MassHighway uses crash data as the foundation for development of the Safety Improvement and Hazard Elimination Programs. Accurate crash location data is fundamental to successful development of these programs. In this regard, MassHighway has funded a complete rebuilding of the Crash Data System (CDS). The Registry of Motor Vehicles (RMV) is required by statute to collect all crash data. In order to improve the CDS, it was imperative to make dramatic improvements to the source of the crash data. Therefore, this project involved MassHighway, RMV and the police agencies as the principal participants. The Governor’s Highway Safety Bureau (GHSB) also participated in the project and contributed to the training components.

Overview of Current Problems

There are three problems with the current Accident Record System (ARS) for MassHighway. They are as follows:

- Accurate Locations
- Timely Data
- Reporting

The CDS was funded by MassHighway in order to solve these problems. It was recognized that it was important to resolve the accurate location problem by working at the data source (e.g. police and operator crash reports).

Overview of Massachusetts

In Massachusetts, automobile crashes are filled out by both police and operators. Police do not respond to all crashes. Operators are required by law to fill out a crash report and forward it to the RMV and the police department that has jurisdiction within five days. Therefore, some crashes may have one or several operator reports and may have a police report, as well.

RMV collects and enters all reports (police and operator) into the current ALARS (Automatic Licensing and Registration System). All reports are paper and the RMV has approximately 12 data entry clerks assigned to this task.

For a typical year, the Commonwealth has approximately 175,000 crashes and nearly 400 fatal crashes. The RMV receives roughly 300,000 reports. RMV produces an extract (subset) of the Accident File in ALARS and transmits it to MassHighway following the closing of the file. The file is closed after all of the fatal crashes are completed in FARS (Fatal Accident Reporting System). The accident file sometimes takes until June to be finalized. Consequently, MassHighway is 18 months behind upon receipt of the extract file.

(CONTINUED ON PAGE 4)
PRESIDENT’S MESSAGE
— — — — — — —

Thanks to all members for allowing me to serve as your President during 2002, and particularly to Diane Morabito, our Immediate Past President, and members of the Executive Board for all their hard work. Jack Gillon, our new Treasurer, reported good news at the January 24th Board meeting -- New England ITE remains on solid ground financially. With help and volunteerism from each of you, NEITE will continue to thrive.

Speaking of volunteerism, if you haven’t done so in recent weeks, check out NEITE.ORG. Andrea Quenneville has done a fantastic job of continuously updating our official website. Section and Chapter meeting information is being posted as it is received. Chapter Presidents are encouraged to send their meeting information to David Scott (david.scott@state.vt.us), our Programs Chairman, and forward it to Andrea, as early as possible to ensure maximum meeting attendance. Even if all the details are not known about the program, information about place and time and preliminary program (topic) is needed as soon as possible.

The NEITE Technical Committee, led by its Chairman Ken Petraglia, continues to work hard on important technical issues. The Committee, which is meeting regularly, has three publications that can be downloaded from NEITE.ORG. It is undertaking new research on traffic operations of short turning lanes and pedestrian issues. If you wish to be a part of the Committee, please contact Ken at (617) 521-5100. Additionally, we are all greatly appreciative to Neil Boudreau for volunteering to serve as Editor of the Chronicle during 2002.

Congratulations to year 2001 winners of the Section Awards including William D. Ankler, Ph.D., Director of RIDOT on winning the Transportation Leadership Award, Ken Petraglia, winner of the Transportation Engineer of the Year Award, and Rod Emery, our Distinguished Service Award winner.

On April 2, a Joint NEITE & Connecticut Chapter Meeting will be held in East Hartford, Connecticut quickly followed on April 9 by a UMass Student Chapter meeting in Amherst, Massachusetts. Please make time to attend one or both of these meetings.

Rod Emery, chairperson of the Thomas E. Desjardins Memorial Scholarship fund, mentioned the other day that the Scholarship’s annual Golf Tournament has been scheduled for May 8 at the Sandy Burr Country Club in Wayland, MA. This marks the third year that this tournament has been held to raise funds for awarding a scholarship to a deserving junior or senior college student.

I look forward to seeing as many of you as possible at these important events.

