architecture, applicable or provisional standards, and protocols.	Draft regulatory language is prepared which will implement the legislative requirement for conforming with the national ITS architecture and standards. Part of the regulatory language will appear in a Notice of Proposed Rulemaking (NPRM) on transportation planning (23 CFR 450). The project development language will appear in a separate NPRM on traffic operations (23 CFR 655). FTA is in the process of identifying their approach to implementing the legislative language. The draft NPRMs have been submitted to FHWA legal staff for informal review.
	Several train-the-trainer sessions have been conducted for federal staff. After the final session in August, all FHWA field staff will have received training on the interim guidance for architecture conformance.

Additionally, the feasibility of consultant training sessions is being researched. Workshops on the application of the national ITS architecture and the application of the interim guidance are under development. |
Critical Standards *Sec. 5206(b)*	**Status**
Specifically, not later than June 1, 1999, the Department shall submit a report to Congress identifying which standards are critical to ensuring national interoperability or critical to the development of other standards and specifying the status of the development of each standard identified.	***ITS Critical Standards Report Submitted to Congress***. On July 6, the Secretary of Transportation announced that the department had identified 17 standards as critical to the smooth operation of ITS throughout the United States, including on that would enable an equipped vehicle to receive traveler information anywhere in the country. The information in this announcement is from the **critical standards report** that requires the US DOT to identify which standards are critical and to have all critical standards in place by January 2001. *A copy of the press release is attached.*
TEA-21 requires the ITS program to develop, implement, and maintain a national architecture and supporting standards and protocols to	There are 25 standards that are either published or endorsed (approved). Another 24 are in the balloting stage, while the remaining 29 are still

promote the widespread use and evaluation of ITS technology as a component of the surface transportation systems of the United States.	under development. The attached milestone charts indicate the status of the standards as of June 25, 1999. Those falling under the "in ballot" or "under development" categories are listed by their projected balloting dates. Two new standards-related initiatives will be coming on line in the near future.
	The first, Highway Rail Intersection (HRI), will be the subject of a two-day workshop scheduled this month. The second initiative, Archived Data User Service (ADUS), is being formulated as the 31st user service under the national ITS architecture and is scheduled to be published later this year.
Evaluation Guidelines *Sec. 5204(j)*	**Status**
TEA-21 tasks the Secretary of Transportation to issue guidelines and requirements for the evaluation of operational tests and deployment projects carried out under Subtitle C which addresses the ITS program. TEA-21 further requires the guidelines to establish funding evaluation levels, based on the size and scope of evaluated projects, to ensure adequacy of evaluation activities.	The TEA-21 evaluation guidelines are currently undergoing review by the Offices of the General Counsel in FHWA and FTA, pending transmission to the Office of the Federal Register where the document will be posted as a notice.
	If the legal review process is still in progress on July 27, the date of the next Program Assessment Quarterly Review, the TEA-21 evaluation guidelines will be accessible effective that date on the ITS JPO Web site under the program assessment area. There will be an appropriate disclaimer informing the reader that the document is still under review, and if the legal review necessitates revisions, the page will be updated immediately upon receipt of those provisions.
Eligibility - STP, CMAQ, NHS *Sec. 1108(a)(7); Sec. 1110(b)(6); etc*	**Status**
STP funding includes infrastructure-based ITS capital improvements. CMAQ funding qualifies if the program or project improves traffic flow, including projects to improve signalization, construct high occupancy vehicle lanes, improve intersections, and implement ITS strategies and such other projects.	No change in status. Action on eligibilities will follow completion of the architecture consistency policy.
Life Cycle Cost Analysis and Financing and Operations Plan *Sec. 52108 [Sec. 1201(a)(18)(A)]*	**Status**
The Secretary requires that those applying for ITS funding under the integration and CVISN programs (Sec. 5208 and Sec. 5209) submit an analysis of the life-cycle costs of operation and maintenance of ITS elements, if the total initial capital costs of the elements exceed $3 million.	No change in status. The JPO is looking at developing technical guidance on life cycle cost and planning for operations and maintenance. However, this effort will be initiated after the procurement requirements are underway.
In addition, a multi-year financing and operations plan is required describing how the project will be cost-effectively operated and maintained.	
	Status

