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SIMATIC IT Unified Architecture Process Industries v2.5

Delivering project integration with full traceability and quality

Benefits
- Provide visibility into, and synchronization with all manufacturing operations
- Facilitate native orchestration of heterogeneous activities
- Deliver full traceability of operations and materials
- Integrate manufacturing and quality
- Support multiple versions of SIMATIC BATCH
- Offer a scalable, modular and extensible solution

Summary
SIMATIC IT Unified Architecture Process Industries (SIMATIC IT UA PI) is Siemens' manufacturing execution system (MES) for the personal and home care, food and beverage and chemical specialties industries. Version 2.5 has six major new features:

- Additional out-of-the-box configurable enterprise resource planning (ERP) integration adapters
- Optimized search engine
- Electronic signature
- Enhanced material movement and tracking capabilities
- Improved task configuration and operator task list screen

Enhancements to SIMATIC IT Unified Architecture v2.5
The home page of SIMATIC IT UA PI has been upgraded to facilitate access to all product functionalities, which are now grouped by categories. In addition, the SIMATIC IT UA PI home page features a search option so you can quickly find the titles of pages you are interested in.
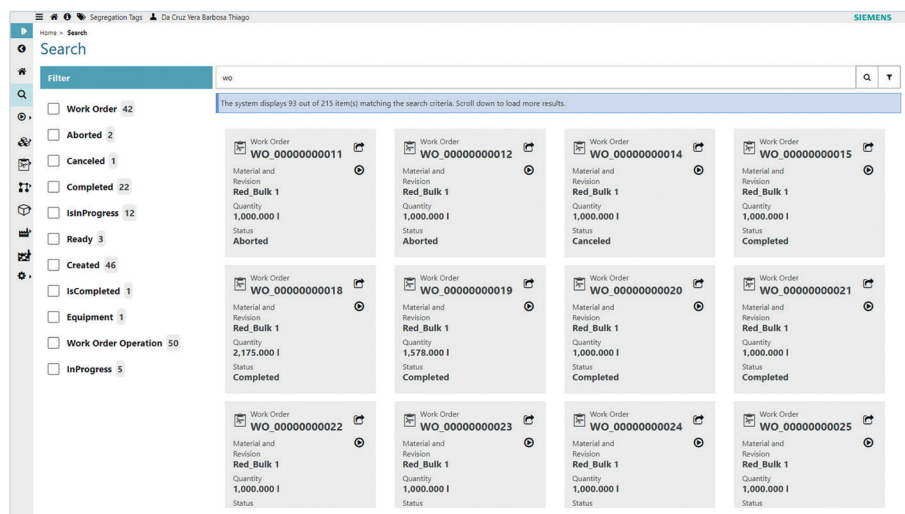
Leveraging manufacturing interoperability (MIO), which offers the functionalities of a manufacturing service bus to facilitate connectivity and integration between products and solutions, SIMATIC IT UA PI 2.5 provides more out-of-the-box adapters. This enables you to exchange meaningful information with various ERP systems, which are available in the SIMATIC IT UA PI interoperability app.

SIMATIC IT UA PI 2.4 provided adapters for downloading material master data, download orders and the upload of order performance. The new set of adapters, based on the Business to Managing Markup Language (B2MML) V6.0 standard, extends functionalities and covers the download of inventory information such as material lot and material tracking unit (MTU), and the upload of material movements and order performance. These can be executed within SIMATIC IT UA PI or by automation systems connected with SIMATIC IT UA PI, such as move operations starting from a specific MTU or

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SIMATIC IT Unified Architecture Process Industries v2.5

Features

- Update of the SIMATIC IT UA PI home page

- Out-of-the-box configurable ERP integration adapters
  - Inventory/material lot download
  - Material move records upload
  - Order performance

