Product identification at Volvo Cars

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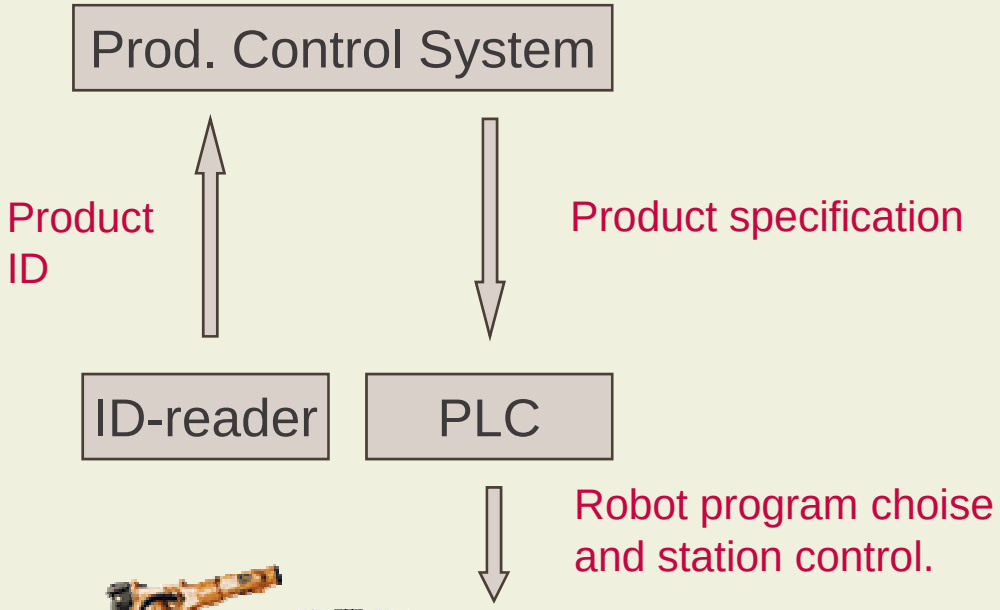
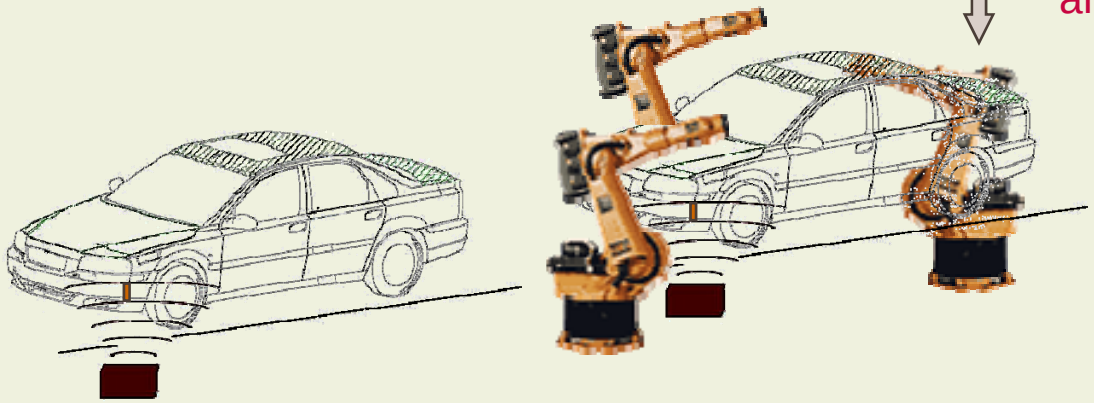
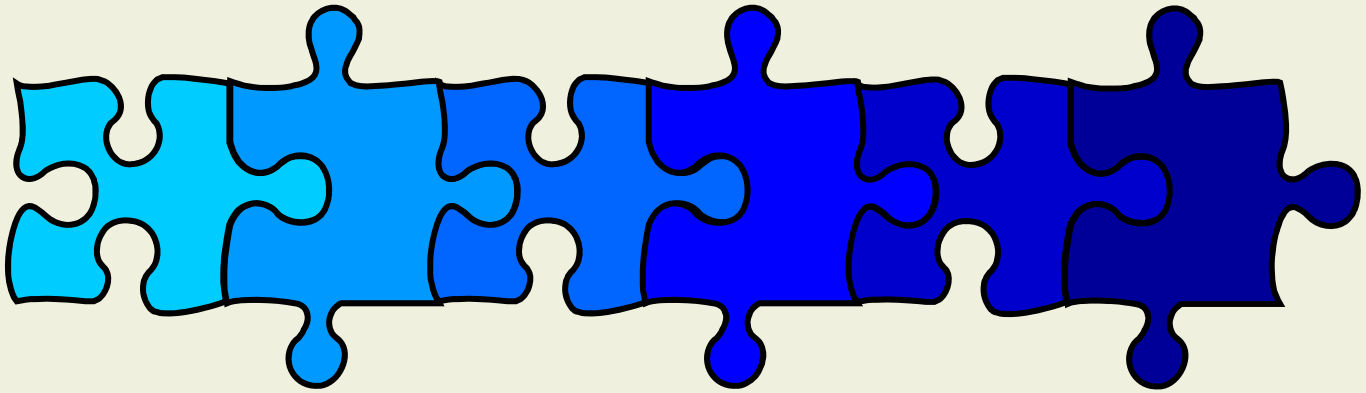
Product identification

