

CASE STUDY: ASTRATA GROUP INCORPORATED

Astrata Group Incorporated Develops Anti-Terrorism Homeland Security Tracking and Control Solution for Singapore Government Using MapInfo's Mapping Technology.



“MapX is no doubt an efficient and cost-effective tool that is a cut above the rest.”

Maurice Borer, Regional Business Development Manager, Astrata

CHALLENGE

The SCDF wanted to implement a system to carry out real-time tracking of vehicles carrying dangerous goods. This is to strengthen its ability to tackle unconventional chemical and biological threats as well as 'dirty' bombs ie. any Radiological Dispersal Device, radiological weapon which combines radioactive material with conventional explosives.

SOLUTION

To meet the SCDF's requirements Astrata's Research and Development ("R&D") team for Homeland Security Products developed the Astrata Geo-Spatial Information Technology System (the "GEO-IT System"), an advanced tracking, monitoring, and control system.

After a rigorous evaluation exercise, MapInfo's MapX® software was chosen as the mapping technology for the HazMat Transport Vehicle Tracking System for the SCDF.

Astrata Group Incorporated (OTC Bulletin Board: ATTG - News) is focused on advanced location-based IT services and solutions (GEO-IT) that combine GPS positioning, wireless communications (satellite or terrestrial) and geographical information technology, which together enable businesses and institutions to monitor, trace, or control the movement and status of machinery, vehicles, personnel and other remote assets. Astrata has designed, developed, manufactured and currently supports eight generations of GEO-IT systems with over 80,000 units deployed worldwide.

The intensification and proliferation of terrorist activities in the world has prompted the Singapore Government to step up its efforts to increase its homeland security. Companies such as Astrata Group Incorporated who develop advanced location-based IT services and solutions play an instrumental role in delivering homeland security tracking and control solutions to organisations and governments worldwide.

The Situation

The Singapore Civil Defence Force (SCDF) is charged with ensuring the safety of Singaporeans and the economy to near-normal conditions during any eventualities. Its main roles are to provide fire fighting, rescue and emergency ambulance services; as well as to formulate, implement and enforce regulations on fire safety and civil defence shelter matters.

One of the measures taken by the Singapore Civil Defence Force (SCDF) to address the threat of terrorism is to implement a system to carry out real-time tracking of vehicles carrying dangerous goods. This is to strengthen its ability to tackle unconventional chemical and

biological threats as well as 'dirty' bombs ie. any Radiological Dispersal Device, radiological weapon which combines radioactive material with conventional explosives.

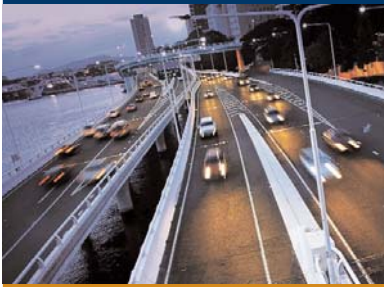
In September 2004, the SCDF invited several vendors to propose a vehicle tracking solution which could provide comprehensive tracking, monitoring, and sophisticated control functions. Following an intensive evaluation exercise of proposed solutions by vendors, Astrata (Singapore) Pte Ltd - a Joint Venture Company owned 51% by Astrata (Asia Pacific) Pte Ltd and 49% by PCS Security Pte Ltd. - was awarded the contract to develop and implement a HazMat Transport Vehicle Tracking System (HTVTS).

To meet the SCDF's requirements Astrata's Research and Development ("R&D") team for Homeland Security Products developed the Astrata Geo-Spatial Information Technology System (the "GEO-IT System"), an advanced tracking, monitoring, and control system. Astrata's R&D team also embarked on a search for a superior mapping solution that could deliver the high performance required at a cost effective price. After a rigorous evaluation exercise, MapInfo's MapX® software was chosen as the mapping technology for the HazMat Transport Vehicle Tracking System for the SCDF.

The HazMat Transport Vehicle Tracking System (HTVTS) comprises two phases:

- Phase one involves the tracking of all local and foreign vehicles carrying bulk petroleum and toxic material
- Phase two involves the installation of an immobiliser which can remotely stop vehicles from entering exclusion zones.

