# CCCP - Cosylab Common Control Platform

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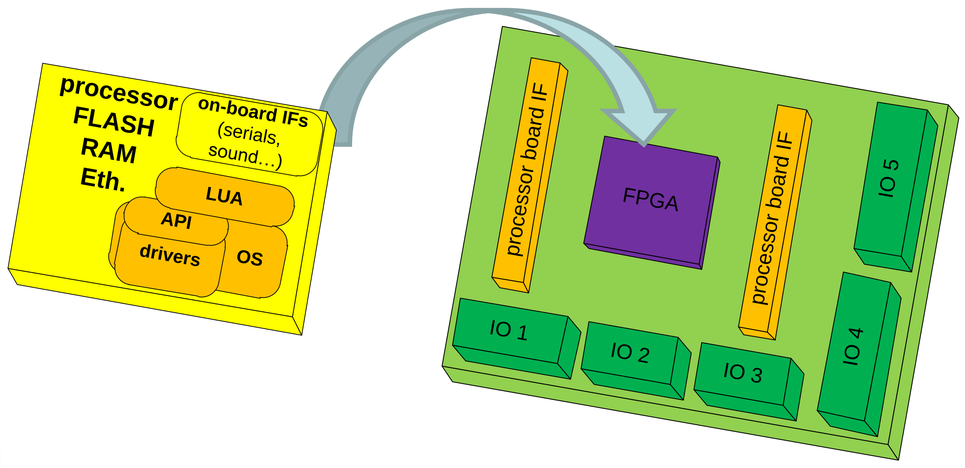
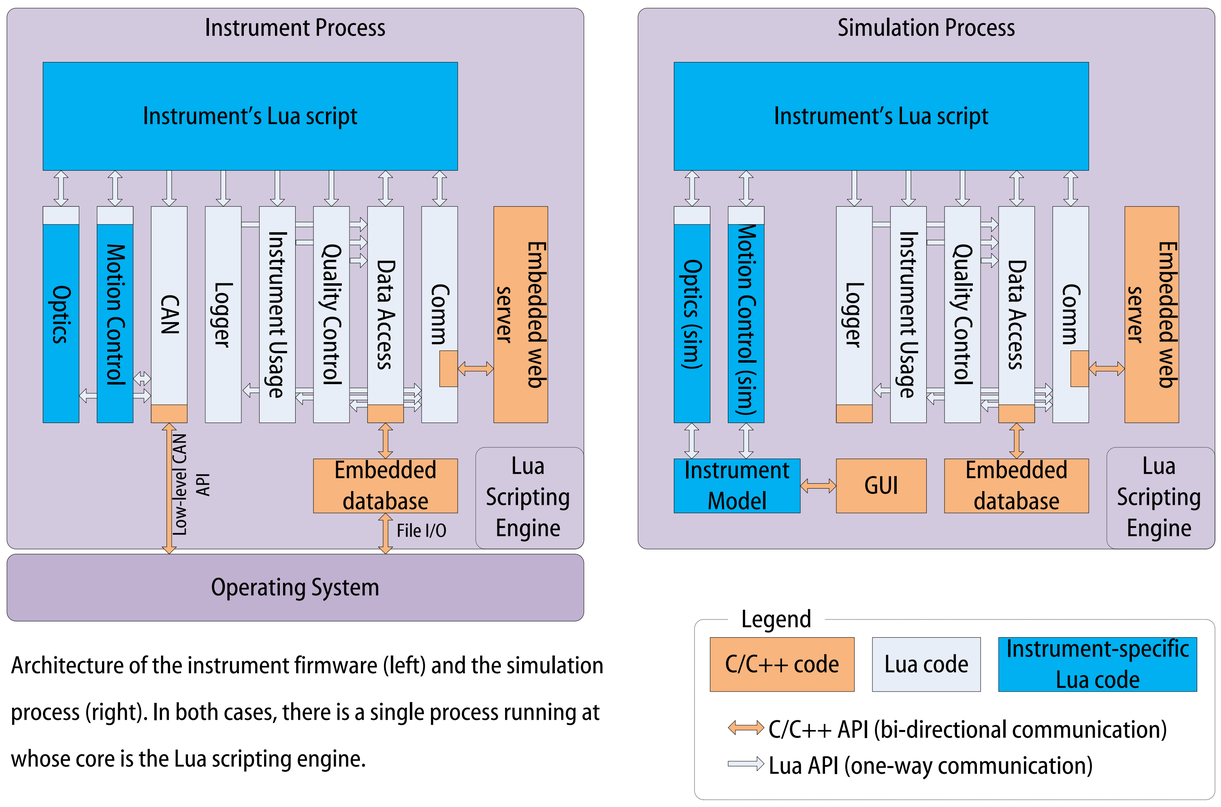
## Introduction

- ☑ Modularized aproach
- ☑ Hardware composed of a generic common module and a product specific IO baseboard
- ☑ Simple interface to various types of hardware components and fast and simple integration of such hardware into control systems
- ☑ Flexible scripting language Lua provides software real-time control of hardware modules
- ☑ Simulator can execute exactly the same Lua code also on the PC, without the instrument's mechanics and electronics are ready.