Procurement Methods for ITS Projects *Sec. 5204 (I)(1)*	
The Secretary must develop appropriate technical assistance and guidance to assist State and local agencies in evaluating and selecting appropriate methods of procurement for ITS projects carried out using funds made available from the Highway Trust Fund, including innovative and non-traditional methods, such as the Information Technology Omnibus Procurement.	Based on the recommendations of the procurement task force, there are two projects under way to provide further assistance to State and local governments in the procurement of ITS technologies.
	A workshop is being prepared to facilitate discussion of contracting options that are available within FHWA contracting procedures. In addition a number of case studies demonstrating how some state and local governments have used innovative procurement practices in the development of ITS projects. Current progress of these projects is on schedule and will permit them to be completed by the end of FY 1999.
National ITS Program Plan *Sec. 5205 (a)(1) & (a)(2)*	**Status**
TEA-21 requires the US DOT to update the National ITS Program Plan as developed by the Department and ITS America. US DOT's approach breaks down the requirement for the development of the National ITS Program Plan into three distinct parts: 1) Program Plan: Five-year horizon; 2) Program Plan: Ten-year horizon; and 3) the National ITS Deployment Strategy.	The five-year plan is in its final draft and will begin the process for final DOT sign-off in the next several weeks. The plan is likely to be completed by mid-Fall. The 10-year plan has not yet begun.

Intelligent Vehicle Initiative

- IVI Broad Area Announcement -- A request for applications for Generation 0 operational tests was issued on December 9, 1998. Fourteen applications were received which covered all four platform types. Negotiations with several applicants are underway. We expect to sign multiple cooperative agreements in September 1999.

- Demo '99 - This event will be held at the Transportation Research Center in East Liberty, Ohio, from July 26-28. Demo >99 is for all ITS professionals from the vehicle industry, freight carriers, transit agencies, State Departments of Transportation, toll authorities, the Federal government, research firms, and academia to experience the next wave of vehicle technology and understand how the future of ITS will be shaped by these developments. The attendees will be able to drive several of the vehicles being showcased at the event. A number of U.S. DOT representatives will be participating.

Other IVI Activities

- The Light Vehicle Platform -- In June 1999, a GM/Delco Automotive Collision Avoidance System (ACAS) Field Test Cooperative Agreement was signed. This agreement is a continuation option from the first ACAS agreement which ran from January 1995 until January 1998. This five-year program is designed to create and field test 10 vehicles with rear-end collision warning systems. The U.S. DOT Volpe National Transportation Systems Center in Cambridge, Massachusetts, will be conducting the evaluation of the field test.

   In July 1999, the Variable Dynamics Test bed Vehicle (VDTV) was delivered by the development manager, Jet Propulsion Laboratory, to the National Highway Traffic Safety Administration (NHTSA). It consists of computer-controlled variable subsystems, drive-by-wire (steering, braking, throttle) and a four-wheel steering test bed vehicle. The project began in August 1995 and made use of the following subcontractors: ERIM for system integration, steering feel, and system-level control; TRW for steer-by-wire subsystems; GM-Delphi for ABS, traction and yaw control, brake-by-wire, variable roll control, and adjustable damper subsystems; and Bosch for the throttle-by-wire subsystem. All of these subsystems were integrated into a 1995 Ford Taurus SHO with the

Bondurant package for power and safety improvements. Planning is underway for the first research experiments using the VDTV and these experiments are expected to begin at The NHTSA Vehicle Research and Test Center in CY 1999.

- The Commercial Vehicle Platform - From April 26-27, 1999, the technical conference on PERCLOS and other eye-based measures of driver alertness was held at the Hyatt Dulles in Northern Virginia. There were approximately 100 attendees. In addition to the technical aspects, the conference also addressed potential and appropriate uses of "alert-o-meter" data to promote end-user and the use and acceptance of this potential safety-enhancing technology by management. Conference proceedings are under development and should be available this Fall.