- Search engine

- Enhanced operator task list

- Material handling UI enabled on mobile

- Identification of orders, work masters, and work orders by type

- Task management enhancement:
  - Configure automatic start and activation of tasks
  - Create and start work processes from process definitions associated with equipment and respective equipment groups
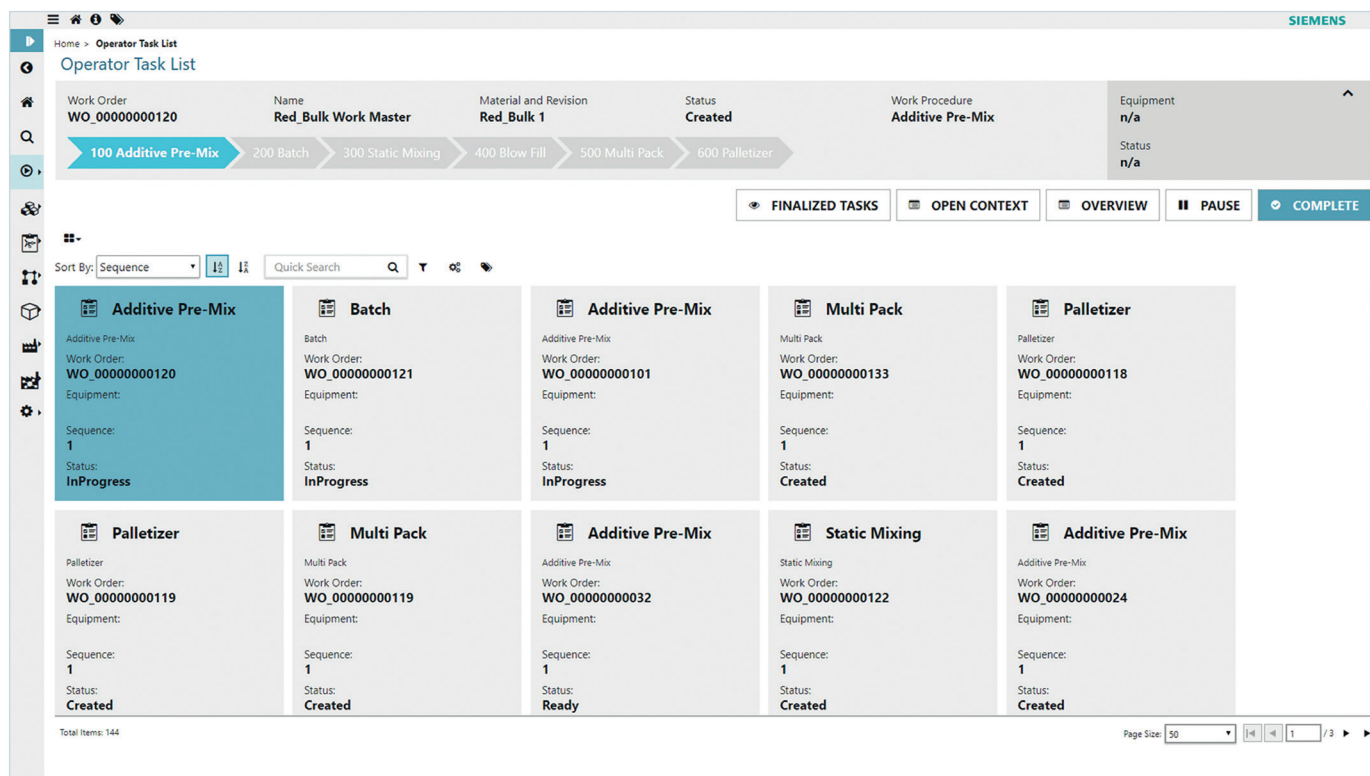 - Associate process definitions with entities

Search engine.

source of equipment. All adapters can be configured and extended based on each implementation requirement and can also enhance the MIO native features (host channel adapters, routing service, broker service, mapping service, message buffering, logging service).

SIMATIC IT UA PI 2.5 features a new search engine, which allows you to search on a predefined set of SIMATIC IT UA PI entities, enabling the user to navigate across menus and provide a fast and easy interaction with the system to quickly find what a user needs. SIMATIC IT UA PI allows the user to search for work orders, work order operations, equipment and MTUs. The user interface (UI) provided by the search app provides some hints on what can be searched in the system. The search can be extended to other entities based on its configuration.

The result of the search is presented in a set of tiles (called cards), representing all the entities that can be searched and the possible operations that can be performed on the entities.