Generic common module (left) and a specific custom module (right)

## Product component simulation




Architecture of the instrument firmware (left) and the simulation process (right). In both cases, there is a single process running at whose core is the Lua scripting engine.

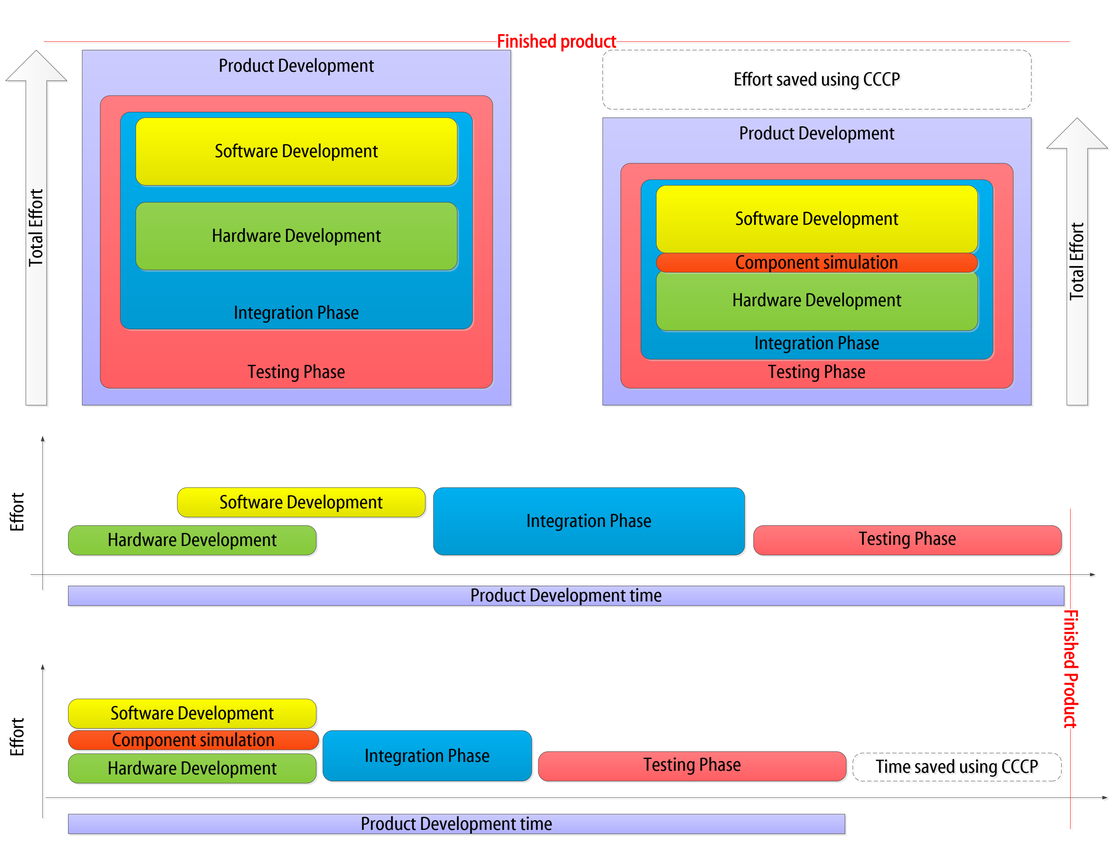
Choosing commonly available software (Linux, C, Lua, Qt) means:
- ☑ Available software development tools
- ☑ Reliability
- ☑ Good support

Product component simulation:
- ☑ Faster development without hardware
- ☑ Test driven development → Agility with task segmentation
- ☑ Shorter time to market
- ☑ Lower development costs
- ☑ Better developer utilization and efficiency
- ☑ Faster hardware integration
- ☑ Faster validation & verification process

## Optimizing development process

Product component simulation allows you to optimize development process with task segmentation and test driven development.

- ☑ Shorter time to market
- ☑ Lower development costs




## Task specific solution

Hardware based on commercialy available components:
- ☑ Cheaper
- ☑ Replaceable
- ☑ Reliable
- ☑ Support

Choosing a modular hardware design with commmercialy available components gives you the option of developing a task specific solution and:
- ☑ Minimizing complexity and maximizing flexibility
- ☑ Minimizing overdevelopment
- ☑ Faster development and faster time to market

## CONCLUSIONS

- ☑ Optimized development process by test driven development and task segmentation
- ☑ Faster development and lower hardware costs
- ☑ Small footprint, high degree of flexibility and high level of hardware abstraction make the CCCP an ideal control platform for complicated hardware instruments