- The Transit Vehicle Platform - On June 7, 1999, US DOT received the draft *Transit IVI Needs Assessment*. On July 2, 1999, comments were returned to the Volpe Center. The final draft is expected in mid-August. In May, the Lane Change/Merge project began. The accident analysis task is expected to be completed by September. The Rear End (forward) and Rear End (bus struck from behind) projects are both in contract negotiations. The projects are scheduled to begin in August and September, respectively.

- The Specialty Vehicles Platform - The Virginia Tech Center for Transportation Research has submitted a draft *Preliminary Needs Analysis* report under the Operational Review of Specialty Vehicles contract. Comments have been given to Virginia Tech and are being incorporated into the report.

ITS National Architecture

- Development of Rural Requirements for Input to the USDOT's National ITS Architecture - A review of the National ITS Architecture to determine how well it meets rural user requirements is well underway. Its objective is to define rural ITS requirements and to work with the National ITS Architecture team to incorporate these requirements into the Architecture where appropriate. The requirements definition process is based on identifying rural needs.

- Rural ITS User Needs -- On April 18, 1999, a stakeholders workshop was held, bringing together a broad range of users and operators to aid in this needs definition process. In June, a compendium of rural needs was completed using information obtained during the workshop and other analyses. SAIC and the national ITS architecture team are in the process of developing a comprehensive package of rural (ITS) user needs. The results of this effort will be presented at the annual Rural ITS Conference to be held August 29-September 1, 1999 in Flagstaff, Arizona. Once the Rural ITS community reaches a consensus as the rural ITS needs, work can begin on modification of the National ITS Architecture to reflect those needs. As a result of this effort, it is thought that new user services may be required to be developed to address areas where requirements had not previously been covered. Most of the rural user needs are likely to fall under existing previously established user service that will merely need to have those needs reassessed and broadened as to their inclusion in the national ITS architecture.

- Archived Data User Service -- The integration of the archived data user service into the national ITS architecture is on schedule. The second interim program review was held, resulting in a greater understanding by the stakeholder community of the integration of their needs into the architecture and the expected product. Constructive comments were received from among the more than 35 stakeholders present, focusing on safety data, interest in standards requirements, and naming conventions. A final report is scheduled to be given to the data user community in September. The integrated user service will be available on the web in October. CD ROMs will be available in November or December.

- Turbo Architecture -- A systems requirements document was developed and approved with modifications. Subsequently, a prototype demonstration was given to the JPO, other FHWA personnel, and several field representatives resulting in a number of constructive comments. The beta test is expected to begin in late September and conclude a month later. The Turbo Architecture software tool is scheduled to be delivered in January 2000. It is designed to assist in developing project and regional transportation system architectures.

- Architecture Training -- Twelve more courses were taught this past quarter to public and private sector transportation professionals. This brings the total number of students taught to 1,736 since beginning the training in late 1997. There were 435 students from the private sector and 1301 from the public sector. Plans are to continue conducting the training both in Washington, D.C. and throughout the country through CY 2000 to respond to needs and requirements from the field.

- ITS Deployment Support -- A new program has been developed to give intensive architecture training to FHWA ITS personnel at the four resource centers and selected divisions within the resource center areas. Two 3-day training sessions for a limited number of FHWA resource center and division personnel are scheduled to be taught in mid-August and late September in Washington, D.C. The first of a number of workshops designed to assist MPOs and regions in their architecture development will be conducted in Pittsburgh in mid-September. Plans are to continue the

workshops in the field at a rate of approximately two per month through CY 2000. This work is being done by the ITS Deployment Task Force whose mission is to assist field offices in supporting key ITS policies and programs and in identifying and developing key skills within the Resource Centers.

ITS Standards

- **ITS Critical Standards Report sent to Congress**. *See update in the TEA-21 chart at the beginning of this report.*

- TC-204 in Amsterdam - The ITS JPO continued its pro-active role in the ITS Technical Committee 204 (TC-204), which covers transport information and control systems. In early June, a U.S. delegation traveled to Amsterdam to participate in the semiannual meeting of TC-204 and its various working groups. The United States will be the lead in two projects:

    - A recently approved work item titled, "DSRC Resource Manager." This activity is based upon U.S. standards work already underway within IEEE.
    - In developing a business plan for TC-204, with a goal to have an approved plan in hand by May 2000. This activity is consistent with ISO efforts to be responsive to user needs by modernizing its products, processes, and image.

