EDDi: Event-Driven Dispatcher

Datasheet

General Description

SYSTEMA's Event-Driven Dispatcher (EDDi) delivers real-time, efficient production control and optimization. EDDi's Dispatcher Editor enables effective and simple menu-based configuration of different rule sets per tool, tool group or area, allowing optimization of manufacturing-process KPIs. The comprehensive suite of rule sets includes simple ones such as due-date oriented optimization, as well as more complex scenarios such as line balancing. The configured rule sets can also be enhanced by EDDi's numerous advanced features such as tool capability management or timer management.

EDDi communicates with the manufacturing environment via events and requests published on message bus middleware. As such, changes in the MES or other external systems (e.g. automated material handling, recipe management, statistical process control systems, etc.) and subsequent updates to EDDi's dispatch lists are published in real time to the user (e.g. operator or automated material handling system). Only affected lots of updated on EDDi's dispatch lists, making EDDi's transactions and the system computationally efficient.

Key Features

- Real-time functionality
- User/tool specific rule sets and configurations at varying levels of detail
- Compliance tracking to document the order of the material dispatched versus what is actually selected for processing at a tool
- Advanced manufacturing performance improvement features such as process capability and timer management
- Integration of different external data sources via flexible, message-bus interface
- Platform independent (Java)
- Dynamic software updates and maintenance within a running environment via SYSTEMA JAMES
- Web-based operator interface for displaying dispatch list, creating batches, and more
- Scalable via multiple-instance architecture

Coming Features

- Scheduler component – Area and tool-group based scheduling, according to user-defined optimization criteria. The scheduler allows optimization of smaller areas, such as batching areas of a tool.
- Web-based configuration interface

Product Information

Software name	SYSTEMA Event-Driven Dispatcher (EDDi)
Year	2018
Version	2.3.x
Area of application	Event-driven dispatcher for production control in discrete manufacturing
Customer References	Semiconductor area (HP, SunEdison, and other leading semiconductor manufacturers)

Software

Operating systems support	Linux (server), Unix (server), Windows (server, client)
Required / supported standard software and application software	JAVA ≥ 1.8, Database Oracle (recommended) or MS SQL
Supported middleware	Message Bus ActiveMQ or Tibco® (recommended)

Hardware

Hardware support	x86 64 bit (server, client), Itanium (server)
Server type	Virtual, Physical
CPU	Multicore, > 2.6 GHz
RAM Requirements	≥ 8 GB (client), ≥ 16 GB (server) for multiple instances
Local disk space for installation	Software < 500 MB + Database
Local hard disk size for workspace	Depending on log file configuration (several GB)
Database storage	Depending on database installation – Filespace for dispatcher scheme < 1 GB
Consumption of computer capacities	Depending on infrastructure, two separate servers with multiple instances of the EDDi Dispatcher server are recommended for failover

Miscellaneous

Online manual	Wiki (DokuWiki by Browser)
Supported languages	German, English
General quality standards	ISO 9001
User management	Available via LDAP
Data interfaces import / export functions	Via XML structures
MES interface	Workstream® Gateway, Promis® Gateway, proprietary MES interface for a customer