ENTERPRISE APPLICATION INTEGRATION (EAI)

APS   MDM   WIP   DNC   MDA
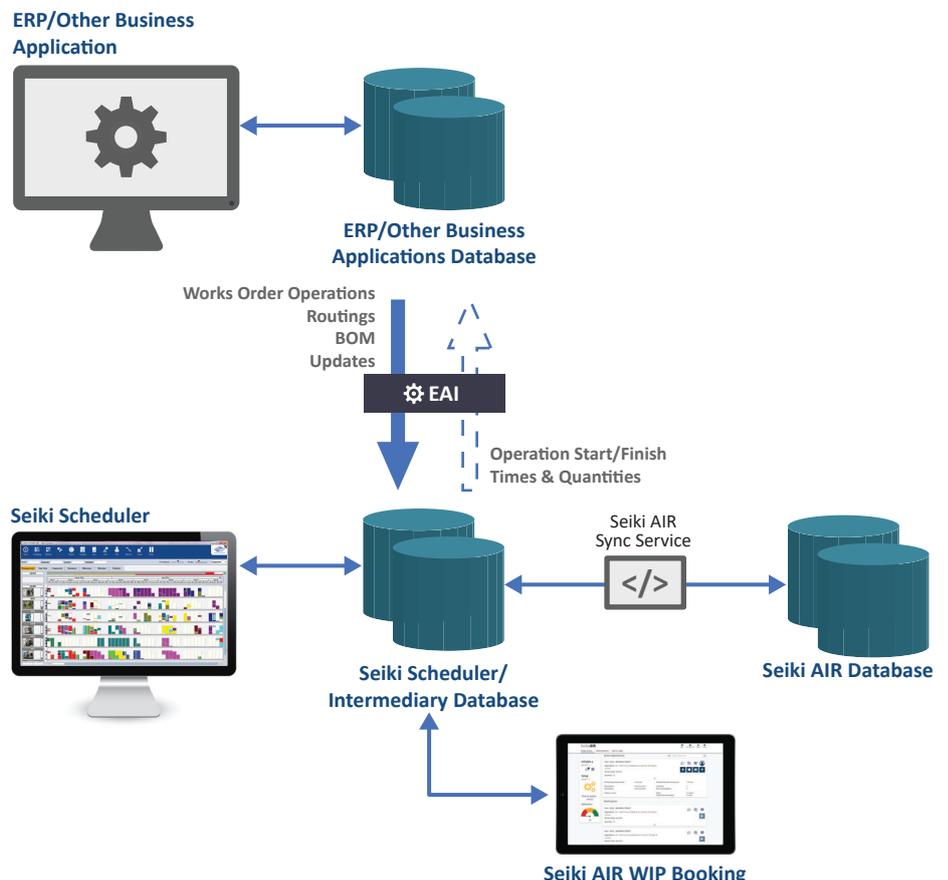
Intelligent Interfacing Solution

Using EAI (Enterprise Application Integration) software, Seiki is able to offer an intelligent interfacing solution that can optimise and simplify data exchanges between different software products. EAI serves to connect your ERP/MRP systems or other databases and software to the Seiki Scheduler database, in order to automate the task of data entry. To achieve this, a number of mandatory and optional data sets are required to provide the interface between the SQL database of the Seiki Scheduler and other systems' data sources, e.g. SQL database, Microsoft Access or CSV files. This data exchange may be configured to run either in a single direction or bi-directionally, depending on your requirements.

Flexible Schedule

As well as being able to run manually, the EAI can also be configured to run automatically via a user configurable schedule. This may be at a set time each day or after a specific interval. You also have the flexibility to split the interface configuration into a number of sections, each with their own schedule regime. For example, you can split the data import to and data export from the Scheduler.

NOTE: Many suppliers of ERP/MRP systems prefer not to allow data from external sources to be written directly into their product databases. In such circumstances, the options available are to write data to a temporary table or tables, usually within the external database structure, or write data to a CSV file or files. With both options, the external system would then import the data via their own routines or products in accordance with their own rules. It is then the customer's responsibility to liaise with the external systems' vendor to arrange for this data import.

