intetics
The Remote In-Sourcing® Company

"As a result of using the new data acquisition model proposed by Intetics, we are able to deliver the most up-to-date maps to our users."

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CROWDSOURCED PROCESS FOR GEODATA COLLECTION PROPOSED BY INTETICS HELPS A LEADING MAP PROVIDER BEAT COMPETITION

OBJECTIVE

To design a new data collection process so a leading map maker can provide the most up-to-date maps to their users and stay ahead of competition.

CHALLENGE

The digital map provider can remain a leader in the industry only if their maps remain accurate and up-to-date. To collect accurate information, the map provider typically collects geo data from geotagged videos that are collected by field teams using specialized vehicles with video cameras. The field teams regularly visit assigned areas to record changes and update the client's maps accordingly. Changes, however, can occur more often than the regularly scheduled field trips. Yet, these changes need to be reflected in client's maps as soon as possible, or they will begin losing users. To ensure changes are recorded as quickly as possible, the client asked Intetics to come up with an alternative solution to gathering and verifying geo-data.

SOLUTION

Intetics has been working with the client for 8 years, delivering custom geospatial services. Client's Intetics team quickly realized that the main solution to the problem was access to more geo-tagged videos, more frequently. To avoid increasing number of fieldworkers, Intetics proposed that the client makes use of dash cam video recorders that provide access to high-quality, crowdsourced, geotagged videos. These recorders are often used by transportation companies, taxi and delivery services with the help from registrars.

Then, in cooperation with the client, Intetics developed a process of using geotagged videos from dash cams as sources for geospatial data. First, it was necessary to develop a specialized PO-Dash Cam Converter (which uses the .NET Framework and C++), to process video data from various providers.

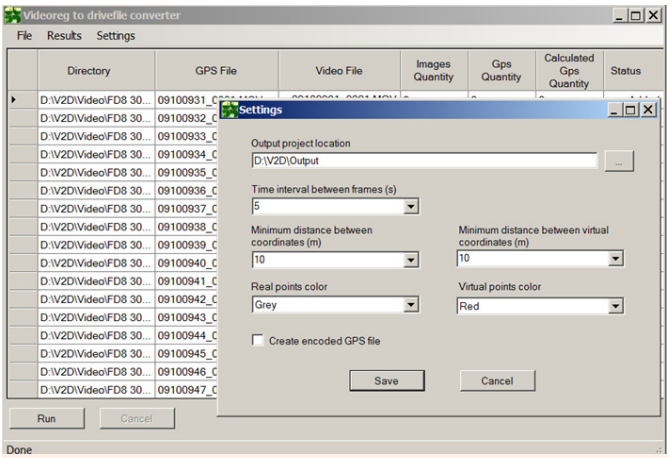
The main functions of the Dash Cam Converter were to:

- Analyze data quality
- Convert video from various formats into a series of geo-tagged images in JPEG format (supporting 16 formats)
- Convert location data from various

MAP-MAKER BENEFITS FROM A WORKING PROCESS AND CUSTOM SOFTWARE THAT KEEPS MAP DATABASE UP-TO-DATE

formats into one (supporting 8 formats)
- Tighten control of conversion parameters to receive the best results
- Control quality

The video material is analyzed every week and if any changes are found, they are immediately transferred to the client's geo database. Finally, Intetics developed a separate work documentation process to provide full support and control over the new updating process.



RESULTS

The client received a working process that is being used, developed and is supported by the specialists at Intetics. The custom software helps process more than 2,000 kilometers of roads in 7 countries. This allows the client to maintain an always up-to-date database and ensure that their maps accurately reflect the real world, maintaining their status as the leading provider of geographic information for consumers.

QUICK FACTS

- *New process allows to update maps weekly*
- *Custom software processes more than 2,000 km of roads in 7 countries*
- *Crowdsourced process reduced costs of database updates and decreased number of required field trips*

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