- The United States will also be a participant in efforts to organize a pilot sector group workshop initiative, in close collaboration with the ISO's Central Secretariat. The purpose of the workshop is to engage in a dialogue transportation-specific standards-making groups across the ISO (e.g. TC-22 and TC-204) and IEC to coordinate their respective work programs. This workshop will take place in conjunction with the ITS World Congress in Turin, Italy, in October 2000.

- Asia Pacific Economic Cooperation (APEC) ITS Special Interest Group (ITS SIG) -- The ITS JPO is active in supporting this group, which is instrumental in identifying standards needs for that region of the world. This group does not develop standards, but looks to the ISO TC-204 for such products. The United States is the formal liaison between the ISO TC-204 and the APEC ITS Special Interest Group.

    In a recent ministerial report, the group proposed that member economies do the following: work with the ISO and other international standards-making bodies to the maximum extent practicable; adopt ISO standards where consistent with the needs and priorities of APEC; consult on ITS developments that have major implications for other member economies; promote trade, best practice models, technology transfer, and research; establish an APEC ITS Group to facilitate this cooperation and to further develop ITS cooperation between member economies.

    Data Registry

- To facilitate the creation of an ITS data registry, each of the standards development organizations (SDOs) has agreed to a new action plan. The SDOs are developing standards containing functional area data dictionaries and message sets. On June 14 and 15, representatives from AASHTO, IEEE, ITE, and SAE, to name a few, met to reinvigorate the data registry project. Representatives of the Archived Data User Service (ADUS) project participated in registry planning meetings to ensure that the ITS data registry will accommodate legacy data systems currently in use the in transportation industry. They also met to ensure that their it will incorporate the needs of the new ADUS of the National ITS Architecture. In short, ADUS requirements have been included in the registry action plan. Implementation of the new plan will drive the evolution of the data registry to an industry-wide "Transportation Data Registry" which will serve the greater transportation community. Eventually, the data registry will be accessible on line to authorized users. The Data Registry Configuration Control Committee met for the first time on July 19, 1999 to kick off development efforts.

    Interoperability

- In March 1999, the Interoperability Subcommittee reorganized and met for the first time on March 2-3. The second working meeting took place from July 8-9. The group has defined the term interoperability and broken it down into three types: technical, procedural, and institutional. It has also created a subcommittee charter and identified selected issues. There are a total of 11 issues before the group. The top three issues are toll administration reciprocity agreement, incompatible DSRC systems, and incompatible data model-elements. They have started forming the task forces that would look into these issues. The task forces will be putting together white papers. The next meetings are Sept. 13-14 (tentative) in Santa Barbara, CA; October 5-6 in Dallas, TX; and November 12 in Toronto. ITS JPO staff are participating in these meetings.

    Standards Testing

- The Battelle ITS Standards Testing Team published guidelines for test site selection. These guidelines will help identify proposed ITS deployment sites that have the desired attributes to serve as standards test sites. Site selection criteria include: standards content, willingness to participate, private sector involvement, National ITS Architecture use and compatibility, timeliness and schedule, geographical balance, cost and site size. The solicitation for the test sites was

available in <u>The Commerce Business Daily</u>, in various ITS America publications, and on the ITS web site.

- Numerous responses of interest were received and efforts to select the first test sites are continuing. It is expected that about 10 sites will be needed to test the 50-plus standards that are targeted for testing. The ITS web site, under the standards section, has a list of the standards to be tested, a new white paper describing the approach for analyzing standards relationships for testing purposes, and the planned testing approach. A detailed analysis of standards relationships and dependencies is provided in the *ITS Standards Program Taxonomy Report*. This report groups the standards according to the application that can be tested together in "clusters." The taxonomy report is currently being released for review and comment by the SDOs and the appropriate ITS America committees.

Rural ITS

- <u>Tourism and Traveler Information Systems Field Operational Test Initiative</u> - The Rural ITS program leveraged limited resources to partner with two State DOTs to fund two tourism and traveler information system field operational tests: the Arizona I-40 Traveler and Tourist Information System and the Branson, Missouri Travel and Recreational Information Program (TRIP) project. Results from these tests are being incorporated into the development of a National Advanced Traveler Information Systems Program focusing on national data collection and interoperability issues. The program will prioritize Federal resource allocation to facilitate the deployment and support of nationally interoperable traveler information systems.

