Marine Traffic improves shipping logistics and crisis response with Google Maps API for Work

MarineTraffic

At a Glance

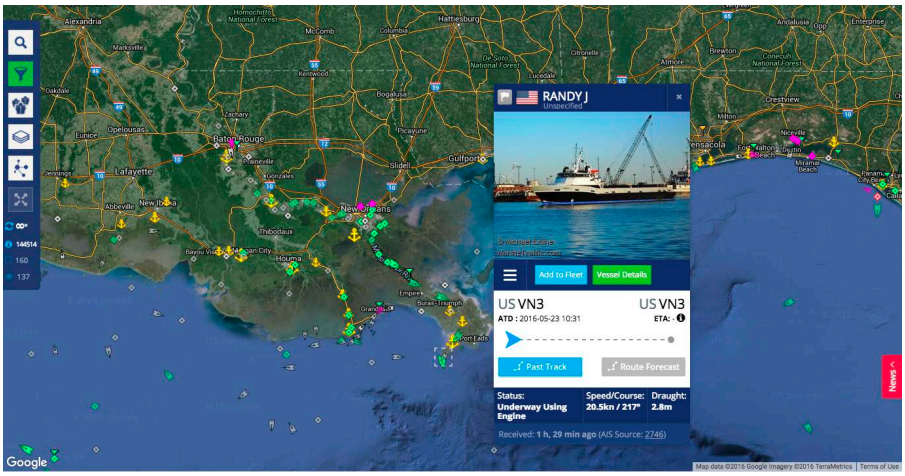
What they wanted to do
- Offer an easy way to track ships around the world
- Create a database of vessel location information available via the cloud
- Offer layers of Maps services on top of the API

What they did
- Used a transponder to pick up AIS signals and put them into a database
- Plotted AIS signals into Google Maps API for Work
- Layered other Maps services, such as weather and ship types, on top of the API

What they accomplished
- Marine Traffic became the de facto standard for remote ship tracking
- The service became so popular that it began offering subscription services
- Increased visibility for ships, improving businesses and crisis management
- Met a need for real-time geo-location information for commercial ships and emergency services

Business

Started in 2007, Marine Traffic began as a one-person hobby to track the movement of the world's ships. It has built a reputation as a simple and reliable platform and grown to become the world's largest vessel-tracking destination.
The service is used behind the scenes during times of disaster management ranging from oil spills, airlines crashes to boating accidents. Marine Traffic helps governments and companies coordinate responses using its geolocation service. The site provides live location information on ship movements around the world that's also used by shipping businesses, telecommunications companies, securities traders, recreational boaters and coastal services.



Marine Traffic collects data from AIS (Automatic Identification System) transponders placed on board sea faring vessels. AIS transponders include a GPS receiver to collect global positioning and a VHF transmitter to send this information on two VHF channels. All large vessels are required to broadcast their position through AIS, a public signal available to anybody. Marine Traffic collects this information in a database to track ship movement, along with information on ports, geographies as well as photos of vessels.

Challenge

Ship managers on land can't always easily pinpoint the location of their marine vessels at sea. This means that emergency coastal services find it difficult to locate the nearest coast guard to aid them in emergencies, and companies tracking shipping logistics of commercial ships lack visibility on delivery times at ports.

Google Maps for Work

"This might sound strange, but the ship owners and the managers don't always know where their vessels are," says Demitris Memos, Managing Director of Marine Traffic.

For navigation, ships have been limited to proprietary systems that offer limited location information. AIS tracking, which was devised to avoid ship collisions, wasn't previously tied into a cloud-based service that could give worldwide data in real time. The technology was adequate for ships to avoid one another but lacked the ability to easily manage fleets and logistics remotely.
Also, there was a lack of a central database for AIS feeds for those tracking ships. Before Internet-based maps and cloud-based databases served this information, it was siloed information with limited access.

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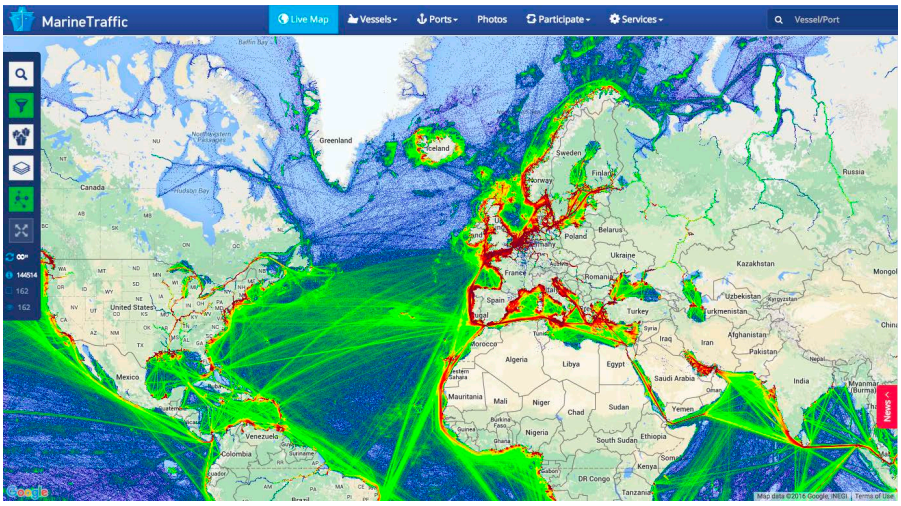
Google Maps for Work
allows you to bring data to life by showing it on a map. Contextual insights can be shared with people inside and outside of your organization, across a variety of devices such as tablets and smartphones. By embedding maps in your website and applications, you can also create a visually rich experience that engages your users, encouraging a higher level of interaction. Whenever you have data that has a geographic reference such as an address or lat/long coordinates, it's an opportunity to provide a more engaging experience through a map.

