

SYMPOSIUM

REALTIME LOCATION SYSTEMS (RTLS) AND SUPPLY CHAIN MANAGEMENT (SCM): A FOCUS ON THE AUTO INDUSTRY

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OPPORTUNITIES & CHALLENGES

Programs at the Center, including Symposia, are possible due to the support of its Sponsors:

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Participants identified opportunities for RTLS in the auto industry that would provide high ROI in the 12-18 month market and beyond. Some of these areas extend beyond SCM as participants agreed that non-SCM opportunities would yield a high ROI. Challenges were also identified by the participants. Participants then voted on the top opportunities and challenges. The results are below and include an asterisk for each vote.

OPPORTUNITIES

QUALITY CONTROL

- o Tracking history of parts for quality & insurance reasons****
- o Quality control throughout the life cycle*
- o Environmental monitoring for wiring harnesses
- o Quality control and management
- o Tracking environmental history of parts
- o Combining location information with manufacturing and transportation environmental data such as temperature and moisture
- o Sensors & tags to track environmental conditions

INVENTORY MANAGEMENT

- o Inbound material SC optimization, Tier I through manufacturing**
- o Inventory management of completed vehicles*
- o Production/Inventory management*
- o Heavy-truck manufacturing (semi-custom)*
- o Distribution of finished cars equipped with GPS will probably be where value can be created; Production-RFID; Distribution-GPS; Car ownership-Telematics*
- o Manufacturer/supplier inventory confirmation & automated replenishment
- o Software systems and frameworks

PRODUCTION CONTROL

- o Production; made-to-order auto trading/production scheduling**
- o RTLS across companies
- o Logistics

JUST-IN-TIME SYSTEMS

- o Parts flow management to improve efficiency of just-in-time systems*
- o Reduce risk of "just in time"

AFTERMARKET

- o Backyard supply parts management**
- o Lojac security systems for manufactured autos*
- o Car maintenance
- o Maintenance tracking
- o Maintenance ahead on the road for a developing condition
- o Ask Viston and Delphi what are their pains today

TRAFFIC MANAGEMENT

- o Shared location data for congestion management*
- o Intelligent transportation for automatic vehicle pilotry & convoys and for snow plows*
- o Location-based assistance

FLEET MANAGEMENT

- o Car auction online combined with on-site RTLS*
- o Locating vehicles in a fleet; i.e. rental cars
- o Automated rental car check*
- o Auto auctions
- o Wide-area GPS tracking of vehicles
- o Security and safety with vehicles, parts and people; everything is working, safe and located

CHALLENGES

ATTITUDES

- o Car people are not IT savvy; it's a cultural issue***
- o Market mindshare

STANDARDS, TECHNOLOGY & APPLICATIONS

- o Lack of RTLS geo-data standards**
- o System & data integrity & data synchronization; Real time is not useful if not synchronized with other systems**
- o Complexity of solutions**
- o Software systems and standards**
- o Standards*
- o Too many layers (players) to obtain an integrated, common system*
- o Lack of useful application systems to make use of RTLS*
- o Getting standards accepted for transmitting data across the Internet
- o Communications standards

COSTS

- o Price of the tags and initial cost of establishing the infrastructure*
- o Manual system plus discipline more cost effective and simpler*
- o Broad systems infrastructure costs
- o Getting real-time speed data to central host
- o Cost of tags and infrastructure investment
- o Cost

EXISTING SYSTEMS

- o Supplier held responsible for product quality and storage location*
- o Auto parts control using passive RFTD tags instead of bar code*
- o Existing supply chain & production systems are not warehouse based, so RTLS adds marginally small value
- o Who Tracks? Information is useful to the supplier, but auto OEM owns the factory & system
- o Deployment timeline is minimum of 3 to 5 years for critical mass
- o Multiple companies within supply chains

HUMAN ERROR

- o Location tag placement subject to human error just as is misplacement of assets*

SECURITY & PRIVACY

- o Security issues: my competitor should no know where my assets are
- o Privacy issues
- o Potential perceived health hazards related to radio frequency emitting from RTLS transceivers

STRATEGY

- o For which combinations of producer and consumer does it make the most sense to RFID enable?