Gary Hebert
**Young Professionals Group**

The New England Section Young Professionals Group (YPG) is now meeting regularly. The goal of the YPG is to provide an environment for young members to take an active role in ITE and the transportation profession. YPG members develop and sponsor their own projects, meetings, and other activities. These projects and activities provide an opportunity for the YPG members to develop job skills and build relationships, which will help them throughout their career.

Over the past 6 months the YPG has become more active. We met at the September and December NEITE meetings last year, plan to meet at each of the NEITE meetings this year, started a web page on the NEITE site (www.neite.org), and are working on a Job Shadow Project. The NEITE Board of Directors has supported the YPG and offered to present training courses directed toward the young members and establish a mentoring program for the young members. In addition, the NEITE also presents an annual award to the section’s outstanding young member.

There are many things the YPG can do, but we need your ideas and participation. Please let us know what you would like the YPG to do, and what would attract you to a meeting. Are you interested in training courses, technical tours, social activities, or something else? If you have not yet been to a YPG meeting, tell us what it will take to get you to attend one. If you have been attending our meetings spread the word, and invite your co-workers and associates to a meeting.

Finally, the first two NEITE meetings of the year are April 2 with the Connecticut Chapter and at UMass Amherst with their student chapter on April 9th. The meeting with the UMass Student Chapter will be an excellent opportunity to explain the Job Shadow Program to the students. At the CT/NEITE meeting, we will provide an update of the Job Shadow Project and our other activities. However, we would like your suggestions for the YPG meeting. Please e-mail me at jrmirabi@bigdig.com or call me at (617) 951-6259 with your ideas. I hope to see you at a meeting.

John R. Mirabito, Jr., PE, PTOE
Chair, NEITE YPG

**New England Technical Committee**

The New England Section ITE Technical Committee has recently selected two topics to investigate. The first is the effect of “short lanes” or “lane drops” on intersection capacity. The draft Chapter 9 of the 1985 Highway Capacity Manual included a treatment for approaches with “short lanes”, but this was not included in the final version. The Committee is in the process of identifying intersections that include either a “short lane” or a “lane drop”. The list will be reviewed, and the most representative will be studied. At each intersection, we will collect an array of data, including not only the normal input data, but also the MOE’s that we normally report in our studies (delay, queues, etc.). The results will be summarized in a report that will be shared with the transportation community.

The second topic is an evaluation of countdown pedestrian signals. The City of Boston, with permission as part of a federal experimental program, will be installing the countdown signals at four locations. We will study each intersection before and after the installation to evaluate the effects.

We will be seeking the assistance of each of the New England states for both projects. We ask that you identify appropriate locations and contact Ken Petraglia at 617-357-7755. We would hope that we could recruit members from each state to use procedures we develop to collect data, and to take part in the evaluation.

New England ITE Technical Committee hard at work during a recent meeting. Come and join the group!
Crash Data System  
(Continued from Page 1)

MassHighway Process
MassHighway uses the RMV file to develop a listing of the High Crash Locations. This is developed by applying the following weights to the number of crashes by severity category:

- Property Damage 1
- Injury Crash 5
- Fatal Crash 10

This process is used to find high frequency crash locations. This is a difficult process. Currently, only 20 percent of all crashes contained in the RMV file can be located to a point. Central Transportation Planning Staff (CTPS) attempts to locate and geo-code all crashes. Using improved Geographic Information System (GIS) tools, CTPS can match over 50 percent of the crashes. This process is very labor intensive and takes several months to complete. The CDS project is aimed at automating this process and will eliminate the months of effort involved in this process.

Project History
This project began as part of the Safety Management System. MassHighway recognized that the Safety Management System was impossible without a better CDS. This project, which will be the foundation for all safety related analysis, will replace MassHighway’s Accident Record System. The ARS had been developed in the early 1980s. It was written in COBOL and operated on a mainframe computer. The MBTA mainframe was used for this purpose. With a shortage of staff, the MBTA was not able to serve MassHighway in this capacity. Additionally, the mainframe technology was being replaced with more efficient server technology. A decision was made to develop an interim solution at MassHighway in order to be able to retrieve crash data while the new system was being built. It was recognized that this approach would not solve the underlying problems of inaccurate crash locations and timely data.

MassHighway was successful in developing an interim solution. This solution provided the ability to retrieve crash statistics in electronic format on Excel Spreadsheets. The interim solution, although more efficient than the ARS, did not provide the ability to query by specific location (roadway or intersection). Data has been provided on a city or town wide basis.