For more information visit:
www.google.com/work/mapsearth/

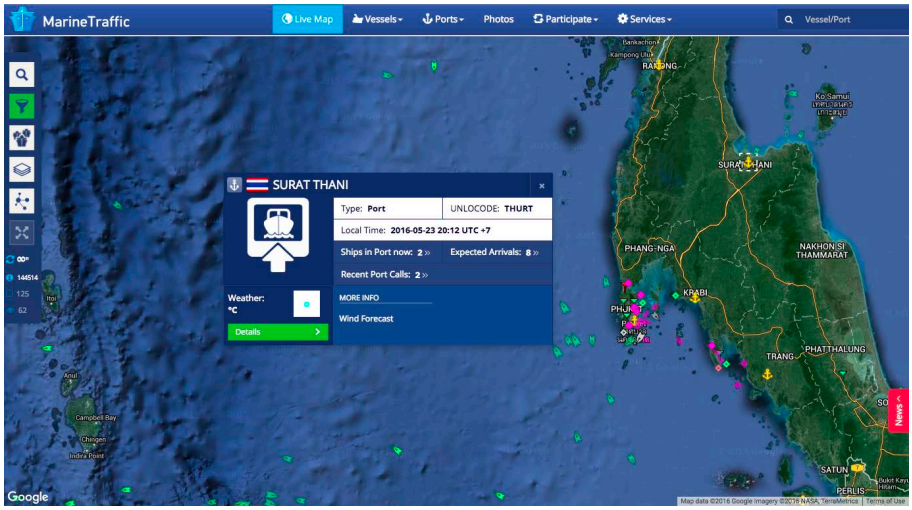


Solution

A website was built at MarineTraffic.com that pairs AIS data with the Google Maps for Work API. From the beginning, the service has been well-received by the shipping community and radio amateurs. Marine Traffic uses the Google Maps API for Work and AIS radio frequency signals of marine vessels to plot movement of vessels around the world. The data is viewable on its website and MyFleet app for iOS and Android.
The service, which is available for free but offers more features to subscribers, allows users to track ships displayed all over the world on Google Maps. It provides the geolocation history, details about vessel, port conditions and other statistics. Marine Traffic keeps track of the ports of call information on all ships so that people can know the exact times that ships arrive at and leave ports. Data that's transmitted and received at base stations is uploaded into the database and immediately made available on Maps.
Marine Traffic also offers Density Maps, which provide information on the volume of particular kinds of ships. Density Maps give users a

Google Maps for Work

visualization of vessel traffic and allow people to filter to view only the density of tankers, cruise boats or tug boats, among others. It's a Google Maps for Work visual that lives on top of the API and allows people to quickly examine worldwide trends of various ship types. Also, people can find overlays of wind and temperature on overlays in Maps.
The Marine Traffic service also offers geo-fencing capabilities so customers can get alerts when ships approach their equipment in the sea. Wind farms, for example, can get proximity alerts when vessels approach their offshore turbine structures and offshore oil platforms receive alerts when ships approach to help prevent collisions. Marine Traffic has geo-fenced about 20,000 marinas around the world and offers alerts on their entries to make navigation easier.
Marine Traffic worked with Google Maps Partner Ancoris to set up its services.



Results

Based on historical data and geolocation of ships, Marine Traffic can also estimate the time of arrival and offer alerts if it appears a vessel is delayed. Automakers are using the service to track shipments of cars so they can update their customers on delivery times and dates much the way people track packages.

"A major car manufacturer is using it to monitor the vessels coming from Europe to the U.S., allowing for the customer to be able to track a specific car. It's a service the car makers like to be able to offer to their customers," says Memos.

Telecommunications companies use it to track ship patterns to avoid placing undersea cables where these vessels might drop anchor and take out cable TV for millions of viewers.

"Cable and telecommunications operators are really interested in the landing point of their cables. An anchor could drop onto a cable and take out a huge area. They want an alert when a ship drops anchor," says Memos.

Google Maps for Work

Using Marine Traffic, securities traders measure ship movements and weather effects to gauge how companies are performing along the supply chain. They can use this information to predict companies' traction in their market to inform investment strategies.
Marine Traffic now attracts more than 60 million page views per month and has seen it's growth double in the past two years to a peak of about 6.2 million monthly active users. There were 250 million map loads in the first three months of the year. Marine Traffic has become a major destination of information for recreational boaters as it grows.

"We've gotten messages that said 'You saved my life because I managed to avoid a huge container ship that would have been a collision,'" says Memos.
