

Dynamic Scheduling Software

Laboratory Automation compliant to SiLA (SiLA PMS)

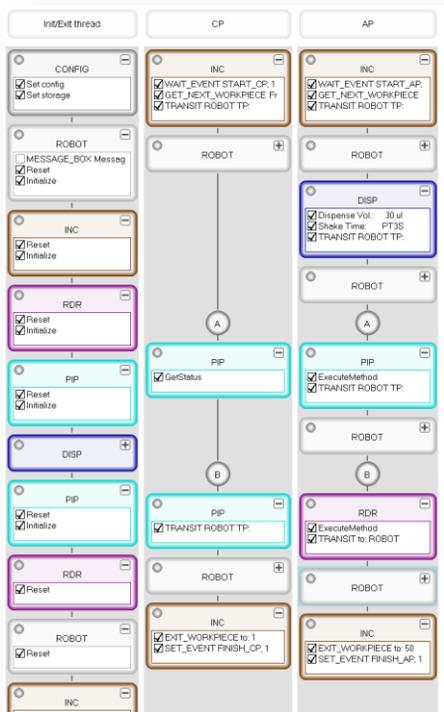
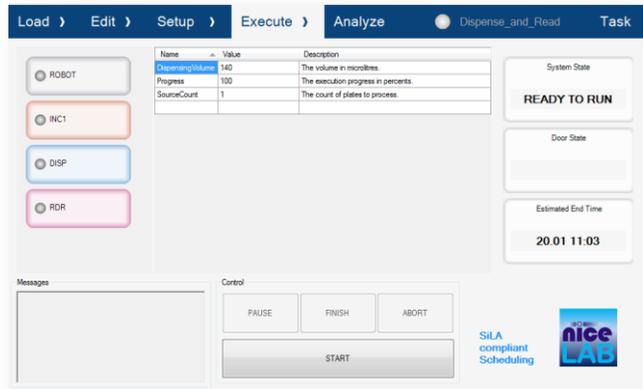
niceLAB offers features to control laboratory automation systems consisting of SiLA devices.

see: <http://www.sila-standard.org>

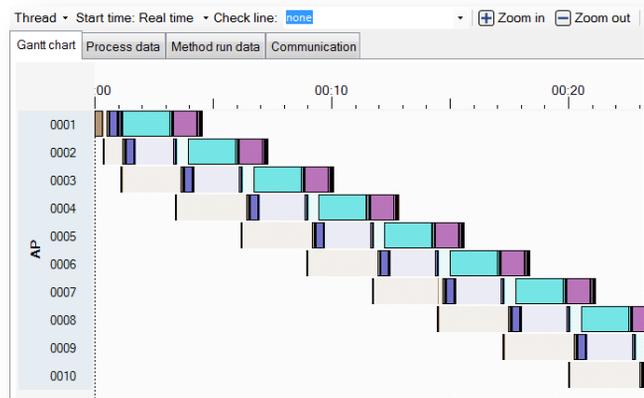
niceLAB was designed and developed to enable the construction of a system by the customer itself. For integration of devices no software development is necessary.

GUI

- Easy to use GUI for daily usage.
- Wizard for
 - loading a workflow,
 - creating or adapting a workflow,
 - Setting up the used labware,
 - executing the workflow,
 - supervising the run and
 - analyzing the result.
- Sophisticated workflow editor.



- Free definable workflow by simple Drag and Drop of devices and functions.
- Assisted by using of templates and macros.
- Synchronization of parallel threads by synchronization points.
- History of all important actions.



- Gantt charts for real-time or offline visualization of process execution or simulation.

Dynamic Scheduler

- Dynamic real-time/event driven scheduler.
- Optional time controlled execution.
- Highest throughput by greatest possible parallelism in the execution and optimal usage of resources.
- Deadlock prevention.
- User defined events for advanced synchronizations.
- Multiple devices with same functionality can be grouped and then used in the workflow as a single device (device pooling).

Supported Devices

- All devices of any vendor with a SiLA interface are supported.
- To integrate a device with SiLA interface no development activities are necessary. Integration will be done only by configuration.
- If there is no SiLA device driver available for a device you want to use, EQUIcon can develop it for you.

Advanced Configuration

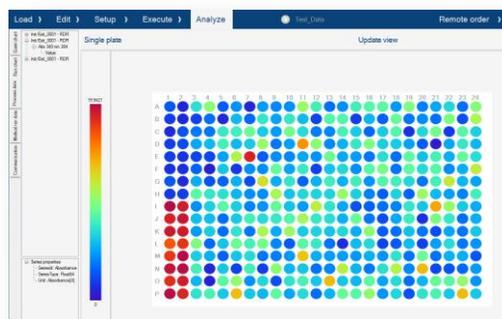
- A database contains all available devices and functions.
- Integration of a new device with only a few clicks. This will be done by reading the description of the functionality by the SiLA interface and filling the database with functions, parameters, parameter ranges, default values and other information.
- System configuration is assisted by a graphical configuration manager.

Error Handling

- Full implementation of error handling defined by SiLA.
- Every device decides for itself about the continuation options after an error. The GUI presents a respective list to the operator for choosing the item which corresponds best to the particular situation.

Data Management

- All execution steps are logged into a database.
- All data received from devices (e.g. data of reader devices) is also stored in the database and can be archived later in a user defined manner.
- Online visualization of data received from devices (formatted accordingly to the AnIML Standard).
- Visualization as single plate, series of plates or kinetics measurement.



Remote access

- niceLAB can be controlled by subordinate systems using the SiLA PMS Control interface. This may be also a niceLAB system or any other SiLA PMS (tightly coupled).
- niceLAB can be integrated into any higher organized workflow management by using the SiLA PMS Order interface (loosely coupled, e.g. for integration in a LIMS).
- Web interface for status visualization usable with any browser.

Simulation

- All devices with a SiLA interface have the functionality to simulate their work. On request they deliver the time the device would need to execute a function.
- With this time items the scheduler simulates a whole procedure run which the operator can use to evaluate the potential real execution.

SiLA Device Test

- As a developer of SiLA drivers you can use niceLAB for testing your own implementation.

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