cosylab
CONTROL SYSTEM LABORATORY

Technology Studies

Start right

Service Descriptions

starting a project …

It may be true that all paths lead to Rome. In reality, only a few paths are the shortest, some are (much) longer, and some … just don't lead to Rome.

Development and commissioning of control systems, high-throughput data acquisition instruments or high-frequency control loops typically turn out to be complex projects. Not starting them in a right way, with right **technologies, tools** and **methods**, might prolong the project, or in the worst case – require a redevelopment from scratch at a later time.

… the right way

To start a project the right way, it is important that one:

1) understands the problem well**:**

- prepare a written list of requirements that need to be addressed,
- differentiate requirements that are necessary from those that are nice-to-have,
- keep in mind performance and scalability requirements.

2) is **aware of available techniques** to solve it

- what technologies and tools are available,
- what are their strengths and weaknesses,
- can they meet all the requirements of the problem

Note that answering these questions might not be an easy task: for example, trying to understand the problem, a focus on a particular sub-problem might divert attention from other sub-problems where it could have been more warranted. Similarly, unfamiliarity with existing techniques might lead to them not being considered as candidate solutions, possibly resulting in their costly re-invention.

leading experts at your command

Cosylab's experts are involved in many projects – more than 50 at a given time. Thus, they are constantly kept up-to-date with current technologies, as well as the domain of experimental physics facilities.

Cosylab can assist you early in the project by:

- gathering and prioritizing requirements,
- survey and evaluation of applicable technologies,
- design and implementation of prototypes that address critical technological risks early,
- document and disseminate the results,
- help you make a right decision,
- help you achieve staff and management support of your decision,
- assist in preparation of effort estimates, project planning and organization,
- train and mentor your staff to achieve proficiency in selected technologies,
- keeping you in the loop (and in command) at all times.

Cosylab, October 2008
Service specifications version: 0.2

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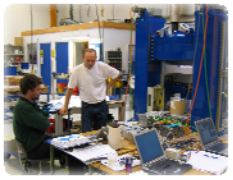
benefits

- assurance of making a right decision early,
- getting your team up-to-speed,
- increase chances of completing your project on time, on budget



Selected references

FAIR Control System Study

- gathering of requirements for the FAIR control system,
- definition of a conceptual design of all subsystems (interlocks, timing, control, data acquisition, beam diagnostics, etc.),
- evaluation of existing control systems applicable for the FAIR facility,
- study requested by: Gesellschaft für Schwerionenforschung (GSI), Darmstadt, Germany

ALMA Common Software (ACS) integration with LabVIEW

- part of the technology demonstrator for the E-ELT (Extremely Large Telescope) 42m optical telescope,
- objective: propose and evaluate the most suitable approach to integrate LabVIEW user interfaces and control loops with ACS control system,
- study requested by: European Southern Observatory (ESO), München, Germany

EPICS integration with LabVIEW

For a complete list of references, see http://cosylab.com/info/references/

Customer satisfaction

We are working on long-term partnership with laboratories and equipment suppliers:

- Marcus Schwickert (GSI): *"Cosylab has delivered a turn-key solution that solves all our needs for motion control. I was impressed at how fast Cosylab was able to produce high quality results."*
- Karen White (Jefferson Lab): *"Cosylab provided a lot and of good quality in a short period of time. I hope that this praise will not make you want to charge more."*
- Hamid Shoaee (SLAC): *"all your clients are very satisfied with the quality of your work, your responsiveness and your price"*
- Volker R. Schaa (GSI): *"In total, we all like the widgets you created for this application very much and were very impressed by your resourcefulness. Our compliments! "*

We believe we can deliver extra value to in-house development. Our motto is ***do what you do best and leave to us the rest***.

how to make it happen

Simply by contacting us; either by the email given in the footer or by already established connection in Cosylab. As an input you can provide any form of specifications you might already have, or you can let us know the wish-list of improvements regarding already available system. If this show up to be insufficient, we normally agree for a few days long on site visit, targeting requirement specification document.

All the efforts and expenses are mutually agreed beforehand and no many is paid before agreed deliverables.

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