



HEIDELBERG innovation FORUM

Business ideas for Process Optimization: FLS-NEXT - The next generation's manufacturing control tool -



Fraunhofer Institut
Informations- und
Datenverarbeitung

FLS-NEXT
THE NEXT GENERATION

© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG Innovation FORUM



1787 –1826
Josef von Fraunhofer

- ▶ **Fraunhofer society:**
 - non profit organization
 - 12.700 ‘applied scientists’ focused on development
 - 1 bio €revenue, 58 institutes
- ▶ **Core competencies of IITB business unit:**
 - Real time applications for production monitoring, control and maintenance support
 - Manufacturing Execution Systems and consulting services
 - Optimization algorithms for manufacturing scheduling and sequencing
 - Detailed know-how of manufacturing and assembly processes in discrete manufacturing

© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG innovation FORUM

FLS-NEXT has just been awarded with an innovation prize 2007 for Web 2.0 application.



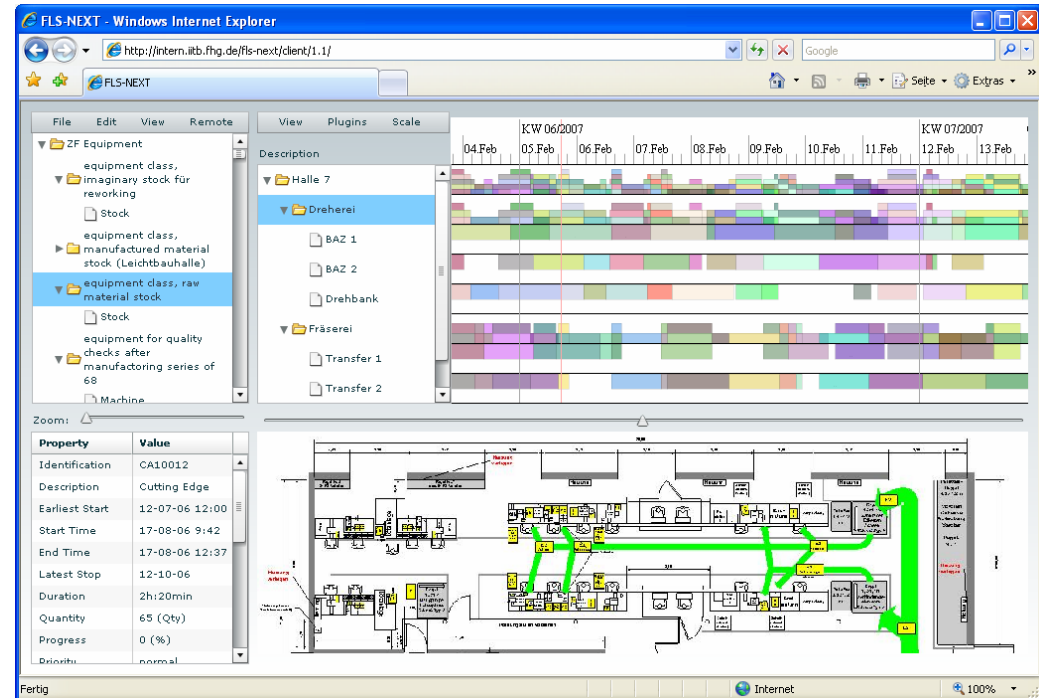
© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG Innovation FORUM

Manufacturing control means

- advanced planning and scheduling in real time
- fast reactions to unexpected events on the shopfloor

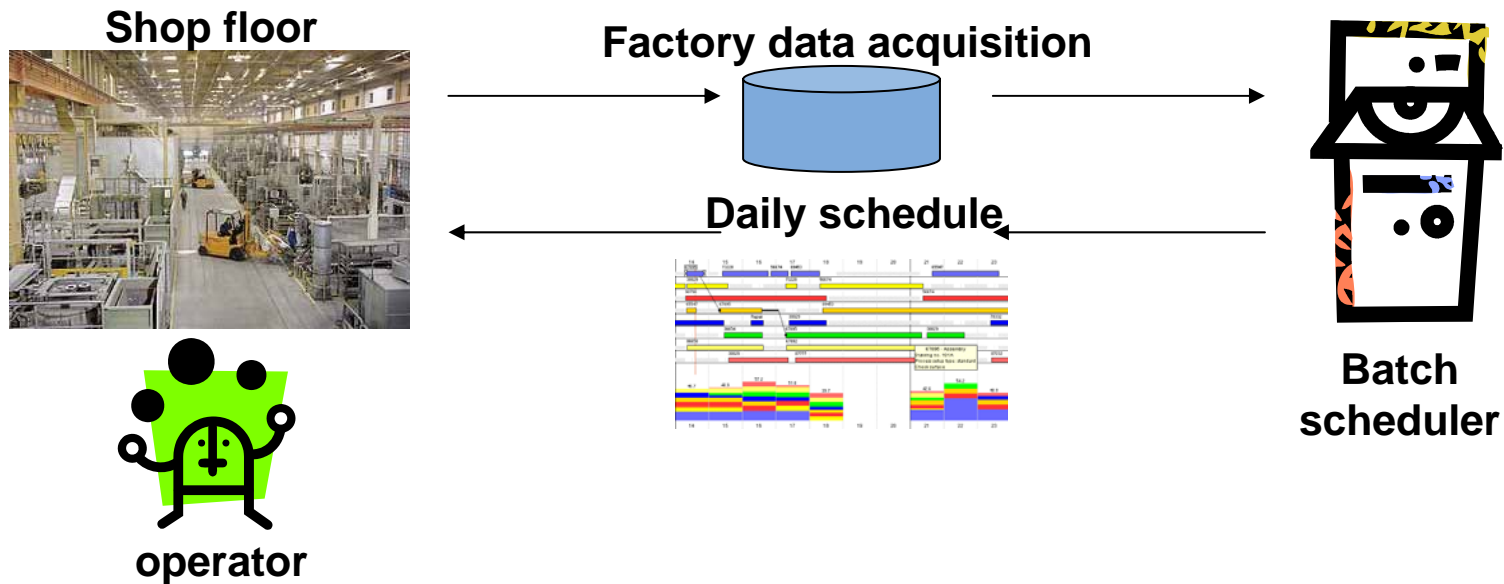


© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG Innovation FORUM

Today: batch scheduling, e.g. at night



© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG innovation FORUM

Tomorrow: real time scheduling, based on events from the shop floor



Shop floor



real time factory data



modified schedule

© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG Innovation FORUM

System architecture

(source: Baumann, M., et.al.: Komplexität beherrschen; PPS Management 11 (2006), pp. 29-32)



© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control



HEIDELBERG Innovation FORUM

Features:

- Web based graphical user interface (GUI) with drag & drop via standard web browser
- no installation on clients except the browser
- ISA 95 compliant, no interface programming to ERP etc.
- processing of production events in real-time
- continuous improvement of production schedule instead of generating a new one

Software basis:

- FLS-NEXT runs on any platform (Windows, Linux, ...)
- server: JAVA; GUI: Adobe flash
- source code completely owned by IITB

© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control

Perspectives for further developments

- Access to server via mobile web clients, e.g. PDA
- Tests with real manufacturing data



HEIDELBERG Innovation FORUM

Requirements concerning the Transfer Business:

- We are looking for: sales partners or licensees; sales partners/licensees may also be software companies that offer 1st and 2nd level support; 3rd level support and software development by IITB
- We want to achieve: licensing
- We need app. T€ 150 for tests, final completion and know-how transfer to licensee

© Fraunhofer IITB, Karlsruhe, Business Unit Production Monitoring & Control