



Red Funnel

Enhancing customer service with Twittering ferries

Overview

The Need

Red Funnel is always looking for ways to make its passengers' journeys more efficient. When an IBM Master Inventor devised a solution designed to predict the actual arrival and departure times of each Red Funnel ferry, the company was keen to explore the customer service benefits.

The Solution

By applying data analytics to information gathered from sensors onboard its ferries, Red Funnel can inform customers of the imminent arrival or departure of its ferries in near real-time via Twitter.

What Makes it Smarter

By intelligently interpreting real-time Automatic Identification System (AIS) data received from the ferries, the solution helps Red Funnel keep travellers and road transport operators better informed of departure and arrival times. For businesses in particular, this improves efficiency.

The Result

"With nearly 14,000 vehicle ferry sailings and 23,000 Red Jet passenger sailings each year, improving the information flow to help our customers better plan their journeys and avoid unnecessary delays is of tremendous value."

– Jonathan Green, Sales & Marketing Director at Red Funnel

Red Funnel has been operating passenger and vehicle ferry services between Southampton, on the UK mainland, and Cowes on the Isle of Wight (IOW) for nearly 150 years. Unplanned cancellations are rare, affecting less than 1% of crossings in 2009 but, because the ferries provide a vital link with the mainland for IOW residents and businesses, any delay or cancellation can have significant impact. Every year Red Funnel carries around 112,000 commercial vehicles, 600,000 cars and 5,000 coaches and the company is always open to new ways of improving the predictability of ferry movements and improving customer service.

One IOW resident who regularly uses the Red Funnel ferries to commute to work on the mainland is an IBM Master Inventor and Distinguished Engineer. For his own benefit, he capitalised on his knowledge of smart solutions and wrote an application that took advantage of the positioning data already transmitted by the ferries every few seconds, using it to determine the predicted arrival and departure times of each vessel. This application ran on his home computer posting updates to Twitter. When he noticed that Red Funnel was using a feed from his Twitter page to post live ferry positions on its web page he decided to contact the company to explore how the solution might be improved and fully adopted by Red Funnel. A successful business relationship developed from there.

Existing information, smarter service

The Maritime and Coastguard Agency requires all commercial shipping operators to use an onboard Automated Identification System (AIS) – an enhanced radar system – to track vessel locations and speeds. It is data transmitted by this system that the Red Funnel solution uses when calculating timings for its ferries.

The IBM WebSphere® messaging system MQTT is designed to bring together GPS signals from the onboard AIS with analytics applications which use geofencing (a static, virtual perimeter around the GPS position of each ferry port) to provide information about each ferry's exact location and when it is entering or leaving port.



Benefits

- Improved customer experience through the provision of more accurate ferry times
 - Opportunity for greater efficiency for businesses using the ferry service
 - Potential to introduce additional improvements that would enhance customer experience further and increase operational efficiency at Red Funnel.
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The way that vessels manoeuvre when arriving or departing caused the main challenge when developing the solution. A ferry may leave a port backwards, for example, turn around in a U shape and stop before finally departing. This complex series of movements makes it difficult for an application to know if a vessel is entering or leaving port. The algorithms within the analytics applications have been refined several times to increase accuracy.

IBM Lotus® Expediter micro broker manages the communications between the radio-based data feed from the ferries, the applications, and the gateway to Twitter. Twitter then provides the RSS feed used to display the live ferry positions on the Red Funnel web site.

Jonathan Green, Sales and Marketing Director at Red Funnel says: “What is remarkable is that by applying intelligence to information we already generated, IBM is helping us provide a smart service for a minimal investment.”

Accurate journey planning

Red Funnel already had an active community following on both Twitter and Facebook. This latest innovation extends its social media presence and helps bring a new level of predictability to ferry movements, improving customer service.

Smarter Ferries

Enhancing customer experience through the provision of near real-time information



Instrumented

Sensors, already present on all Red Funnel ferries, transmit real-time, radio-based AIS data identifying their current location.



Interconnected

AIS data from the ferries is processed by analytics applications before being passed to Twitter to display live ferry positions on the Red Funnel web site.



Intelligent

Real-time location data and analytics provide accurate details of every ferry, keeping travellers and transport operators better informed. This improves customers' ability to plan journeys and increases efficiency.



Solution Components

Software

- IBM WebSphere MQTT
 - IBM Lotus Expediter
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For businesses using the ferry service, increased predictability provides opportunity for greater business efficiency. Transport operators and service providers could use the service to anticipate delays and make alternative arrangements. They might, for example, schedule extra pickups whilst waiting for resumption of service.

“With nearly 14,000 vehicle ferry sailings and 23,000 Red Jet passenger sailings each year, improving the information flow to help our customers better plan their journeys and avoid unnecessary delays is of tremendous value,” confirms Green.

Potential to develop

In addition to the greater transparency already delivered to customers, Red Funnel's new solution has opened up opportunities for future customer service improvements. “We expect to be able to further develop the system to provide real-time information on how the service is operating against the schedule, and also to contact customers booked on the service through SMS to advise of any delay,” says Green.

Red Funnel currently displays the status of all its ferry services on its web site and sends SMS messages to customers booked onto a specific ferry who have asked to be notified of delays. However, both these services are provided manually. By extending the IBM solution, status updates and SMS alerts could be automated, which may improve the accuracy and timeliness of the information provided to customers, and potentially increase Red Funnel's operational efficiency.

For more information

Please contact your IBM representative or IBM Business Partner.
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at Red Funnel



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