A search filter helps you visualize a subset of the search results. Usually, you are only interested in one subset of an entity (for example, raw material tanks of the equipment entity). The filter can be a combination of filtering criteria; for example, you can choose to filter the searched work orders to retrieve only those orders that are ready and in-progress. A filtering panel, on the left side of the search app page, displays the list of hashtags, which are associated with each card. Also, you can create predefined queries or bookmarks that can be added to the SIMATIC IT UA PI homepage.

Enhanced operator task list.

SIMATIC IT UA PI 2.5 provides a major enhancement to the task list with a large tile-based view for all tasks and reworked meaningful action buttons bar. This facilitates using the application on mobile devices and touch screens with a context ribbon that represents the status of the order progress (with a color code for every phase that has been executed, is ongoing or upcoming). This new cockpit view will also display the equipment in use as well as its status.
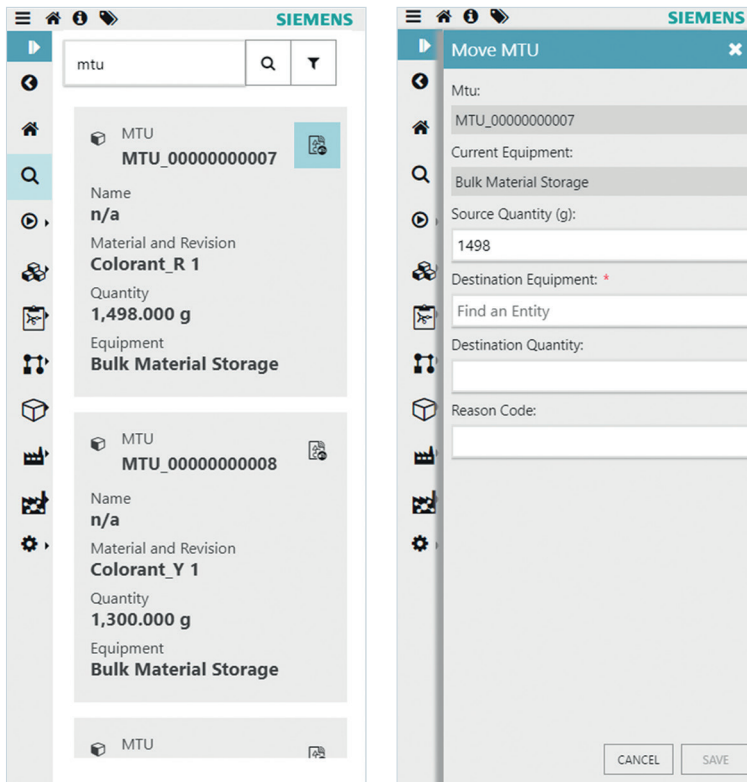
SIMATIC IT UA PI 2.5 enables the use of mobile devices to execute material movements, such as receiving, sampling, consuming and producing MTUs, due to its optimized search engine, the ability to search entities with barcode identification and its direct access to actions associated with the MTUs and HTML5 responsive user interfaces.

Enhancements have been added to the management of tasks in SIMATIC IT UA PI 2.5 to facilitate creation of project-specific tasks for system integrators. It now takes less effort to create custom tasks, manage the interaction of these tasks with the system and create documentation and associated tests. For Instance:

- Configure automatic start and activation of tasks: SIMATIC IT UA PI provides a standard way of defining which tasks must be automatically activated and started
- Create and start work processes from process definitions associated with equipment and respective equipment groups: SIMATIC IT UA PI provides quick access to create and start work processes from process definitions associated with a piece of equipment and the equipment group it belongs to

Mobile enabled material movement user interfaces:

- Associate process definitions with entities: SIMATIC IT UA PI makes it easy to create an association between a process definition and an entity. This allows you to quickly know about process definitions related to an entity. It becomes possible to associate process definitions with an equipment group. When listing the process definitions associated with a piece of equipment, SIMATIC IT UA PI lists all process definitions associated with this piece and the equipment groups it belongs to

SIMATIC IT UA PI 2.5 gives you the ability to indicate an order or a work master is related to a specific activity by defining a new property called type. By inheriting this type at their creation, works orders can be grouped into categories such as a type of activity or a type of process.

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