Crash Data System
The CDS was initiated as a joint MassHighway and RMV project. It was essential to involve other “stakeholders” as well. The police community had to be intimately involved because they were on the “front lines” actually collecting the data. Also other “end users” needed to be involved. The GHSB assumed this role and was actively involved in all phases of the project. An Advisory Committee was formed to guide this project with representation from all the key players. The committee met 30 times during the project.

The Advisory Committee developed the following Vision Statement:

“Replace the existing system capitalizing on newer technology and document management process that will improve the accuracy, quality, timeliness and usefulness of crash related information.”

Project Approach
MassHighway provided funding for this project through an Inter-Agency Service Agreement (ISA) with the RMV. RMV contracted with EDS to undertake this effort. EDS and the RMV used a life-cycle approach. The life-cycle is essentially a 6-step approach. They are as follows:

- Definition/Analysis Phase
- Business requirements Phase
- Technical Design Phase
- Coding/Testing
- Quality Assurance
- Implementation

A final step includes “post implementation”. Details as to how the system will be maintained as well as enhancements and improvements are presently under discussion between MassHighway and the RMV.
CRASH DATA SYSTEM
(CONTINUED FROM PAGE 4)

Challenges

There were many challenges to the CDS. Perhaps the most challenging aspect of this project is that crash data transcends several state and local agencies. While MassHighway is a prime user of crash data, there was no direct line of authority. The project needed cooperation across the lines of authority.

During the initial meetings with the Advisory Committee, it was apparent that the police community wanted some technological help to reduce the burden of data collection. Laptop, palm computers and other electronic means to “cut down” on the paper work were discussed and evaluated. This project did not have the means to equip each cruiser or give mobile data terminals to police officers. RMV strived to make available to all police units the means to transmit crash data electronically.

This proved to be even more challenging when trying to integrate a possible solution with one of many vendors that supply local police agencies with record management systems. Police departments wanted the crash report to be integrated into this existing software. Again, project resources fell well below the ability to pay for this work across the Commonwealth.

Another challenge is the creation of a master record from a combination of operator report(s) and police reports. It was important to review all records carefully to determine if other crash reports had been received for this crash. RMV developed a set of business rules to define how a “master record” is created from multiple reports. Further, the business rules define how a record is updated and ultimately closed.

MassHighway has several challenges as well. The Roadway Inventory File (RIF) needed updating. Staffing shortages made this process difficult. E-911 data was used to supplement the street listing data contained in the RIF. The solution to use E-911 data had institutional barriers and required good cooperation with police, fire and Verizon.

Training

The GHSB provided funding for extensive training of the Police Departments. Part of their effort included the production and distribution of a “role-call” video. GHSB also paid to have the training officers of individual police departments receive training from the Massachusetts Criminal Justice Training Council (MCJTC).

The training went beyond a simple review of how to fill out a new form. The MCJTC spent time explaining that crash data is important. They explained how it was used and gave concrete examples. Further, they stressed the importance of accurate crash location data when filling out a crash report.

Roll Out

I am happy to report that a number of these challenges have been met. The new CDS was rolled out on November 1, 2001. With the roll out, the new CDS included:

• New Police Crash Form
• New Operator Crash Form
• New Data Entry System
• New Relational Database
• Crash Location Validation Process
• More Timely Data Extract Process for MassHighway

The new police and operator forms were designed to collect the data elements defined in the data dictionary. The new system is compliant with the Model Minimum Uniform Crash Criteria as published by FHWA and National Highway Traffic Safety Administration.

RMV has developed a new database and data entry system. The data entry system includes the ability to enter reports from paper or accept reports electronically from the police. The latter is under final testing and will be available shortly.

The location validation system involved a significant effort. There are five location referencing systems: intersection names, mile marker, route/exit, street address and landmark. Only landmarks are not validated.

For intersection street names, the validation routine verifies that both streets do exist in the city or town and then checks to determine if the streets
CRASH DATA SYSTEM  
(CONTINUED FROM PAGE 5)

intersect. All three conditions must be met in order for the crash location to validate. There are valid ranges for address numbers, mile markers and exit numbers within each city/town. For a crash location to validate, the address number, mile marker or exit number must fall in that valid range.