- <u>Development of Surface Transportation Weather Data Requirements</u> - Progress continues to be made building the working relationship between the surface transportation community and the meteorological community. On June 18, 1999, the Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM) sponsored a meeting that included all of the Federal agencies that are currently involved in some type of weather-related activities for surface transportation. FHWA was well represented, and made three presentations at the meeting. Another presentation was made by a representative from the Foretell field operational test. Consensus was achieved to work towards the documentation of surface transportation weather requirements.

  These requirements will serve as the mechanism that the weather community will use to develop products (e.g., weather forecasts and other reports) that meet the specific needs of the highway community and the surface transportation community at large. This work will take place under the auspices of the OFCM Joint Action Group (JAG) for Weather to Surface Transportation. FHWA is represented on this JAG.

Commercial Vehicle Information Systems and Networks (CVISN)

- <u>CVISN Project Managers March 1999 Meeting</u>: On March 30, 1999, the project managers and system architects from the Commercial Vehicle Information Systems and Networks (CVISN) prototype and pilot initiatives met with Federal representatives in Washington, D.C. The group discussed several key issues regarding the deployment of CVISN Level 1 capabilities, including Federal funding for the State to complete Level 1 deployment, interoperability and electronic screening, the upcoming rulemaking addressing Federal funding and architectural standards, safety and credentialing software, and CVISN evaluation.

- The States were thanked for their accomplishments in testing both technical and non-technical components of the CVISN initiative in light of the uncertain funding environment. The following topics were discussed: Federal funding for the remaining pilot States which have yet to be fully funded; the FY 2000 ITS Deployment Program; the Federal strategy for expanding CVISN Level 1 deployment to new States; interoperability for ITS/CVO electronic screening systems in the areas of hardware, systems/software, operations, and programs; and the FHWA's field and headquarters reorganization.

- <u>Award of FY 1999 Federal ITS Funds to CVISN States</u>: The Office of Technology Evaluation and Deployment within the Motor Carrier and Highway Safety Core Business Unit awarded FY 1999 Federal ITS funding in support of the CVISN pilot projects in Kentucky, California, and Colorado. The funds for Kentucky will be used for the Commonwealth to complete CVISN Level 1 deployment in the areas of safety information exchange, credentials administration, and electronic screening by December 31, 1999. California's funds will be used for the State to complete CVISN Level 1 deployment by December 31, 2000. The additional funding provided to Colorado will enable the State to continue its efforts to successfully demonstrate CVISN Level 1 capabilities. We are hopeful that we will be able to provide Colorado the remaining funds necessary during FY 2000 to complete CVISN Level 1 deployment by December 31, 2001.

- <u>Integrated Schedule for Electronic Credentialing in Maryland and Virginia</u>: There are three vendors which provide IRP registration and IFTA tax processing systems and services to the offices involved with the motor carrier industry in

Maryland and Virginia. Lockheed Martin Information Management Systems provides IRP registration systems and services to Maryland and IRP registration and IFTA tax processing systems and services to Virginia. Intelligent Decision Technologies, Inc. (IDT) is developing the carrier automated transaction (CAT) and credentials interface (CI) software in Maryland. Web Critical is developing the CAT and CI software for Virginia.

- In May 1999, representatives from Maryland and Virginia, in partnership with Lockheed Martin, IDT, and Web critical, agreed to an integrated/accelerated schedule for demonstrating CVISN Level 1 deployment capabilities for the electronic application and processing of the IRP and IFTA credentials. The integrated/accelerated schedule keeps with our goal for Maryland and Virginia to deploy CVISN Level 1 capabilities in the area of interstate credentials administration by the December 31, 1999, deadline. However, the schedule is tight. As a result, the date has been extended for demonstrating CVISN Level 1 capabilities for the IRP and IFTA credentials to January 31, 2000.