THE MAPINFO ADVANTAGE



To meet SCDF's requirements for a HazMat Transport Vehicle Tracking System, Astrata developed the Geo-Spatial Information Technology System, an advanced tracking, monitoring, and control system incorporating MapInfo's mapping technology. MapInfo's MapX® mapping solution and engine was selected because it is proven, robust, flexible and easy to use. The ActiveX component enables Astrata's developers to add mapping functionalities to the application – seamlessly, quickly and easily. MapInfo's reliable and proven location intelligence technology complements and adds value to Astrata's product offerings by enabling Astrata to provide flexible and scalable solutions that can easily be customised to suit their customers' needs.

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"We are very pleased with the quality and performance of MapInfo's MapX and as such, we will continue to leverage on MapInfo's best of breed technology to develop innovative solutions for our customers"

Sandy Borthwick, Managing Director, Astrata, Asia Pacific Region

Using the solution developed by Astrata, the SCDF will be able to track all vehicles carrying hazardous materials and chemicals which could become a possible weapon used by terrorists. From the control room at their headquarters, SCDF officers will be able to monitor a vehicle's movement in real time and view the exact location and activities of each vehicle to prevent hazardous materials from being used as a weapon, as well as to minimise the impact of a possible terrorist attack using such materials.

Approximately 500 local HazMat transport vehicles will be fitted with a tracking device which is smaller than a mobile phone and fits under the dashboard. These vehicles can only travel along approved routes away from highly populated areas at specific times to reduce the impact of any possible disasters. If a vehicle strays from its path, the device will trigger an alarm, mobilising emergency services.

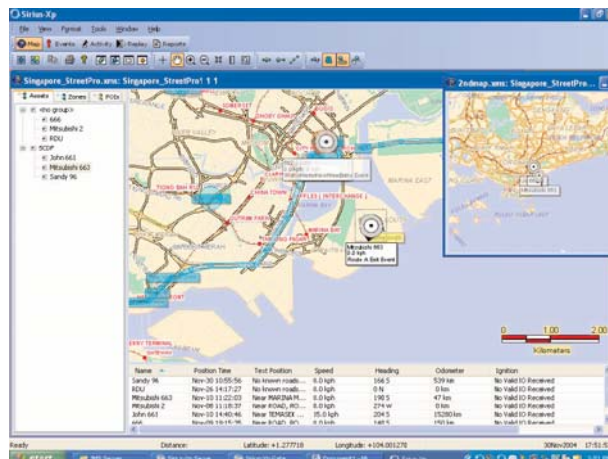
Another unique feature of this system is the ability to monitor vehicles in tunnels, urban canyons and underground parking structures. These capabilities set a new benchmark for security conscious nations around the world with similar concerns for public safety. At present, Singapore is the first country in the world to implement the HazMat transport vehicle tracking system.

The Benefits

Maurice Borer, Regional Business Development Manager, Astrata (Asia Pacific) said, "The choice was clear for our R&D team. They were looking for a mapping solution and engine which was proven, robust, flexible and easy to use. MapInfo's MapX® fulfilled all of these requirements. The ActiveX component enables our developers to add mapping functionalities to the application - seamlessly, quickly and easily. MapX is no doubt an efficient and cost-effective tool that is a cut above the rest."

MapInfo MapX helps simplify application development through its use of standard languages, a streamlined object model, extensive methods and events, efficient property pages, defaults and other wizards. It also offers users a highly visual way to display and analyse location-based data to better serve customers; and management to make better decisions and manage assets and operations more effectively.

Sandy Borthwick, Managing Director for Astrata's Asia Pacific Region, commented, "MapInfo's reliable and proven location intelligence technology complements and adds value to Astrata's product offerings by enabling us to provide flexible and scalable solutions that can easily be customised to suit our customers' needs. We are very pleased with the quality and performance of MapInfo's MapX and as such, we will continue to leverage on MapInfo's best of breed technology to develop innovative solutions for our customers."



Astrata's GEO-IT System is powered by MapInfo's MapX. The system monitors HazMat vehicles' movement in real time, allowing security personnel to view and track the exact location and activities of each vehicle from the control room.