ERP/Other Business Application

ERP/Other Business Applications Database

Works Order Operations
Routings
BOM
Updates

⚙ EAI

Operation Start/Finish
Times & Quantities

Seiki Scheduler

Seiki Scheduler/ Intermediary Database

Seiki AIR Sync Service

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Seiki AIR Database

Seiki AIR WIP Booking

SQL VIEW

SQL View is our preferred method of importing data from external systems into the Scheduler database. You may need assistance from your external system's vendor or agent to create the required SQL view. In these circumstances, any additional costs incurred would be the responsibility of the customer.

The table below details both the mandatory and optional data fields required when importing records from existing systems. However, should your existing system not have some of the mandatory data required it may still be possible to create a solution. This will need to be discussed and agreed prior to the system installation

COMMA SEPARATED VALUE (CSV) FILES

An alternative method of providing data to be imported into the Scheduler database is via one or more CSV files. These files are structured such that each records line of data represents a single record, with each record having the individual field values separated by commas. It is a two-stage process. Firstly, the external system is required to generate the appropriate CSV file(s) which is the responsibility of the customer to configure and schedule this activity. Secondly, having recognised the presence of the CSV file(s), the EAI product reads the content and populates the Scheduler SQL database accordingly.

TABLE	FIELD	MANDATORY	DESCRIPTION
Works Order/Batch Header Records	Works Order	Yes	Works Order Number. Max 32 characters.
	Parent Works Order		For Bill of Material (BOM), to define which Parent Order, this Order is the material for.
	Part Ref	Yes	The part reference / drawing number. Max 64 characters.
	Drawing No.		Drawing Number if different to the Part Reference field.
	Material		Reference to raw material required for Order.
	Part Description		Description of the Part to be produced
	Customer ID		Customer ID (in case of Name Change).
	Customer Name		Customer Company Name. Max 64 characters
	Customer Order Ref		Reference to Customer's Purchase Order.
	Due Date	Yes	The customer delivery date. DD/MM/YYYY
	Order Quantity	Yes	The number of parts required to fulfil the order. Max 10 characters.
	BOM Level		Mandatory field if importing BOMs
Operation Records	Operation	Yes	Operation Number. Usually 10, 20, 30, etc. Max 24 characters.
	Operation Description		Description of the operation. Max 1024 characters.
	Resource	Yes	The resource/workplace on which the Operation is to be carried out.
	Setting Time	Yes	The planned setting time for the Operation. Units to be in Minutes. NOTE: Operations must have a setting time, Cycle time or both and should not be 0 for both
	Cycle Time	Yes	The planned Production time for the Operation for ONE part. Units to be in Minutes.
	Sub-Contract Flag	Yes	To indicate if this operation is to be performed by an external supplier
	Sub-Contract Supplier Name		Sub-contract Operation Supplier Name.
	Sub-Contract Supplier ID		Subcontract Operation Supplier ID.
	Sub-Contract Lead Time		The time in days the operation takes to complete (5 or 7 day week)
	Earliest Start		Date Operation should be scheduled from, e.g. Material delivery date against first operation.

There are 2 standard methods of maintaining data within the Seiki Scheduler:

- Import ALL appropriate data from an external system
- Import ONLY Works Order data (section one in table above) and allow the Scheduler to hold static information, for example job routings, resources and standard times

The following standard data set is made available by Seiki AIR WIP Booking on paused and completed operations. Please speak to us if you don't see a field listed that you will require.

FIELD	DESCRIPTION
Employee	The employee ID performing the transaction
Works Order	Works Order number
Operation	Operation number
Resource	The resource on which the operation has been performed
Good Quantity	The number of parts booked as Good in this transaction
Non-Conforming Quantity	The number of non-conforming parts booked in this transaction
Finish Time	The time the transaction has taken place
Complete Flag	If the operation is Complete then 1, otherwise NULL
Start Time	The time this operation was started (or restarted if previously paused)
Set Time	The Setting time recorded against this operation
Run Time	The Running time recorded against this operation

About Seiki Systems

Seiki has been specialising in digital manufacturing solutions since 1992. Today our portfolio comprises of a suite of integrated software modules that deliver a live, visual and dynamic picture of the production process. Our production control and manufacturing execution solutions maximise the productivity of production equipment and plant resources by monitoring and managing the complete works order lifecycle.

SeikiSOFTWARE by SEIKI SYSTEMS
Advanced Manufacturing