Crash locations that do not validate are sent to an RMV analyst for resolution. The analyst will check the crash report or reports to determine if the location can be resolved. The final step in this process is to send it to MassHighway to determine if it can be resolved. At either step in the resolution process, reports can be sent back to the author (police or operator) to ask for additional information.

Landmarks will be recorded and validation tables will be built as the CDS matures. Eventually, major landmarks will be able to be validated.

Data Warehouse

The GHSB has initiated a Data Warehouse project. University of Massachusetts has entered into an agreement with the GHSB to start this effort. The GHSB will extract data from both the RMV and MassHighway databases for this purpose. Other data will eventually come on line from such sources as Department of Public Health, Emergency Medical Services (EMS) and other vital statistics. It is envisioned that GHSB will “push back” crash data and statistics to police agencies as well. This feedback will assist police in patrols and evaluation of the effectiveness of enforcements of programs.

Next Steps

The new CDS has developed a solid foundation, overcome many challenges and will serve us quite well for the foreseeable future. Not all components of the CDS vision have been realized. For example, RMV is analyzing an agency-wide data imaging and document management project. This project will allow MassHighway to gain access to the important sketch and narrative description of each crash. Further enhancements may include web reporting for operators, location validation at the point of entry for police officers and license/registration data population.

The new CDS has been in place for a few months. The Commonwealth of Massachusetts, like most other states since September 11th, is faced with serious economic challenges. Part of these challenges is reduction in staff. As such, the new system is being introduced more slowly than originally hoped. The data entry is likely to take longer as staff from the RMV is shifted to other areas. It will give us time to gradually work in the new system.

The initial report for those reports that have been entered into the new system are so far so good. Validation of the location data has been consistently at 70 per cent or above. We hope this trend will continue. We expect to initiate several more rounds of training with the Police departments over the next few years.

This article is based on a presentation made at the International Traffic Records Forum in August 2001.

EDITOR’S CORNER

Welcome to my first edition of the NEITE CHRONICLE. I would first like to introduce myself to those of you who do not already know me. I am a Traffic Engineer with MassHighway in Boston, and I am in the process of assuming the duties as Manager of the Traffic Operations & Safety Unit. I have been a member of ITE since 1993 and have been working on the New England Technical Committee since 1995.

My goal as Editor involves spearheading the effort to bring the CHRONICLE to a more widespread distribution in the electronic media format. To this extent, Meeting Notices and CHRONICLE Issues could be sent to members through email. Watch for more on this throughout the year.

I look forward to your comments and suggestions to make the CHRONICLE even better. Articles are always welcomed and encouraged. Thanks for reading!

Neil

Neil E. Boudreau, Editor

neil.boudreau@state.ma.us
**AGENCY CORNER**

The *Agency Corner* presents a new feature to the NEITE Chronicle. The purpose of this section is to provide a brief overview of “What’s Happening” with the State Transportation Agencies (DOTs) in New England. NEITE professionals will have an opportunity to see what the other states are doing in the region. For comments or to make a submission to this area, please contact the Editor via email at neil.boudreau@state.ma.us or call (617) 973-8211.

**Connecticut** – The Connecticut Department of Transportation (ConnDOT) has recently updated their Traffic Control Signal Design Manual after a comprehensive review process. The Traffic Signal Design Manual is intended to provide guidelines for considerations involved in the design of traffic control signals. The information contained in this manual generally reflects current departmental policy and current State Traffic Commission Regulations as of August 2000. The updated manual can be downloaded from the ConnDOT website, and has been made handicapped accessible through the use of the Jaws™ software program. For further information, visit the ConnDOT website at [www.dot.state.ct.us/whatnew/index.htm](http://www.dot.state.ct.us/whatnew/index.htm).

**Massachusetts** – The big news around the Massachusetts Highway Department (MassHighway) is the passage of a State Retirement Incentive Bill this past January, which aims to attract a significant number of MassHighway workers to an early retirement. With this legislation, a number of key Department personnel have opted for the early out, leaving some important positions to be filled with remaining staff.

In other areas, MassHighway has been working along with the local Federal Highway Administration Safety Team to develop policy initiatives aimed at combating run-off-road crashes. A number of options are being considered to update the current Policy Directive, “Measures to Combat Driver Fatigue” as released in November 1996.

