DataApex

P004b-80A

03.07.2019

CLARITY CHROMATOGRAPHY STATION

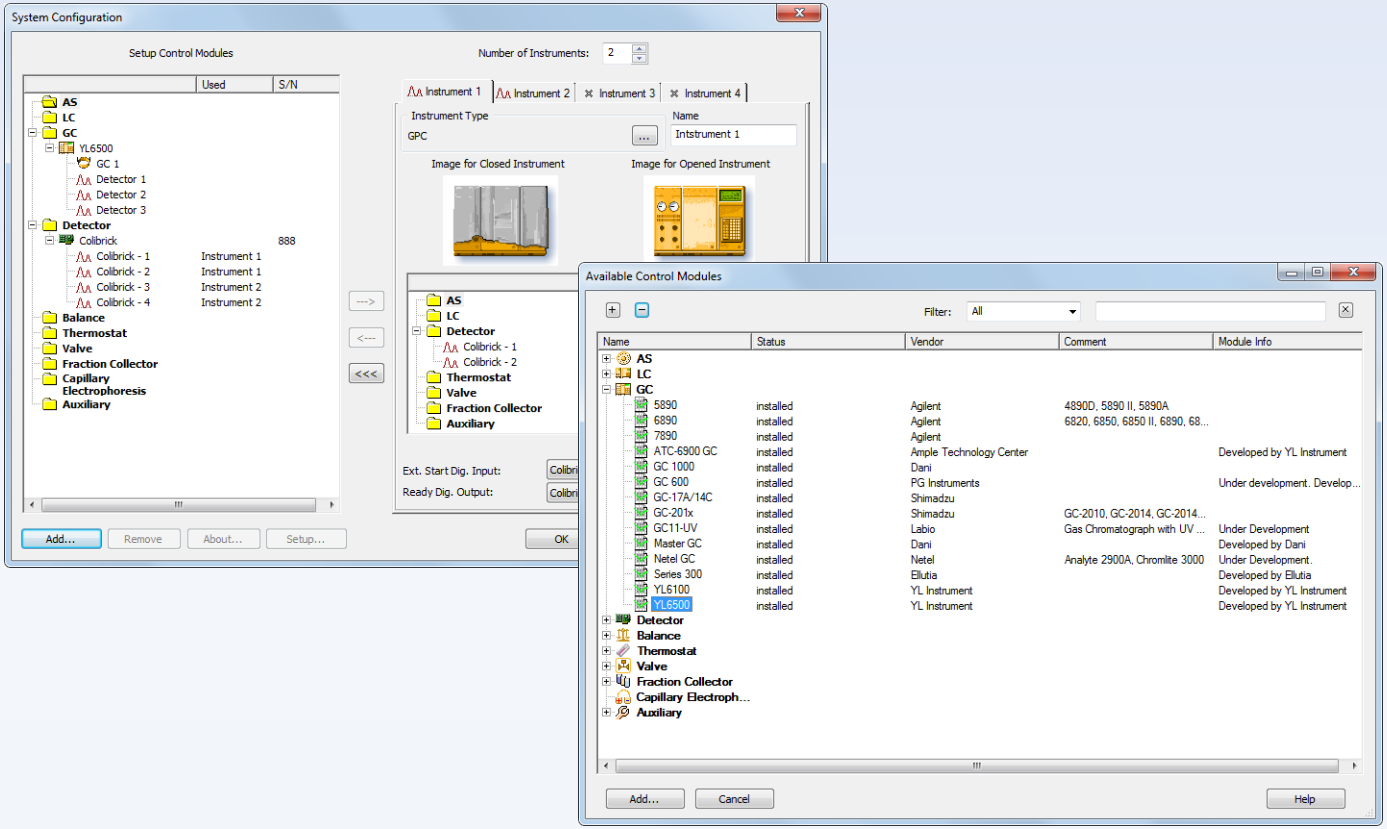
SDK SOLUTIONS

Control Module Development

- Development by DataApex
  - Communication protocols necessary
  - Unit for testing needed
  - Price & time depend on complexity and annual volume
- Development using Clarity Software Development Kit (SDK)

Clarity Software Development Kit

Set of tools for rapid development of control modules by third parties



Control Module / Extension Module

- Control Module: is a bridge between Clarity CDS and specific hardware
  - Control modules may be developed by External developers
- Extension Module: enhances Clarity CDS by new data, computations, outputs, etc.
  - Extensions are only developed by DataApex
- Control module may contain additional calculations based on data from Clarity

