



ekahau
Innovation Through Location

Vehicle Tracking



ekahau

Problem:

Time wasted in locating vehicles

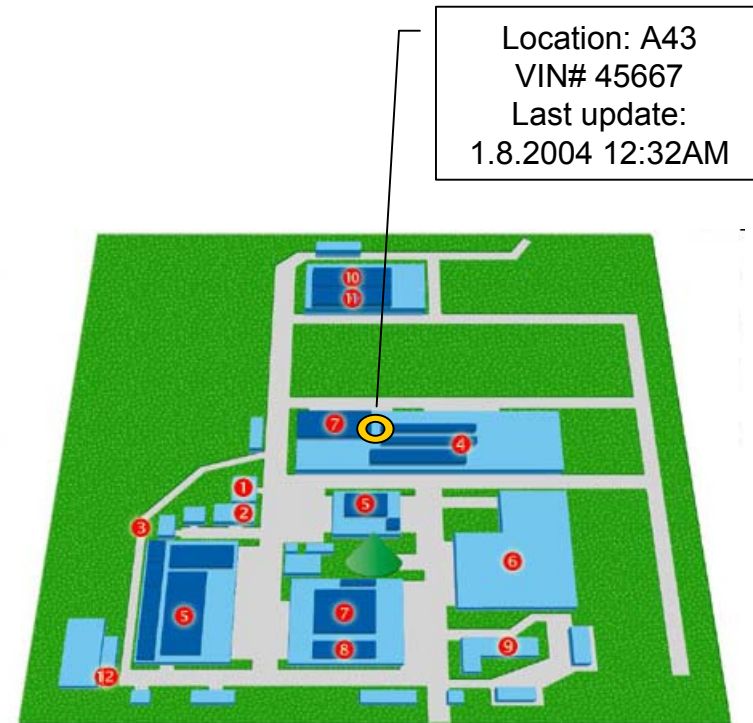
- Vehicles are inherently assembled with imperfections
 - Defective parts are installed
 - Parts are not installed or not completely installed
 - QA discovers the defects and identified fixes for post assembly
- QA needs to locate the vehicles with the defects
 - Locating vehicles can be time consuming and complex in a large manufacturing plant



Solution:

Ekahau Tracking of Vehicles

1. Ekahau T101 tags are attached to cars when entering assembly line
2. The TAG is scanned to associate it with the VIN (vehicle identification number)
3. TAG reports its position to server whenever position changes
4. Q&A discovers a problem in VIN #45660-#45665
5. Quality technician locates the cars using the Ekahau positioning engine
6. Defective parts are replaced in the cars
7. TAG is removed when vehicle leaves the factory and disassociated from the VIN
8. Vehicle location history can be stored into data warehouse for later analysis



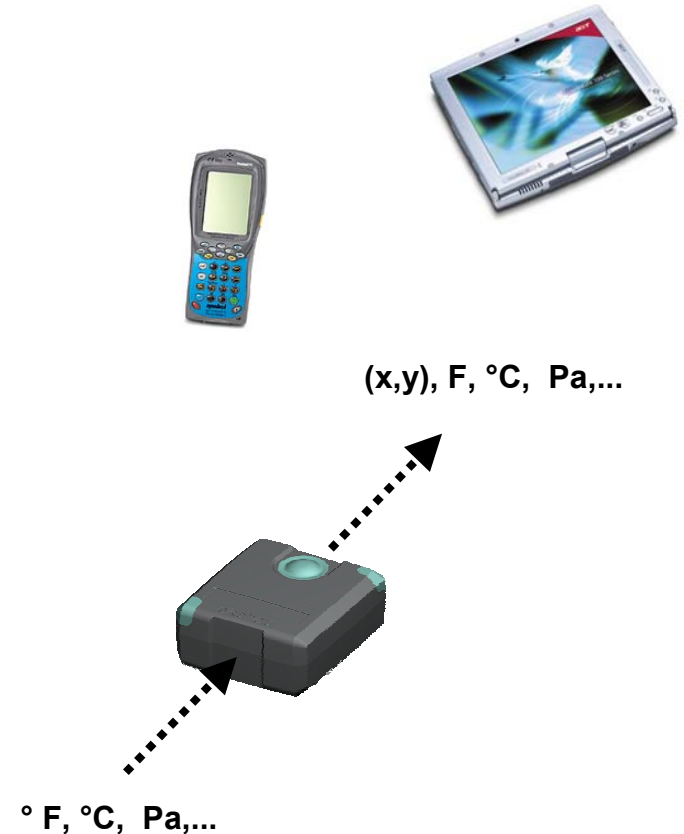
Benefits of Vehicle Tracking

- Reduced operating costs
 - Less manpower needed for searching lost vehicles
- Improved productivity
 - Faster locating of defective vehicles
 - More time for actual fixing of defects
- Improved quality
 - Less chance for vehicles getting lost in the process
 - Easier and faster locating of vehicles gives more time for fixing the actual problems
- Improved visibility
 - Assembly throughput times of individual vehicles can be monitored
 - Vehicles creating assembly bottlenecks can be identified