**Maine** – The Maine Department of Transportation (MaineDOT) complied with a legislative act to *Ensure Cost Effective and Safe Highways in the State*, which directed the task of developing rules and regulations for the design of driveways and entrances on state and state aid highways. The process that was completed in late 2001, became effective this past January 1st, 2002. The program involves a series of “Access Management” rules that have been put in place to detail the Driveway/Entrance permitting process in the State of Maine. For more information on “Access Management”, visit the MaineDOT website at: [www.state.me.us/mdot/planning/bureauweb/accesslinks.htm](http://www.state.me.us/mdot/planning/bureauweb/accesslinks.htm).

**New Hampshire** – The New Hampshire Department of Transportation is sponsoring the study in partnership with the Vermont Agency of Transportation and the Commonwealth of Massachusetts in conjunction with the Federal Railroad Administration. The study began in December 2001 and will be completed by September 2002. Phase I of the study is focusing on developing preliminary service projections, identifying institutional and policy issues, and documenting basic existing infrastructure information.

The Federal Railroad Administration has designated the Boston to Montreal corridor as one of the nation’s three new High-Speed Rail Corridors. The principal objectives of high-speed rail service are to reduce congestion associated with highway and air travel, and to provide a transportation alternative.

**Rhode Island** – The Rhode Island Department of Transportation (RIDOT) introduced their new Transportation Management Center (TMC). RIDOT’s new high-tech system monitors, evaluates and responds to roadway emergencies. The new system aids in managing traffic on Rhode Island's major interstates (I-95, I-195, and I-295) as well as other local routes throughout the state (Route 146, Route 4, Route 6, and Route 10.). Through the use of the Information Exchange Network (IEN), the Rhode Island TMC is able to keep in contact with other neighboring states in the I-95 Corridor Coalition and monitor traffic conditions within these states that could affect the traffic flow in Rhode Island.

(Continued on Next Page)
**AGENCY CORNER**  
**(CONTINUED FROM PAGE 7)**

The Transportation Management Center (TMC) is located at DOT headquarters in Providence Rhode Island, and is staffed from 6 AM to 10 PM Monday through Friday. A Rhode Island State Trooper is present in the TMC to assist with incident response and clearance.

**Vermont** - The Vermont Agency of Transportation (VAOT) has established policy on directing and reviewing Safety Management System activities. VAOT shall utilize the Agency Safety Management System to help minimize the occurrence and severity of accidents on the Vermont transportation network through safety education and promotion of practical and effective safety measures incorporated into the planning, design, construction, maintenance, and operation of network assets.

The Safety Management System Steering Committee shall be formed and include the Deputy Secretary of Transportation, the Commissioner of Motor Vehicles, and the following Agency managers: the Directors of Policy & Planning, Project Development, Maintenance and Aviation, Rail, and Technical Services. The director of the Criminal Justice Services Division and a representative from the Federal Highway Administration (FHWA) shall also serve as members. The Deputy Secretary of Transportation shall act as committee chair. The committee may appoint task forces to develop procedures, needs, and policies. The Agency’s Traffic Safety Unit will serve as full time staff of the steering committee.

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**ANNOUNCEMENTS**

**TIME TO RENEW YOUR CHRONICLE ADVERTISEMENTS**

The *Chronicle* Staff is in the process of updating our list of paid advertisements for the 2002 publishing year which runs through the first issue of 2003. In the coming weeks, we will be sending out a notice to all of our advertisers to solicit new submissions for the *Chronicle*. The cost for a year-term is now $100 and provides you with ad placement in each issue of the *Chronicle* and free Job Postings. Without the annual ad listing, the normal fee for a job posting is $50.

The *Chronicle* Staff prefers Advertisements to be submitted in Electronic Format that is readable through Microsoft Word™ (typically a business card format). Paper ads are acceptable, although the ad may lose some quality through scanning.

Please contact Bill McNamara at (401) 231-6780 for more information on purchasing an annual advertisement. Paid ads can be sent into Neil Boudreau at neil.boudreau@state.ma.us or mailed to: MassHighway, 10 Park Plaza, Room 7210, Boston, MA 02116.

**Hurry, Don’t Forget to Renew for the Next Issue!**

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**MARK THIS DATE**

**JOINT NEITE / UMASS CHAPTER MEETING**

April 9, 2002

**Program:** Social Hour 5 pm to 6 pm w/exhibits presented from UMass Students. Dinner and Presentation from 6 pm to 8 pm. Speaker: TBA

More Information will be mailed out or visit NEITE.ORG to get the details.

