COSYLAB
CONTROL SYSTEM LABORATORY
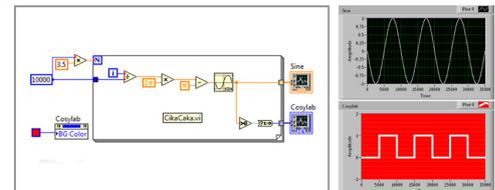
LabVIEW Development and Integration

Service Description

Introduction

LabVIEW is chosen by labs all around the world to develop systems that need measurement and control.

Cosylab provides outstanding development services for all aspects of National Instruments' COTS software and hardware platforms. We have extensive experience applying NI's solutions in a Big Physics context.

Get us on board and you hit the ground running with your NI-based project.

Use cases

There are many Big Physics use cases for this technology, of varying scope and complexity. Here are a few examples:

1. Embedded real-time systems based on multicore processors and FPGAs
2. High-speed data acquisition systems requiring timing and synchronization
3. A complete control system based on LabView

In-house or outsource?

The development part is best outsourced to experts. It requires specific expertise that is hard to come by and that you do not need permanently in the control group. But the work can, and should, be integrated seamlessly into the overall CS project, and is often facilitated by the in-house controls group. The need for additional outsourcing services, such as onsite installation and support, or commissioning support can be considered on a case-by-case basis. (ask for our Service Description on Outsourcing Services)

What we offer

Cosylab has built up extensive experience with LabVIEW design, development and integration work. It allows us to deliver the **right quality**, **on-time** and within the **agreed budget**. We:

- **Quote** on these projects with confidence, even **with incomplete requirements**, since we can rely on our experience from previous projects

- **Consult and advise:** help gather requirements from the different stakeholders

- **Work fast**: efficient and effective. The best experts with the right tools

- Do a **quality job**. Neither under- nor over engineered, **well coded and tested**

- Deliver with **full documentation**, **test plan** and acceptance **test report**

- Provide **extra services**: on-site installation, cold and hot commissioning support

You can count on us again when the device integration needs updating. If your person leaves, you lose the knowledge. If Cosylab does the job, we make sure it's available for life!

Cosylab, September 2013
Service Description version 1.0

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LabVIEW Development and Integration is part of
Cosylab's Development Services
We master all control system technologies for Big Physics

LabVIEW Development and Integration
(Continued from front side)

Service Description

Benefits

- **Save time:** you can focus on the big picture, we take care of the details

- **Quality results:** you get well documented source code, based on design patterns for better maintainance and extensibility

- **On-time & in-budget:** we deliver the agreed functionality within the agreed timeframe

- **Support:** through a Service Level Agreement (SLA) we provide support and updates

- **Minimize Risk:** as you let us take care of the technical details, we also take care of the associated risks such as porting issues, configuration issues, known technology issues
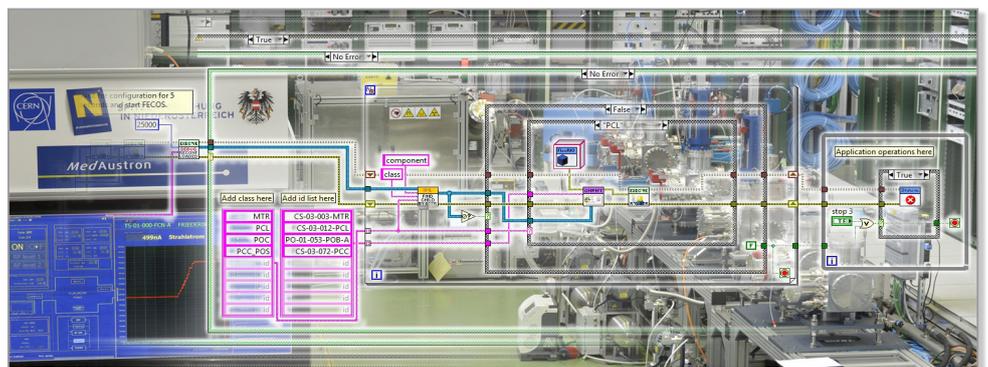
A Recent Example

MedAustron Medical Accelerator

One of the most advanced centres for Ion Beam Therapy and Research in Europe is currently being built in Wiener Neustadt, Austria: MedAustron.

The control system is built entirely around National Instruments software and hardware technology with reusability as a main objective.

Cosylab contributes as a contractor to the development of the accelerator control system and the medical front-end. We developed:

main timing system, power converter control, front-end controller, LV RT communication framework, injector and synchrotron LLRF integration, NI FPGA programming, LV RT drivers, dose delivery system, and the design, development and production of special purpose FlexRIO add-on modules.

How to make it happen

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Simply by contacting us; either by e-mail (see left) or by contacting someone you already know at Cosylab.

You can provide us with any form of specifications you already have, or tell us the wish-list of improvements for your current systems. If we need to know more before we can start with the work, we typically propose a 3-day site visit to produce a requirements specification document.

We quote all effort and expenses upfront and invoice after acceptance of deliverables. "No cure, no pay"!

Your **TRUSTED** Control System Partner