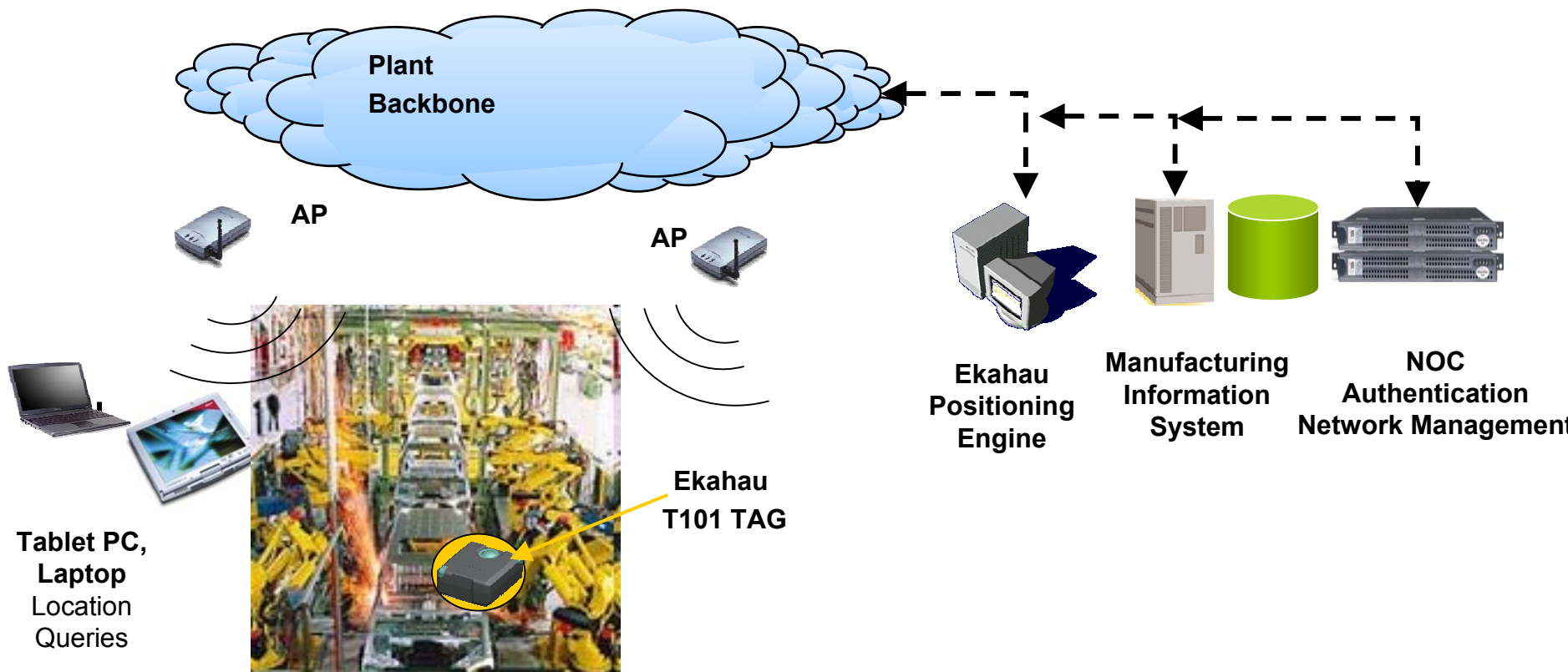


Ekahau Positioning Engine

- Any WiFi-enabled device (e.g. PDA, tablet PC or laptop) can be wirelessly tracked in real-time
- Non-networked devices, such as in-process vehicles, can be tagged with Ekahau WiFi tags, enabling real-time tracking
- The WiFi tag can be used for location but also to deliver telemetry data and alarms
- WiFi tracking can be integrated with barcode scanning or RFID systems
- Location information helps staff and contractors identify and locate plant equipment



Ekahau Deployment in Factory



Other Sample Applications in Manufacturing

Area	Applications	Benefits	Clients
Q&A	<ul style="list-style-type: none">• Locating Cars	<ul style="list-style-type: none">• Faster, more accurate turnaround in events/incidents• Improved staff productivity	Tags, Tablet PCs
Production Management	<ul style="list-style-type: none">• Production Analysis	<ul style="list-style-type: none">• Improved productivity	Tags
Information delivery	<ul style="list-style-type: none">• Push information• Location-based messaging	<ul style="list-style-type: none">• Improved staff efficiency• Higher quality work• Better staff communication	PDA's
Workflow management	<ul style="list-style-type: none">• Turnaround tracking• Expedited dispatching• Procedure recording	<ul style="list-style-type: none">• Faster, more accurate action• Accurate audit trail and procedure control	PDA's



Summary

Ekahau's wireless real time tracking solutions let manufacturers ***improve staff productivity and optimize workflows*** while at the same time ***increase quality***.

Ekahau's technology facilitates more efficient manufacturing because of immediate locating of vehicles and automatic production monitoring. Improved staff productivity increases production margins.

Ekahau provides ***very fast payback times*** and ***dramatic return on investment***.

Ekahau enables the intelligent manufacturing.