**Contact** : Dr. David A. Noyce, P.E. (413) 545-2509

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As I step down from the position of President I feel some relief due to lesser responsibilities and demands on my time, but also some sadness. Serving ITE, both at the Maine State Chapter and at the New England Section level, has been time-consuming, and given Murphy’s Law, often seems to require the most when one is busiest with “real” work, yet it has been one of the most rewarding aspects of my career. Serving as an officer has given me the opportunity to work with some great individuals, such as Ken Petraglia and Rod Emery. Both of these individuals were recognized by NEITE at our annual meeting in December with well-deserved awards, for they have given so much to their profession and ITE. I have enjoyed working with the entire New England Board and thank you all for your efforts.

I owe so much to ITE and can’t imagine my life (work?) without it. Where would we be without ITE publications? Please consider serving ITE in a leadership position. At a minimum, take advantage of the educational opportunities provided to you through conferences and seminars, and attend meetings for the technical sessions and to network with your peers.

Thank you for letting me serve as your president. I know Gary Hebert will do a fine job as New England’s President this year. I intend to continue to serve the Institute at committee levels, etc. and will continue to attend ITE meetings. I look forward to seeing you there.

Thanks again,

Diane

Diane W. Morabito, P.E. PTOE

Connecticut Chapter
The Connecticut Chapter of the Institute of Transportation Engineers 2001 Annual Report overview and highlights:
Membership – 193 Members
Meetings –
- October 23, 2000 @ ConnDOT – 65 attendees
- January 23, 2001, Joint ITE/ITS Meeting; “Acela Express Train” – 73 attendees
- February 20, 2001 – Engineer’s Week Joint Meeting @ Hawthorne Inn, Berlin
- April 3, 2001, Annual Meeting/Joint Meeting with NEITE – 66 attendees
- October 30, 2001: ITS Video Showcase: Ramada, Meriden
- January 23, 2002; Joint ITE/ITS meeting; “Univ. CT Football Stadium TMP & ITS”

Special Events:
- ITE District I 2001 meeting in Mystic CT (Bob DeSanto, Joe Balskus, Paul Smith, Paul Schmidt, Jay Koolis, Ruth Fitzgerald, Jim Ford, Mary Manning, Fred Greenburg, Bill Scully, Rod Emery)
- ITE CT Membership Drive: January 2, 2001 mailings to ITE National members residing in CT, Erika Smith
- Student Chapter Chair sponsored a presentation to Engineering Students at Univ. of Conn. Storrs on Sept. 19th.

Notes:
- ITE CT Chapter
  Contributed $250 toward the ITE Milennium Fund

Massachusetts Chapter
In 2001 the Massachusetts Chapter of the Institute of Transportation Engineers made progress toward two of our goals, providing opportunities for inter-organizational contact and increasing participation of our members. These goals were achieved through the three technical meetings that the Massachusetts ITE Chapter presented, two of the three were run in cooperation with other local professional organizations. Monthly board meetings were held throughout the year.

In February the Massachusetts Chapter co-hosted a luncheon meeting in Boston with the Boston Society of Civil Engineers Transportation Group and ITS Massachusetts. Dr. Nathan Gartner, from the University of Massachusetts at Lowell, discussed work in the field of interactive traffic control systems, including the
RT-Tracks program developed at UMass Lowell. All of the hosting organizations were pleased with the joint meeting and plan to work together in the future.

The Massachusetts Chapter held its second meeting of 2001 in July. Nancy Luther, Executive Director Governor's Highway Safety Bureau (GSHB), gave a presentation entitled “Your State Highway Safety Office” at this luncheon meeting. Ms. Luther provided an overview of the functions of the GSHB and the programs they administer.

In September the Massachusetts Chapter and New England Section conducted their annual joint meeting, which included technical sessions, a PTOE review course, and a dinner speaker. This year the annual meeting was co-sponsored by ITS Massachusetts. The topics of the three technical sessions were "Wireless Traffic Signal Monitoring", "Unsignalized Intersection Capacity Analysis" and "Logan Airport ITS Strategies." MassPort Director of Capital Programs, Christopher Gordon was the dinner speaker, and discussed MassPort's $4.4 billion capital program. Mr. Gordon's presentation touched on a wide range of transportation projects, most of which were developed in conjunction with our members.

