PROJECT SUMMARY

Automated Waze Imports

Project Location:
Systemwide

Start – Finish Date:
Report submitted in June 2021

Project Status:
Complete

Project Partners:
Castle Rock

MnDOT Project Cost:
$52,000

Projects with Similar Characteristics:
511 Traffic Camera Maximizer

Project Description:
Waze offered a traffic data feed to government transportation agencies, which included alerts (citizen alerts of traffic delays, construction, accidents, etc.) and jams (slowdown information created algorithmically by the Waze platform). The Automated Waze Imports task consisted of several components:

- Customized and deployed a Waze alerts importer.
- Enhanced the alerts importer eligible for the 511 Google delay measurements.
- Developed an importer for Waze Jams.

The project involved importing all alert types from Waze, determining which events should be documented based on reliability and confidence scores, adding expected delays to 511 events, determining which jams should be eligible for import into 511, and adding directional information to displayed jams.

Project Objective:
The project objective was to improve the user experience of the existing 511 system and provide accurate real-time information to users through integration with Waze.

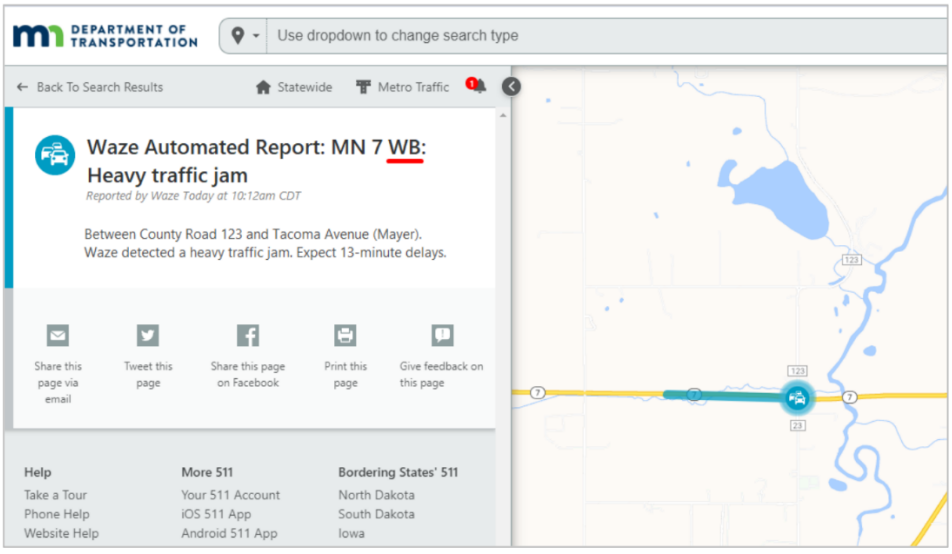

Figure 1: MnDOT 511 website showing a traffic jam from an automated Waze report.

Project Accomplishments:
- Determined a methodology for which event types and jam types should be featured on the 511 website.
- Added delays to events on the 511 website.
- De-cluttered the 511 website by clustering icons and features.

Key Findings:

Filtering of Alerts and Jams

Waze alerts and jams data can be refined to display what users wanted to see. Jams were displayed if they ranged between level 2 (moderate traffic jam) and level 4 (bumper-to-bumper traffic). Alerts were displayed after verifying the minimum confidence score of 2 out of 10, and the reliability score required a minimum of 5 out of 10.

Event Counts

The number of imported events ranged from 40-50 during non-congestion times and increased to 150-200 during rush hours. Creating event clusters on 511 allowed the website to maintain its usability while displaying many events.

Lessons Learned:

- Data imported from Waze needed to be refined to provide the most accurate and useful information to travelers.
- Identified value of using a different approach to data gathering through crowdsourced data.

Potential Next Steps for MnDOT:

- For future V2I application projects, determine feasibility of integrating machine generated data information and human inputted data feeds.
- Determine feasibility of packaging application data feeds for use by Waze and/or other third-party mapping applications.
- Establish a systematic review (every three years) to evaluate accuracy of Waze information to identify potential operational improvements using Waze data and evaluate usefulness of data to 511 users.