

# Trenchless Technology Center Newsletter

December 1997

## Advisory Board Meets



Dr. Straughn (right) of the TTC explains the testing facility to IAB members and staff. From left, Lynn Osborn, Insituform; Jadranka Simecovic, research associate; Peter Strychowski, TRS; Bob Fisher, CSR; Luke Whittle, Ultraliner; Michael Banks, Lamson; Art Kidder, GCTA; Cliff Tubbs, BRH-Garver; and Joe Barsboom, City & County of Denver;

The Industry Advisory Board of the TTC met Sept. 11 and 12 at Louisiana Tech University. The advisory board typically meets in connection with major trenchless industry meetings throughout the year, but the board had decided to have one longer meeting each year at Louisiana Tech University.

The meeting allowed the board to see the continuing improvements in research facilities and to receive updates from TTC faculty on their current research findings. The meeting also focused on setting key research directions for TTC to pursue in

the near future. Many of the research needs discussed related to the loading on pipes and liners used in trenchless technology installation and rehabilitation.

Other strong research needs were in the areas of reducing the need for open excavation to connect or reconnect laterals and

the improved performance of guidance systems. Also of concern was the need to predict the environmental impact of products associated with trenchless methods (such as grouts and slurries) so that acceptable products would be available for use by the industry.

Membership in the TTC Industry Advisory Board is open to all members involved with the industry. Members support the activities of the center and help guide its research, education and technology transfer directions.

## Pipe Bursting Research Project Completed

A 15-month study on the effect of pipe bursting on nearby utilities, pavement and structures was completed on October 31. At the time of writing of this newsletter, the draft technical report on the project was undergoing review by project industry participants.

Following the review and the preparation of the final technical report, the findings will be made available in a number of articles, papers and presen-

tations as well as on the TTC web site. Copies of the report will be available for purchase through the TTC office.

A brief summary of the findings will be made as part of a session on pipe bursting at the UCT Conference in January. A paper on the level of ground vibrations associated with pipe bursting has been accepted for the NASTT No-Dig '98 Conference in Albuquerque in April.

## Research Colloquium

The Trenchless Technology Center is hosting an international research colloquium to be held Jan. 16-23, 1998. The colloquium has been generating a lot of interest in the trenchless technology research community.

To date, the colloquium is attracting 24 participants from seven countries, including five from Canada, one from France, two from Germany, Italy and the Netherlands, each, five from the U.K., and seven from the U.S.A. Inquiries from other European countries and Japan have also been received. The participants represent leading universities that are most involved in trenchless technology research around the world.

Participants will discuss research issues in trenchless construction and explore potential research collaboration. Representatives from municipalities in the U.S.A. are also expected to attend.

The colloquium will first meet in Houston on January 16 & 17 immediately following the UCT'98 Conference. This will be followed by three days of meetings at the TTC in Ruston, January 18-20, and will be concluded in New Orleans on January 23.

For further information, please contact Dr. Fred Akl at the TTC. Phone: (318) 257-4410; Fax: (318) 257-2306; email: [akl@engr.latech.edu](mailto:akl@engr.latech.edu).

## New Industry Support for the TTC

The TTC is pleased to announce that SAIC of Houston joined the TTC Industry Advisory Board in September.

SAIC (Science Applications International Corporation) is an employee-owned company with last fiscal year revenues of \$2.4 billion. The company is active in many diverse fields and is a specialist in information technology and systems integration.

SAIC recently acquired Bellcore which had been a member of the TTC industry board since the board's inception in 1992.



# TTC Assists CERF with New Technology Evaluation

The TTC is assisting the Civil Engineering Research Foundation (CERF) of the American Society of Civil Engineers in a technical evaluation of a water main inspection technology offered by Hydro-scope Inc., USA.

The inspection system uses remote eddy current technology to determine the condition of buried metal water pipes. It provides continuous, direct measurements of the pipeline's remaining wall thickness and graphitization. It generates enhanced information that will enable quantitative engineering decisions about which sections of line need to be replaced.

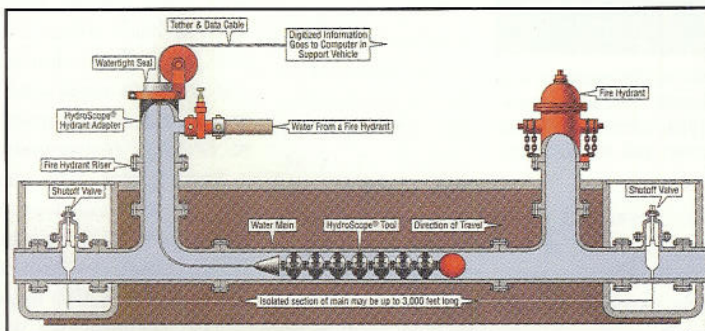
In the evaluation process, CERF convenes a national technical panel to conduct a broad consensus based evaluation of the technology in its intended application. The panel guides the evaluation process and the TTC acts as a consul-

tant to CERF and the panel.

A positive evaluation report from the panel (many members of which are potential users of the technology) provides an independent technical evaluation that can be used by the technology provider in discussion with other members of the public works community.

The process is designed to assist the entry of technology innovations into the market and also to reduce the need for each public works agency to separately evaluate innovative technology.

This new evaluation is in addition to the evaluation of a sewer scanning and evaluation technology (SSET) that is currently in progress at CERF and for which the TTC is also acting as the consultant.



## SSMS Study Continues

TTC faculty members Norm Pumphrey, Freddy Roberts and Les Guice are attempting to produce a prototype of a sanitary sewer management system (SSMS). The project considers only vitrified clay and portland cement concrete pipes and attempts to estimate the remaining pipe life under various states of distress.

Public works and industry experts will view numerous types and severity of distress in these pipes and will estimate the time before the pipe will have to be rehabilitated or replaced. A statistical analysis of the information will be performed to achieve a prediction of the remaining life of the pipe. When incorporated in the SSMS, sewer system managers could then use this information to plan future work schedules and budgets to obtain the most cost effective maintenance approach.

The first phase of the project, involving a survey of the state-of-practice in sanitary sewer management in the United States, has been completed. Former TTC graduate student Omesh Malik, Norm Pumphrey

and Freddy Roberts completed a paper that was recently presented at an ASCE Conference on Infrastructure Condition Assessment. Approximately 130 responses to a sewer management questionnaire were received from sewer managers across the United States. These provided valuable insight into current sewer management practice.

Almost 60 percent of the total sewer miles in the United States is aging vitrified clay pipe. Sewer management districts are beginning to locate these and other pipes and 44 percent of respondents reported using sophisticated GIS systems to help them in sewer management. However, only 14 percent of the respondents indicated that they obtain sewer condition data on their system.

Many respondents indicated that they would be interested in implementing a proven SSMS. The researchers hope that this project will give managers more information about how long a distressed pipe might function before it fails.

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## Industry Advisory Board

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