Finally, in 2001 the Massachusetts Chapter has seen our core group grow significantly. The Chapter began the year with 4-5 people attending our monthly board meetings and that number had doubled at our December meeting. Looking ahead to 2002, the Massachusetts Chapter plans to hold an event in central Massachusetts and develop programs targeted toward municipal employees while continuing to grow and work with our sister organizations.

John R. Mirabito, Jr., PE, PTOE
President, Massachusetts Chapter

New Hampshire Chapter

The New Hampshire Chapter of the Institute of Transportation Engineers held three meetings during the year 2001.

In April, we had over 30 attendees at the Highlander Inn at the Manchester Airport to hear Bob Barry, Bureau of Municipal Highways Administrator for the NHDOT, bring us up to date on the latest developments on the Manchester Airport Access Road Project. This project would provide an important new connection to the Manchester Airport directly from the Everett Turnpike, and would include a new crossing of the Merrimack River. This project has been in the planning stages for many years, and has had numerous delays due to sensitive environmental issues.

In June, the NH Chapter had a joint meeting with the Maine Chapter and with the New England Section in Portsmouth, New Hampshire. The meeting centered around a full day technical session on highway capacity. Dane Ismart, of The Louis Berger Group, conducted the session with an emphasis on new procedures and concepts presented in HCM 2000. Dane previously worked for the FHWA and is currently on the TRB unsignalized capacity committee. The meeting was well attended, with over 60 registrants. All participants earned continuing education credits.

In December, the Chapter held its annual business meeting in Concord. In addition to conducting the business, the members heard a presentation by Dave Fluharty, Executive Director of the Technology Transfer Center at the University of New Hampshire discuss several topics on signs and sign management programs. At the business meeting, the Chapter elected the following officers for the year 2002:

President – Joe Lowry, The Louis Berger Group, Inc.
Vice President – Dan Hudson, CLD Engineers, Inc.
Secretary-Treasurer – Todd Landry, City of Nashua

MARK YOUR CALENDAR!

ITE DISTRICT 1 ANNUAL MEETING
May 15 – 17, 2002
Shelter Island, New York
Traffic Signal Monitoring & Data Acquisition System

By Sudhir Murthy, PE, P.T.O.E., TrafInfo Communications, Inc.

TrafInfo Communications, Inc. recently installed and tested a Wireless Signal Monitoring System at a signalized intersection within MassHighway jurisdiction. Through assistance from the MassHighway District 4 office and Ocean State Signal, the system was installed at the intersection of Providence Highway at Dedham Plaza Driveway and BestBuy Driveway in the Town of Dedham during the second week of August 2001. The testing of the system lasted for about 1 month. A brief description of the system is provided below.

In a nutshell, the Wireless Signal Monitoring System performs two primary functions. First, it periodically communicates with the local traffic signal controller to determine if there are any System Alarms and/or Local Detector Fault reports. If so, the system then immediately notifies maintenance personnel via email, of the situation. With this feature, problems at traffic signal locations are identified and fixed quickly.

The second feature of the system is the ability to download data collected at the local detectors. Since 1999, the EPAC controllers include a feature that allows data collection using the local intersection detectors in addition to the traditional system detectors. The controller allows up to 24 data sources, thereby potentially allowing the collection of data by each lane and even the pedestrian push buttons. The data can be collected in any time interval such as 15-minute, 30-minute, 1-hour etc. For the test, the data was collected in 15-minute intervals. The monitoring system downloads this data every 12 hours, with the download occurring once at 12 Noon and the other at 12 Midnight. This data is temporarily stored on a server until downloaded by the user conveniently over the Internet.

One can easily imagine the significant benefits that will be derived by having traffic volume data at the signalized intersections, by lane and in 15-minute intervals. Periodic updates to the signal timings can be achieved. Moreover, each signalized intersection can now also function as a permanent count station, providing continuous count information. This would be a beneficial addition to the traffic counts database maintained by Traffic Data Collection Section within MassHighway.

In order to realize the benefits of traffic data collection at signalized intersections, certain design requirements related to local detectors will need to be adopted to obtain accurate and useable counts. Each intersection approach will need to have at least one set of detectors that are wired independently by lane. In other words, a detector in each lane would need to be wired to a different channel of the loop amplifier. On exclusive left turn lanes, that typically have four detectors wired in serial/parallel, the farthest detector could be wired to a separate loop amplifier channel.

