

Computer-based anti-icing and RWIS training

INFORMATION IS POWER, especially when winter maintenance staff use it to take preventive, pro-active, anti-icing action during the calm before the winter storm—saving money, time, and even lives.

In Iowa, winter maintenance staff and supervisors have access to real-time data about pavement and atmospheric conditions collected by road weather information system (RWIS) sensors. These data are then sent to computers in maintenance facilities throughout the state.

But making sound winter road maintenance decisions based on current environmental data requires training and practice. That's why the Iowa DOT is one of 31 state DOTs using a new computer-based training (CBT) program to learn the art of RWIS data interpretation and operational application.

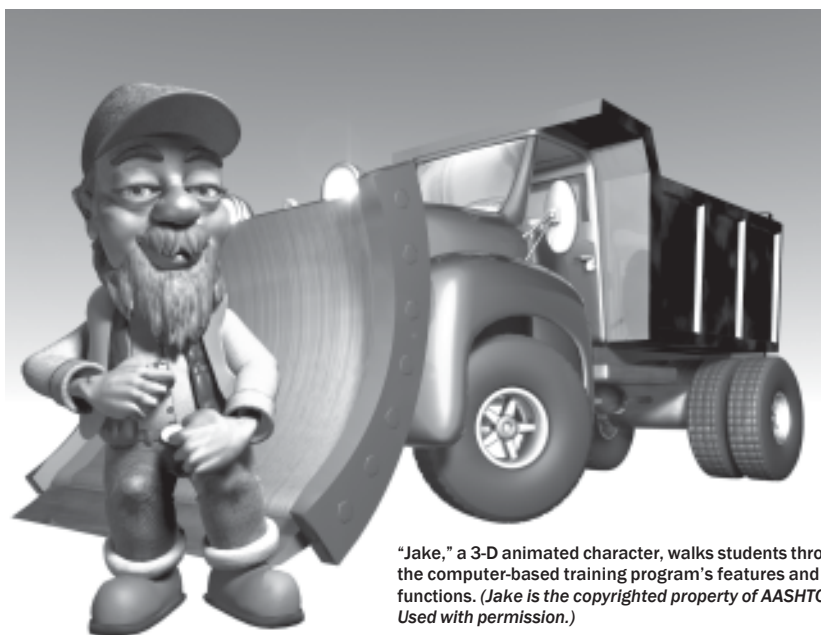
CBT includes modules specific to staff responsibilities and is accessible through an interactive CD-ROM, allowing users to learn at individual paces, as follows:

- Maintenance supervisors learn how to decide when and where to deploy anti-icing equipment and how much chemical to use.
- Operators learn how to override a snowplow's automated system when necessary to fine-tune chemical placement.
- Decision-makers learn how to analyze the effectiveness of anti-icing strategies under various weather conditions.

Generic versions of the CBT will be available to road agencies in spring 2004 from the APWA and NACE. The Iowa DOT has placed a generic version of the training in each maintenance garage around the state and encouraged operators and supervisors to test the system. In fall 2004, they will release an adapted version of the CBT that includes Iowa DOT policies and procedures with pictures of Iowa roads and road conditions, so users will feel right at home.

For more information

Contact Leland Smithson, AASHTO Snow and Ice Cooperative Program coordinator, 515-239-1519, leland.smithson@dot.state.ia.us. •



"Jake," a 3-D animated character, walks students through the computer-based training program's features and functions. (Jake is the copyrighted property of AASHTO. Used with permission.)

Winter maintenance decision support system

WE ALL have trouble making decisions sometimes. When those decisions involve how to care for often-unpredictable winter roads, winter road maintenance managers have an especially tough job.

Help may be on the way. For the second winter, the Iowa DOT is testing a prototype of the Maintenance Decision Support System (MDSS) being developed by five national research centers for the FHWA. Based on data the system collects, the MDSS makes road maintenance recommendations about how much chemical to apply and when and where it's needed.

The data are collected from several sources, including the road weather information system (RWIS) sensors, numerical weather prediction models, and surface observations. The system monitors road and weather conditions throughout the state, alerting road maintenance managers to critical changes.

Even though the MDSS makes specific recommendations, managers must still be able to evaluate those suggestions based on their job experiences and interpretations of weather information. Therefore, computer-based RWIS training is still crucial (see related article).

CTRE researchers are collecting data from the test this winter, and the system is constantly being tweaked to improve forecast performance. In fall 2004, the finished product will be available to road agencies and state DOTs throughout the country.

For more information

Contact Dennis Kroeger, CTRE transportation research specialist, 515-296-0910, kroeger@iastate.edu. •

Anti-icing/deicing video

WHEN should deicing chemicals be used instead of abrasives? Where would a snow fence help?

The answers to these questions and more can be found in the Iowa DOT's *Winter Operations Training Program: Anti-icing/Deicing* video. This 30-minute video is the fifth in the *Winter Operations Training* series from the Iowa DOT.

To borrow the video, contact Jim Hogan, LTAP library coordinator, 515-294-9481, hoganj@iastate.edu. Ask for video V-567. •