Client: Castle Rock Associates

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Description: I was lead author on this abstract submitted for presentation at the National Rural Intelligent Transportation Systems (NRITS) conference. It describes a technology project ("Module X") that was in a conceptual planning phase at the time. Unfortunately, NRITS does not have an online archive of abstracts and agendas prior to 2011.

Using SMS (Texting) in ITS (Intelligent Transportation Systems)

With the increasingly wide use of mobile wireless devices, along with growing public demand for improved and more reliable travel information, transportation agencies have been developing new ways of acquiring better data from the field and disseminating it through a wider range of media. SMS (short message service) messaging technology, commonly known as “texting,” has become an increasingly popular method of digital communication in the last several years, and many agencies are planning innovative ways of using this medium in the ITS field. SMS can be used wherever cellular coverage is available and does not require users to purchase additional devices or services other than a mobile phone, making it an attractive option for efficient delivery of traveler information.

Castle Rock is working with state departments of transportation (DOTs) in the U.S. to build applications that leverage wireless devices for both input and delivery of real-time travel information. Over the past three years, several DOTs belonging to the CARS group (see www.carsprogram.org) have worked to develop and deploy a subscription-based e-mail and SMS-push service known as Module X. Module X is an example of a “notification” application that allows registered users to receive automatic alerts about road conditions and other information critical to public safety.

SMS technology offers “lookup” functionality in addition to one-way notifications. A two-way texting concept is being explored by the CARS group that would allow personalized information exchange between a wireless phone number and a group-owned SMS “short code.” This type of service would deliver customized alerts, such as conditions affecting a specified route, in response to a text request from the user. It is anticipated that the concept will be expanded to include transit and weather information.

Travelers can also use two-way SMS to retrieve standardized information from transportation agencies. Castle Rock worked with the Westeros DOT to develop an application known as XYZ, which utilizes a cell phone browser. The XYZ interface includes a two-way SMS function allowing users to acquire real-time road weather conditions from RWIS stations throughout the state.

Members of the CARS group are also exploring the use of SMS to monitor agency-run Closed-Circuit Television (CCTV) and Dynamic Message Sign (DMS) deployments. It is envisioned that authorized staff will be able to send SMS requests to a centralized server in order to receive the latest roadside camera images or DMS messages. This concept may be taken even further by developing the means to *control* CCTV and DMS equipment via SMS. Such an application would allow personnel in the field to respond quickly to changing situations without having to use a computer to relay critical updates.

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