The latest MassHighway specifications for traffic signals already call for a NEMA TS2 controller that can accept significantly more inputs, as opposed to only 8 previously under the NEMA TS1 controllers.

Additionally, with the use of rack-mounted loop amplifiers with a Bus Interface Unit (BIU), at least one detector per lane could be wired to a separate loop amplifier channel to allow for useable data collection. Perhaps MassHighway might consider making it a design requirement for all future signalized intersection work. Having accurate and comprehensive volume data would certainly out-weight the minimal cost increase resulting from additional loop amplifiers.

Sudhir Murthy is President of TrafInfo.COM

Tired of having too much paper clutter on your desk?

How about having your Chronicle and NEITE Meeting Notices sent via email? Documents can be downloaded in Adobe .pdf format for printing.

Look for More Information in the Next Chronicle Issue!
ITS Standards Training Course: Information and Schedule

ITE and the Intelligent Transportation Systems (ITS) Standards Outreach, Education and Training Public Sector Users Advisory Group (UAG), in conjunction with AASHTO, NEMA, AMPO, IEEE, SAE and ITS America, are pleased to announce the continuation of the ITS Standards Outreach, Education and Training Program through calendar year 2002. ITE is continually updating courses within the program to reflect emerging ITS Standards. Program updates during 2002 are expected to focus on emerging Incident Management, Environmental Sensor Stations and Advanced Traveler Information Systems (ATIS) standards, as well as the ITS Data Registry.

Course offerings in this program include:

- **ITS Standards Overview**
- **Center-to-Center Communications (C2C),** which includes TMDD, MS/ETMCC, Incident Management and ATIS
- **Dynamic Message Signs (DMS)**
- **Actuated Traffic Signals/Advanced Transportation Controller (ASC/ATC)**

**ITS STANDARDS TRAINING COURSES INFORMATION AND SCHEDULE**

A schedule for upcoming courses within the ITS Standards Outreach, Education and Training Program can be found on the ITE Web site at www.ite.org. These courses were developed from the requirements in the Work Plan established by the ITS Standards Outreach, Education and Training Public Sector UAG. A downloadable copy of the Work Plan is available. The ITS Standards courses do not have to be taken sequentially. Each course is designed such that it can be delivered individually. A strongly recommended prerequisite for the subject matter courses is the ITS Standards Overview. Those with a working knowledge of the ITS Standards will obtain overview information in each of the subject-matter courses.

These courses are free and the class size is limited to 50 participants per day.

**WHO SHOULD ATTEND?**

- Public-sector transportation professionals responsible for specifying/procuring ITS-related equipment and services that facilitate the movement of goods, people and information;
- Private-sector professionals who understand that ITS technology standards are the key to a successful transportation system; and
- Transportation policy-makers interested in getting maximum utility from the ITS systems of today and tomorrow.

**SCHEDULE FOR ITE SPONSORED ITS STANDARDS COURSES IN CONCORD, NH**

Overview – March 11th
Center to Center – March 12th
Dynamic Message Signs – March 13th
Actuated Traffic Signals/Advanced Transportation Controller – March 14th

For More Information Contact:
James M. Cheeks, Jr., ITE
Email: jcheeks@ite.org
Phone: (202) 289-0222 Ext. 131

Have an article or meeting notice that you want to share? Send it to Chronicle! We will be happy to publish it!

Submission Deadline for the next Chronicle is April 16th

Next Issue will be Mailed in early May 2002 – Look for it in the mail!
MEETING ANNOUNCEMENTS

Massachusetts Chapter ITE & BSCES

Date: March 7, 2002
Location: 57 Radisson Hotel
200 Stuart Street
Boston, MA 02116

Schedule:
11:30 AM – Registration/Social
12:00 PM – Luncheon
12:30 – 1:45 PM – Program

“Simplifying Boston’s Development Review Process”

BTD’s Updated Transportation Access Plan Guidelines

Cost:
$45 Non Members
$40 BSCSE/MAITE Members
$25 Public Sector
$15 Students/Retirees

Register: LeeAnn Duke (617) 776-0432 x118
Email lladuke@geocorp.com

ITE District 1 Annual Meeting

Shelter Island, NY

May 15-17, 2002

ITE District 1 Annual Meeting

Upcoming Events

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<td>May 15-17, 2002</td>
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