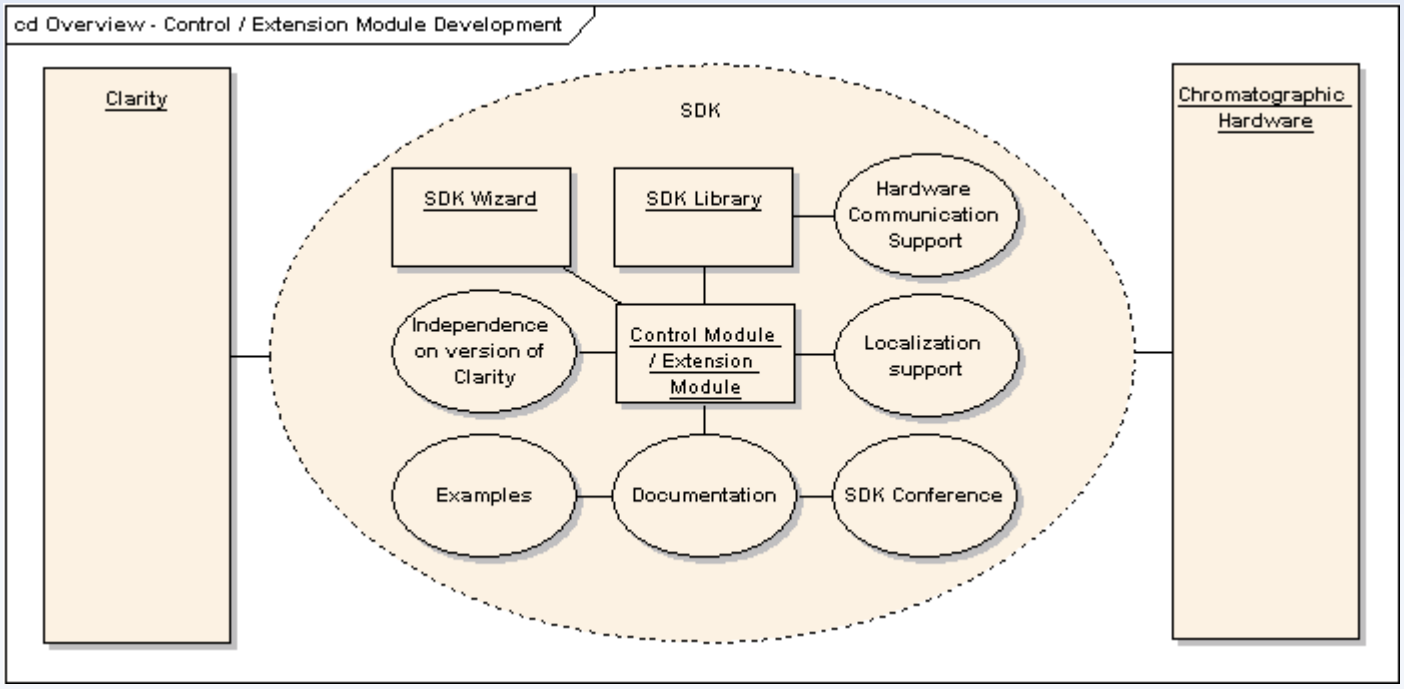
Clarity SDK

- Provides stable well-documented interface between Clarity software and the control/extension module
- SDK is implemented in C++ and uses Microsoft MFC and ATL libraries (COM)
- Designed to be used with:
  C++ in Microsoft Visual Studio 2010 (MFC 10) or
  C++ in Microsoft Visual Studio 2015 (MFC 14)

Clarity SDK Content

- Dynamically linked library
  (CswSDK10Mfc10.DLL or CswSDK10Mfc14.DLL)
- Set of tools
  (SDK Wizard, DependencyWalker etc.)
- Documentation
  (*.CHM help, examples, SDK Forum)

Clarity SDK Overview



Scenarios of Clarity SDK Usage

- Control module communicates directly with hardware over hardware lines such as COM, USB, TCP/IP
- Control module communicates with hardware through producer's own SDK (COM objects, dlls, etc.)

Clarity SDK

- Control modules developed by SDK will be added to Clarity's portfolio of instrument drivers (Details in DataApex SDK Policy D040)
- Exclusive drivers- a part of OEM version

Clarity SDK

- Control/Extension Modules developed by Clarity SDK will be compatible with future versions of Clarity
- Development Cooperation Agreement required
- SDK is free of charge, all services related to a SDK are charged (price as per valid pricelist)
- SDK support includes an introductory webinar, online email/phone support, Clarity Software loaner and testing of a developed driver(s)
- We offer an optional SDK training in Prague

Localization of control modules

- Clarity is localized to several languages, control module can be too
- Default language for a new control module should be English
- To allow localization, all strings (including states, error messages) should be saved in *.rc files

Released SDK Projects

Clarity already includes dozens of control modules for different instrumentation, both developed by DataApex and by external developers

- GC (Agilent 7890, Shimadzu GC-2010, …)
- HPLC Systems (Agilent 1200, Shimadzu Prominence, …)
- HPLC Pumps (Spark SPH1240, Sykam S2100, …)
- Detectors (Sedere ELSD, ESA Coulochem, …)
- Autosamplers (Spark Alias, CTC PAL, …)
- Valves (Upchurch, Rheodyne, Valco, …)
- PDA Detectors (Knauer S2800, Duratec DDT-3200, …)
- MS Detectors (Advion Expression CMS, …)
- Column Ovens (Spark Mistral, …)
- Fraction Collectors (Buechi 660, …)
- Special Applications (Sykam Amino Acid Analyzer, …)

Contact information

- SDK Technical questions:
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DataApex