Mixed model production creates a need for product identification to be able to control the manufacturing process.





Product identification



Body shop | Paint shop | Assembly shop | Yard | Shipping /Port | Retailer

Product identification

RFID, passive UHF (868Mhz)

standardized readers and transponders.
Multiple suppliers of readers and transponders.
Read distance > 2m.

Closed application

No need for data storage in transponder.
Virtual Escort Memory (Database) for product data.

Disposable transponders

Low handling cost
No degeneration caused by handling and heat cycles.
The transponder can be left at the car for possible future use.

Product Identification

RFID project, bodyshop in Gent, Belgium

- In the summer shutdown 2007
  80 readers were installed
- During autumn 2007, the old and new system were runned in paralell
- In the spring 2008, all new readers where integrated and tuned
- Autumn 2008 the new system was fully integrated and operational

Product identification

Densed reader environment

110 readers in body shop, 160 readers in paint shop

Environment with high containment of metal

Field deviation
Unwanted reflections
0-power fields (Holes)

High-temp environment

200° owens

100% read performance

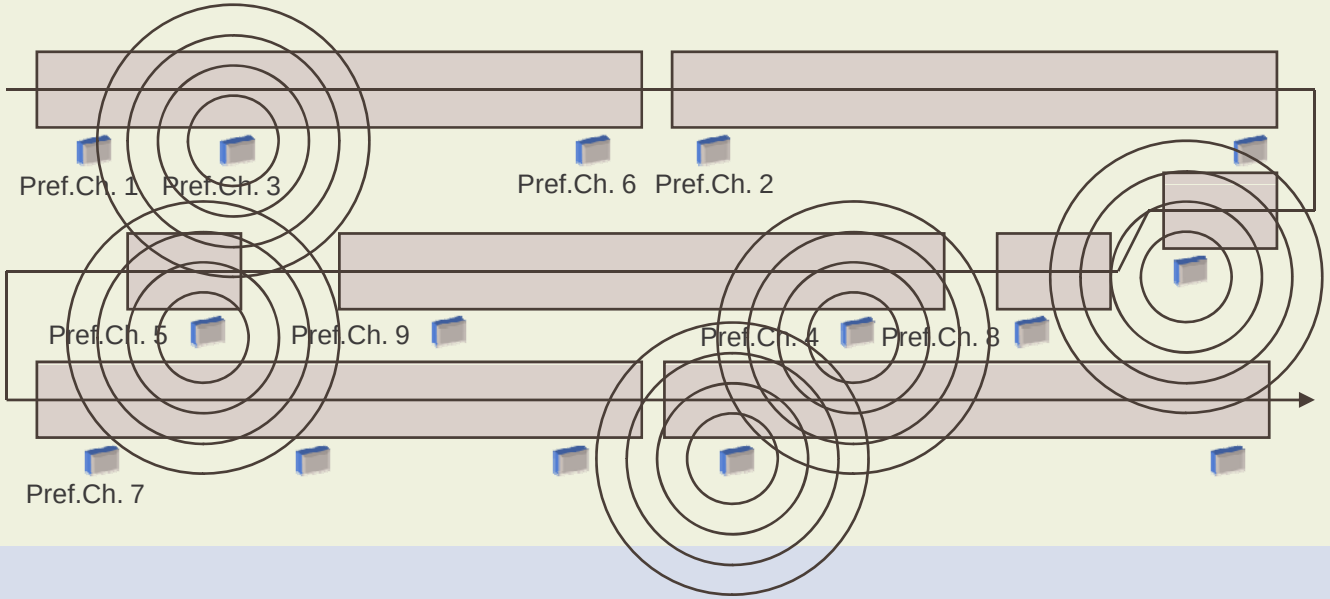
Read during movement

Produkt identifiering

Dense reader environment

Minimizing the radio wave pollution

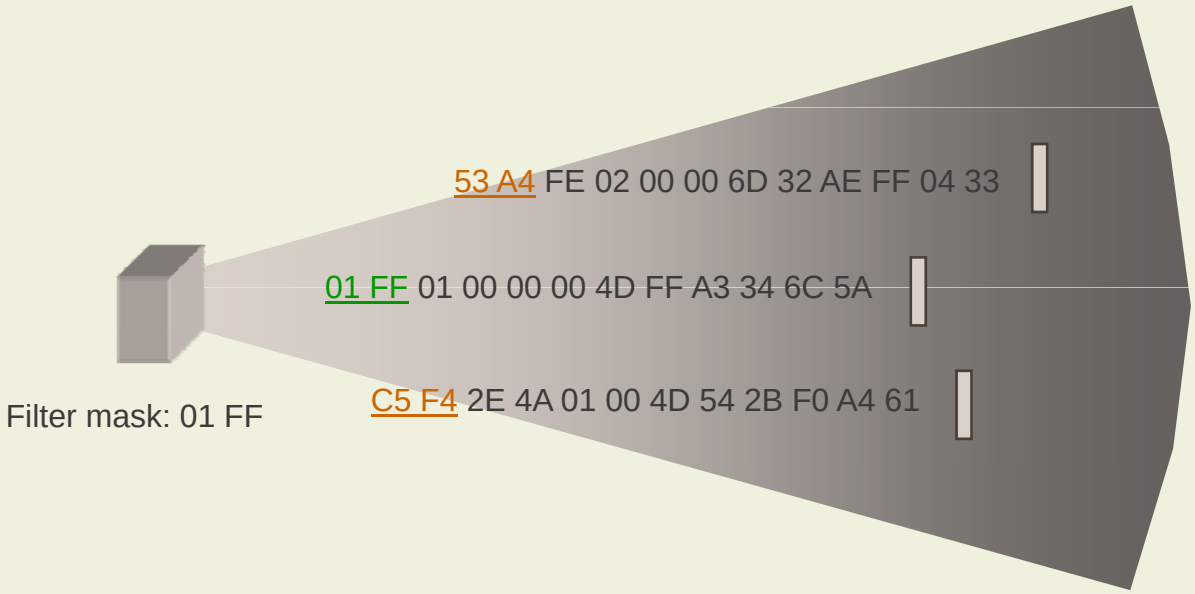
- Triggered readings.
- Short reading time.
- Low output power.
- A good channel planning.



RFID Product identification

Transponder filtering

The content can be filtered to exclude unwanted transponders.



Product identification

System integration