


CASE STUDY

## 3i TECHNOLOGIES

“THANKS TO THE OPEN ARCHITECTURE OF MAPXTREME, OUR 3iVMS APPLICATION IS EXTREMELY CUSTOMIZABLE.”

Kenneth Tan, CEO, 3i Technologies Pte Ltd

USING 3i TECHNOLOGIES' MONITORING APPLICATION, VESSEL OWNERS NOW HAVE PEACE OF MIND FROM KNOWING THE EXACT LOCATIONS OF THEIR VESSELS.



### Challenge

To take on established competitors and to better serve the needs of its maritime industry customers, 3i Technologies needed a development platform with an open yet sturdy architecture.

### Solution

Using the MapXtreme SDK, 3i Technologies has developed a Web-based vessel monitoring application that lends itself to customization, continual enhancement, and integration with complementary technologies.

### SUMMARY

Established March 2004 in Singapore, 3i Technologies Pte Ltd is a leading provider of Electronics Security and asset monitoring solutions. It also operates a 24x7 command centre that seagoing vessels with a Ship Security Alert System can alert in the event of a security incident.

The company's suite of asset monitoring solutions, which make up about half of its total business, consists of an automated vehicle tracking system and a vessel monitoring system. Called 3iVMS, the latter system is the mainstay of 3i Technologies' asset monitoring business. Combining GPS, satellite communications and geographical information systems, it allows vessel owners to pinpoint the location(s) of their seacraft at user-definable time intervals and view their routes on a map. Owners can also set up geo-fencing zones and receive notifications as their vessels leave or enter these zones.

“Besides piracy, pilferage of cargo and fuel is a problem for vessel owners. With geo-fencing, they can be alerted when their assets are sent off their intended routes, whether by hijackers or by a less than honest crew,” said Kenneth Tan, CEO of 3i Technologies.

When a vessel leaves a pre-defined geo-fenced zone and does not enter another one shortly after, he explained, an alert is sent via email to the vessel owner, who can then turn to 3i Technologies, port authorities or maritime policing agencies for help in recovering it. In piracy incidents, crew members can trigger alerts by pressing covert panic buttons located on-board.

### MapXtreme An Easy Choice

The first application to be launched by 3i Technologies, 3iVMS was developed using Pitney Bowes Business Insight's MapXtreme, the leading software development kit (SDK) for integrating location intelligence into both desktop and Web-based systems.

“We did look at one other SDK but found MapXtreme to be superior. MapXtreme also came highly recommended by our hardware partners so the choice was an easy one to make,” said Mr. Tan. MapInfo consultants, whom he described as “very responsive”, were involved in the development of 3iVMS at the initial stage, helping to map the application core with Inmarsat and telco gateways as well as GUI integration.

3i Technologies delivers the 3iVMS application to its customers as a service, with access via the company's website. Users range from individual tugboat owners to fleet operators whose vessels ply routes connecting Indonesia, Singapore, Malaysia and Vietnam. Implementation is a breeze, Mr. Tan said, with just a few hours needed to install the necessary hardware and make the system operational.

“While competing vessel monitoring systems are available in Singapore, these have only generic functions. Thanks to the open architecture of MapXtreme, our 3iVMS application is extremely customizable. This allows us to custom-fit the application to each customer such that all their unique needs are met.”

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Kenneth Tan, CEO, 3i Technologies Pte Ltd

The ease of integrating new technologies into the 3iVMS core has also enabled 3i Technologies to make two major enhancements to the application. The first incorporates flow-meter sensors and allows vessel owners to remotely and accurately check the amount of fuel being used by their vessels. Besides preventing pilferage of fuel, this enables owners to do a better job of provisioning voyages. The second enhancement, draught sensing, makes it possible for government bodies responsible for natural resources to ensure that dredging contractors or concessionaires do not remove from the seabed more material than they are allowed, or dredge outside authorized areas.

### Full Steam Ahead

Going forward, 3i Technologies is working on a low-power portable tracking unit that does not have to be hard-installed on vessels or other assets, and on a satellite broadband link that will deliver vessel owners live video of their vessels' journeys. The company also plans to introduce new applications that can be accessed either via its website or as downloadable applications.

“We're also looking at setting up offices or partnerships in Malaysia, Indonesia and Vietnam. Whichever local business model we eventually choose, the MapXtreme-based application core is already in place and deployment should be a quick affair,” said Mr. Tan.

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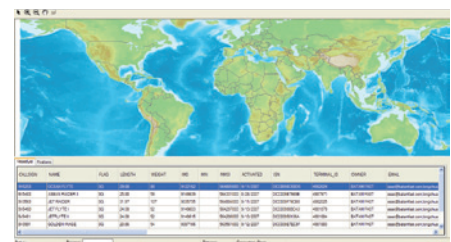
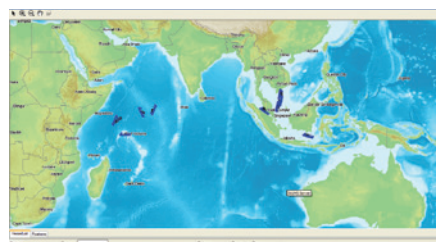
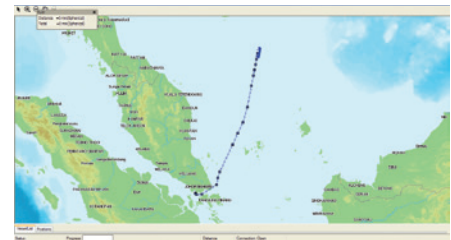
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#### 3i Vessel Monitoring System (3iVMS) – Powered by MapXtreme:

Combining GPS, satellite communications and geographical information systems, 3iVMS allows vessel owners to pinpoint the location(s) of their seacraft at user-definable time intervals and view their routes on a map.

#### THE PITNEY BOWES BUSINESS INSIGHT ADVANTAGE

3i Technologies prides itself on providing high-quality asset monitoring services. With the sturdy yet flexible applications that it has built using Pitney Bowes Business Insight technology, it can meet the needs of its customers while continuing to grow organically and through partnerships.