CVISN Deployment Efforts

- Negotiated and executed an agreement with the Montana Department of Transportation that allowed the use of FY 1999 funds for the State's automated size and weight certification system with the commitment from the State to deploy CVISN Level 1 capabilities with their own funds.

- Participated in the ITS Deployment Task Force meetings providing information the systems engineering approach regarding the CVISN effort to benefit the Integration Program's plans to initiate architecture workshops. In addition, participated in the development of and NPRM for architecture conformance.

CVISN Reports and Studies

- Initiated a project to develop a cost model for deploying components of CVISN Level 1 capabilities. This effort will provide new and existing CVISN states with the latest information regarding cost of implementing components such as CVIEW and the credentialing interface. A CVO case study on electronic credentials has been created.

- A work plan has been developed for the University of New Mexico's Alliance for Transportation Research Institute (ATRI) that outlined their efforts to support the State of New Mexico's CVISN program. The State of New Mexico's CVISN steering committee has officially accepted the work plan and their responsibilities therein.

- A roadside identification feasibility study was conducted by the Kentucky Transportation Center and completed on July 1, 1999. The study evaluates various technologies as applicable to the task of identifying commercial motor vehicles (CMVs) at the roadside. The activity of selecting CMVs for inspection at the roadside needs technology to help in screening since the volume of CMVs far exceeds the resources available to conduct the inspections. The study concludes that two technologies are preeminent in the field: RFID (transponder) and OCR (Optical Character Reader). An internal FHWA panel is being assembled to review the findings of this report.

CVISN Training Efforts

- ITS/CVO Trainers under contract to the FHWA conducted seven deliveries of the ITS/CVO course on the CVISN architecture. A special ITS/CVO training course focused on State safety enforcement personnel was created and delivered twice at the CVSA Spring meeting. This second course was conceived and delivered.
- APL staff under contract to FHWA conducted a seminar on the CVISN architecture and electronic credentialing standards at the ATA's Information Technology & Logistics Council meeting. Participants included technical staff from EDI fleet management software vendors.

Professional Capacity Building

Distance Learning Initiatives

- Three web-based training (WBT) course pilots have been launched, and will be ready for viewing by the end of CY 1999. The topics include: a technical introduction into the national ITS architecture and standards; deploying integrated ITS; and a two-semester course to provide a breadth of knowledge in ITS deployment. Other distance learning initiatives included: interactive CD ROM on ITS Awareness (10,000 copies distributed; new printing underway); and a satellite transmission of "Public Private Partnerships" over the TEL-8 Network. FY 2000 plans are being formulated for more extensive web-based training initiatives with National Highway Institute and National Transportation Institute.

ITS Curriculum Development

- The ITS Education and Training needs report is being given wide distribution.

- On June 9-10, the ITSA DTAG Committee met. The following priorities were determined for the next two years:

- To develop PCB courses in system integration, ITS standards, custom software and design, system design and analysis, regional transportation system management and operations, partnerships, and writing/communications skills.

- To establish a Council of Training Organizations (CTO). The U.S. DOT PCB program should evolve into a convener and/or coordinator role of the CTO. This evolution must be outlined in a ITS PCB succession plan that should be developed by the JPO which includes programmatic evaluation of the PCB program by the time the CTO is in place.

- To support ITS America's efforts to develop an ITS professional certification program within the time frame established by them.

- Priorities for the next five years include developing PCB courses related to Advanced Traveler Information Systems, rural ITS, regional transportation operations and management using ITS; using ITS to optimize individual system performance, communications and outreach; and to examine the potential for courses regarding safety and the intelligent vehicle, as well as comprehensively populating the CVO track.

- Peer review meetings being planned with ITSA Education and Training Committee and ITE Education and Training Committee. Universities developing model curricula based upon "needs" report.

New Courses

- ITS Software Acquisition (by MITREC) has been taught three times and a significant demand is anticipated. The Lessons in Procurement course preparation is underway and will be held in Fall/Winter 1999.

- An ITS Deployment Analysis System (IDAS) workshop is being developed with the Turner Fairbank Highway Research Center (TFHRC). The first cut should be available in January 2000. IDAS is software that provides ITS sketch planning capability. Typically, planners can use IDAS to calculate the relative costs and benefits of ITS investmentsBas alternatives to and/or enhancements of traditional highway and transit infrastructure investments.

