## Real time supply chain visibility - increasing for shippers and 3PLs

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The last few years have seen rapid developments in real time supply chain visibility, with the main beneficiaries being high volume exporters and importers, as well as global 3PLs and freight forwarders. While track and trace technology has been available for some years, a number of senior executives of global logistics companies, who themselves offer such solutions to their customers, admit that there are still relatively few shippers taking advantage of comprehensive shipment visibility software on a regular basis. This is partly to do with the high cost of such systems, despite the financial and operational benefits that gaining visibility down to SKU (item) level can provide manufacturers, retailers and other shippers.

This looks set to change however, as the costs and ease of achieving real time supply chain visibility come down, thanks to developments by a number of specialised IT solution providers. Two logistics technology companies focused on developing comprehensive visibility systems for shippers and their service providers throughout the global supply chain are GT Nexus and Savi Networks.

**GT Nexus' solutions**

Oakland, California-headquartered GT Nexus claims to run the world's only industry-backed, on-demand global trade and logistics portal. GT Nexus' portal was established in 1998, at about the same time as the other shipping portals, INTTRA and CargoSmart. The usage of all three portals has grown substantially since then, to several million transactions per week in total.

Since their formation, all three companies have enabled shippers, through a single website portal, to book sea freight shipments with multiple container ocean carriers simultaneously, compare sailing schedules and rates between the carriers, and manage shipments. But with its wider functionality, GT Nexus' service offerings were always targeted more at shippers, 3PLs and freight forwarders than those of the other two portals.

For some years GT Nexus has provided door-to-door supply chain visibility, as well as the automation of many time consuming (manual) logistics processes. These include documentary requirements for different countries, landed cost calculations (in real time, viz actual demurrage costs, surcharges etc. to be paid, rather than estimates) and, within the last two years, managing the financial part of shippers' supply chains, through agreements with a number of banks.

Supply chain visibility down to SKU as well as shipment level, and other core services provided by GT Nexus, have been achieved through the company building a central repository of shipment data from many sources, and standardising that data into a common format. This involves the re-formatting of thousands of consignment data elements received, via different EDI feeds: from ocean carriers, freight forwarders, warehouse operators, customs brokers, trucking companies and many other service providers.

John Urban, the President of GT Nexus, explained to Transport Intelligence that the format into which the myriad of data is converted is compatible with the systems of other logistics solution and software providers, including SAP, Manhattan Associates and Oracle. This is important, as GT Nexus' client

base includes some large, multinational manufacturers and retailers, such as The Home Depot, Sears, Xerox and Liz Claiborne.

Dawn Boike, the Senior Manager of Logistics at the tier one auto parts supplier Yazaki North America, another GT Nexus client, pointed out: "We selected GT Nexus because their platform was pre-integrated with many of our partners, and they understand how to manage and improve the quality of the data they receive on our behalf, and turn it into the information we need to run our supply chain."

Urban said that in the last few years GT Nexus has seen annual growth of 30-40% in the number of transactions processed in its supply chain visibility system, and now the company has achieved a "critical mass" exceeding 1m business transactions per day.

He attributed this to two factors. First, the GT Nexus customer base comprises mainly high volume shippers and 3PLs using multiple trade lanes, and they are the companies that derive the most benefit from the high level of shipment visibility. Second, being on-demand - i.e., the software available on a network via the Internet on a pay-per-usage or subscription basis - the cost is considerably lower than for comparable license-and-install systems. These conventional systems often require the user to purchase expensive software, as well as paying for network costs, upgrades, and consultants' fees.

Urban concluded: "The cost of using our visibility system depends on the complexity of our customers' supply chains, in terms of number of shipments and service (data) providers involved. It typically ranges from $25,000 to $400,000 a year for large shippers, which includes all network costs. This compares with several million dollars a year or more if they had to purchase a comparable conventional system."

### Savi Networks

Comprehensive supply chain visibility solutions on a global scale, utilising RFID (Radio Frequency Identification) and GPS (Global Positioning System) technology, have been developed by Mountain View, California based Savi Technology, which is owned by the advanced technology system manufacturer Lockheed Martin.

Savi Technology's RFID and GPS systems have been used more extensively for military shipments in the past, but in the last few years their application has been expanded to commercial containerised shipments for major shippers moving cargoes in the major east-west trade lanes, such as from Asia to Europe. This commercial expansion has been the focus of Savi Networks, a joint venture between Savi Technology and the major Hong Kong-headquartered container terminal operating company Hutchison Port Holdings (HPH).

Using a system of data transmitters (readers) and receivers, shippers can obtain detailed information not only of the location of their containers and their contents, but also of the ambient conditions of the inside of the containers, such as the temperature, amount of light and humidity.

This functionality, which has proved to be very beneficial for one major European chemicals manufacturer in terms of improved quality control monitoring throughout the supply chain, has been made possible by the development of the so-called 'e-seal'. This 'smart' reusable electronic seal contains sensors, and replaces the traditional mechanical seal on the containers' doors.

Customers can access the readings, in real time, via the Internet, and pay for the service on a per transaction basis. The cost varies according to the size and complexity of their supply chain, and the

level of visibility required. Not all shippers require such detailed visibility of the inside of the container, so would not need an e-seal equipped with a sensor, and thus would pay less for the service.

Larry Trebesch, the General Manager for China at Savi Networks, told Transport Intelligence that some major multinational shippers, including the electronics goods manufacturers Sony, Philips and Brother, are benefiting from Savi Networks' systems to achieve accelerated export and import customs clearance procedures for their containerised shipments, which comprise several thousand TEUs (twenty-foot equivalent units) a year.

Trebesch explained: "Under the China-Europe 'Green Lane' initiative, which is currently being trialled, Savi Networks has an agreement with the Chinese, Dutch and UK Customs authorities, whereby in exchange for them receiving detailed real time information on the containers' contents these shipments receive expedited export procedures in China and import clearances in Europe. Currently the participating ports are the three Shenzhen ports in southern China, Rotterdam and Felixstowe (where HPH is the terminal operator), and the plan is to roll it out the scheme to other European ports shortly, including Barcelona."

Trebesch said that the next generation of Savi Networks' service offerings, which are being developed and expected to be launched in 2009, involve data being sent and received over wireless networks in the same way as mobile phones, using GPRS (General Packet Radio Service) technology.

He explained that in terms of hardware the system is considerably less complex than the current RFID service offerings, which will bring down the cost for users. All the antenna and sensor equipment required is contained on the outside and inside of the container itself, respectively.

This initiative shows how technological developments are making real time supply chain visibility more accessible and affordable to shippers and their logistics providers, and increasing opportunities for technology providers serving them, such as Savi Networks and GT Nexus, among others.

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