



Assembly Host Computer for Engine Production

In Berlin, a KAT assembly host computer controls the manufacture of V8 and V12 Daimler engines. The production line with twenty manual stations is so flexible that all engine variants can be produced at the same time. Even small batches can be triggered at any time.

Two screw robots perform the quality-controlled screw connects. In the mechanical testing diagnostics, all engines are pretested. This way, only a small quota has to be sent through the end-of-line hot test.

The **automatic guided vehicles** can go anywhere in the assembly hall. Therefore, the whole production can be configured by software.

The parameters regarding lot sizes, production orders and task schedules can mostly be used directly from **SAP**. In addition, they can be entered and edited right in the assembly line.

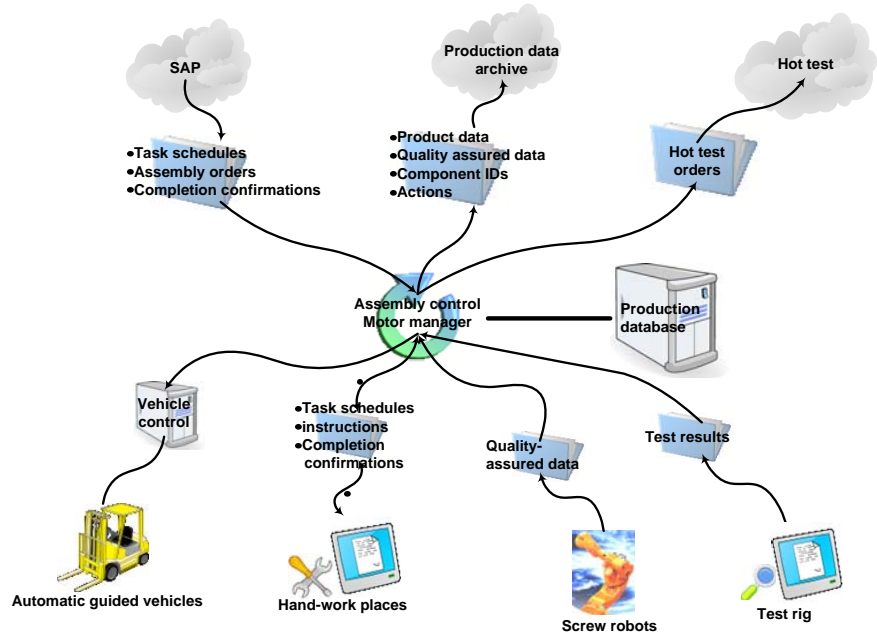
Even new models can be added on site. This way, the complete assembly hall can produce independently from supervising software.

Intermediate messages and **completion confirmations** are sent back to SAP. The quality-assured data and the component ID are sent back to the production data archive for **traceability**.

Due to the number of variants, the manual stations are equipped with screens. On them, **instruction sheets** and **machine operator information** are displayed.

The control technology is distributed on three computers: **Oracle database server**, assembly control, and vehicle control. For visualization, **Intellution FIX** is used on a computer situated in the assembly hall.

The project was started in 1997. After the programming and the initial start-up at the end of 1998, the original basic solution was enhanced by many additional functions. In the beginning of 2001, the hardware and software were upgraded for a higher throughput.



For current software extensions, **web-based** solutions are preferred. Among them are the connection to the **statistical process monitoring**, the **production data archive**, and internal activities.