- A Corridor Microscopic Simulation (CORSIM) workshop is being developed with the Turner Fairbank Highway Research Center. It should be available in Fall/Winter 1999.

- A Traffic Management Center (TMC) workshop being developed with TFHRC. It will be available in late 2000.

- A Public Technology Inc. (PTI) Executive Seminar is under development with Resource Centers. It will be available in September 1999.

Program Assessment

Metropolitan and CVISN Model Deployment Initiative Evaluations

MMDI Evaluations	CVISN Evaluations
Major efforts are being dedicated to analyzing surveys, questionnaires, web site logs, and associated data collection instruments. These analytical efforts are defining the framework for the lessons being learned in these endeavors. Efforts have begun to draft, review and produce final evaluation reports for the Phoenix, Seattle, and San Antonio sites.	CVISN activities have focused on data collection in Connecticut and Oregon through the conduct of screening assessment studies. Roadside safety enforcement data collected will contribute to determining safety risk categories and inspection-related data.

ITS Deployment Tracking

Metropolitan Deployment Tracking	CVISN Deployment Tracking
The current and near-term focus of activity in the ITS Metropolitan Deployment Tracking endeavor is the preparation, coordination, and distribution of FY 1999 surveys.	The CVISN Deployment Tracking activity is disseminating surveys to the 50 states and the District of Columbia. Each of these jurisdictions is being provided with its FY 96 deployment status in three areas: credentials administration; safety information; and roadside electronic screening. They are requested to document deployment status in these three areas as of FY 98.

Field Operational Tests

- Many of the field operational tests (FOTs) started during the period of ISTEA authorization have completed data collection and test activity. FHWA policy is that an FOT will not be defined as completed until a final evaluation report has been accepted by the Government. The following summary depicts FOT status during the quarter by infrastructure category. In several cases, FOTs categorized "In Progress" are undergoing various stages of report review and editing.

	Intelligent Transportation Infrastructure			Intelligent Vehicle Initiative
Status FOTs	Metro	Rural	ITS CVO	IVI
In Progress	19	11	5	2
Being Redefined	1			
Completed	41	1	12	1
Total	**61**	**12**	**17**	**3**
Grand Total	**93**			

ITS Benefits/Cost Tracking

Benefits Analysis - Since December of 1994, the ITS Joint Program Office has been collecting and distributing information regarding the benefits and impacts of ITS investments.

- The latest report entitled "ITS Benefits: 1999 Update" is available on the ITS Electronic Document Library (EDL) on the ITS Joint Program Office web site at www.itsdocs.fhwa.dot.gov/welcome.htm as document number 8323. Paper versions are expected to be available late this summer.

- A prototype of the ITS Benefits Database now is available on the Internet. The prototype currently is under password and security protection for testing. The online database allows users to access ITS benefits data collected by the Joint Program Office by using search options or by navigating through ITS services, program areas, or benefit measures. Users also may submit benefits data and reports by using the online forms. Password protection is expected to be removed later this year.

- ITS Cost Analysis - As part of the Joint Program Office effort to track and report ITS costs, a working paper titled, "*National Costs of the Metropolitan ITS Infrastructure: Update to the FHWA 1995 Report*" has been prepared, and now is available. The paper provides new estimates of the costs to deploy ITS infrastructure elements in the largest metropolitan areas in the United States.

ITS Special Benefits Studies

The ITS Joint Program Office initiated an effort to "soak up" lessons learned from both federally and locally funded ITS tests and deployments. The lessons learned and data on ITS benefits then would be repackaged into a number of products. The purpose of these products is to encourage the investment of local budget resources in ITS projects by helping to provide ITS solutions that meet local and regional transportation needs. The following formats have been developed to communicate with people at various levels within local and regional organizations and among their community stakeholders:

- Benefits brochures let experienced community leaders and transportation professionals explain in their own words how specific ITS technologies have benefited their areas;

- Cross-cutting studies examine various ITS approaches that can be taken to meet a community's goals;

- Case studies provide in-depth coverage of specific approaches taken in real-life communities across the United States; and implementation guides serve as "how to" manuals to assist project staffs in the technical details of implementing ITS.

- Thirteen (13) benefits brochures have been developed. The brochures were distributed at the ITS America 1999 Annual Meeting, and distribution of selected brochures to USDOT staff and appropriate professional organizations began in July. An order form has been developed to enable target audience members to request copies of currently available documents and place advance orders on documents still in development.

- Sixteen (16) cross-cutting and case studies are in the final stages of development and are scheduled to be published and distributed next quarter.

Outreach and Communications

Standards Outreach

- The ITS JPO is examining various methods for providing education and outreach to the community in support of standards implementation. The Professional Capacity Building Program, the ITS web site, and the FHWA Peer-to-Peer program will be used as information distribution sources. Other channels are also being explored. The standards section of the ITS web site has earned many compliments for its user friendly format. In addition, the level of information content is increasing rapidly. Currently, the standards section contains: 26 fact sheets; the status of ITS standards being tracked by US DOT; the latest information on the new Standards Testing Program, and other useful data on the program. Visit the site at: www.its.dot.gov/standard/standard.htm.

ITS Public Affairs Summary

- On April 20, the FCC opened docket 92-105 to receive public comments on the Department's petition for a nationwide, three-digit traveler information telephone number. The comment period closes on July 20. The FCC decision is expected to take into account a measure of broad public support for the DOT proposal. Media interest continues with a TV story on the Wood Television Network in Grand Rapids expected the week of July 12.

- On June 24, Transportation Secretary Rodney Slater announced the $35 million cooperative agreement with General Motors to research rear-end collision warning systems. This is the first Intelligent Vehicle Initiative operational test. There was considerable media play including the Detroit media, The Boston Globe, and The Wall Street Journal.

- In June, FHWA Administrator Wykle's comments on behalf of ITS were aired in a PBS nationwide broadcast which focused on the Metropolitan Model Deployment Initiative projects in Seattle, Washington.

- On July 6, the Secretary of Transportation announced via press release the 17 critical standards mandated by TEA-21 and their transmittal in a report to Congress.

- In August, the Secretary of Transportation is expected to announce the first ITS operational test in a National Park, a venture jointly funded by the Federal Highway Administration and the National Park Service.

ITS Exhibits

- To better reach our customers, the ITS JPO has embarked on a 10-city exhibit tour to provide information on the program. The ITS exhibit has already been included in the following meetings: the Transportation Research Board Annual Meeting in January; the ITS America Annual Meeting in April; the National Associations of Regional Councils Annual Meeting held in June; and the Conference of Minority Transportation Officials (COMPTO) Meeting held in July. Upcoming meetings include the following: the ITE Annual Meeting in August; the ITS Rural Conference in August; the American Public Works Association Meeting in September; the American Association of State Highway Transportation Officials Annual Meeting in October; the ITS World Congress in November; and the National League of Cities Annual Meeting in November.

New Publications and CDs

- CVISN Publications: Ten documents have been added to the Electronic Document Library and for print. These include the following: Cross-cutting reports on Electronic One Stop Shopping and Hazardous Incident Response; technical reports on the Introductory Guide to CVISN, Guide to CVISN Top Level Design, the CVISN Design Description, the COACH Part 1, final reports for the Southwest and Midwest Electronic One Stop Shopping Operational Tests; and ITS/CVO Business Plans from South Carolina and Rhode Island.

- The ITS program has compiled a CD that includes a comprehensive sampling of its most popular publications. The "ITS Greatest Hits" CD will be made available in early August as an education and information tool at the ITS exhibit.

ITS Web Information Resources

- The **ITS Electronic Document Library (EDL**) is on line and houses more than 900 ITS documents from a diverse field of sources. The system is based on a search command which helps to find documents quickly using key works and other information. This library can be found at the ITS JPO Web site at www.its.dot.gov.

- The **ITS Cooperative Deployment Network (ICDN)**, located on the World Wide Web, is integrated with each National Associations Working Group member's web site. It is accessible, useable, and responsive to the needs of its members and eager to attract new ones. The ICDN can be reached at the ITS JPO web page or at www.nawgits.com/icdn. There are over 900 documents in the EDL most of which are available to the general public.