

RAON Control System Status Report

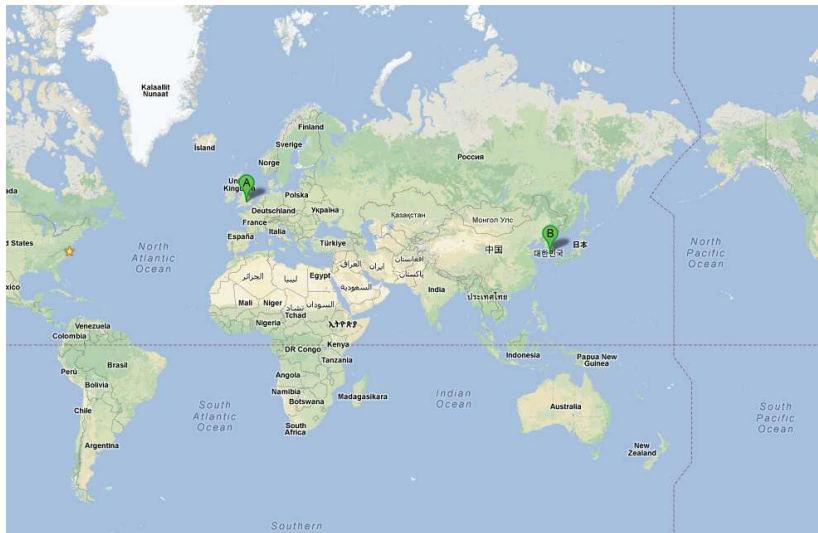
RAON is the name of an accelerator of RISP which is the new name of KoRIA project

Jeong **Han** Lee and Soo Ryu

Rare Isotope Science Project, Institute for Basic Science
South Korea

May 1, 2013

Rare Isotope Science Project (RISP) - Location



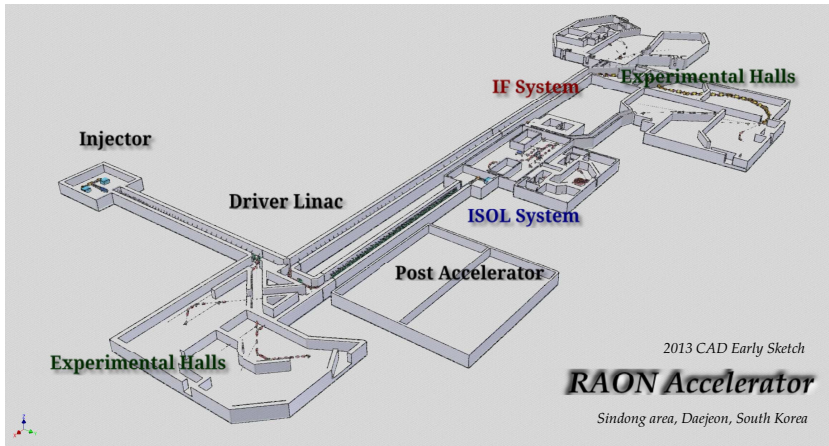
Rare Isotope Science Project (RISP) - Location



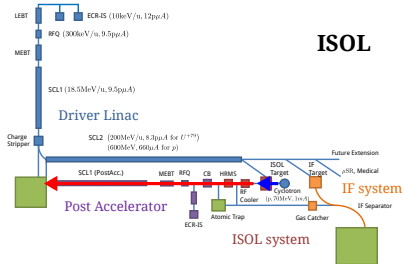
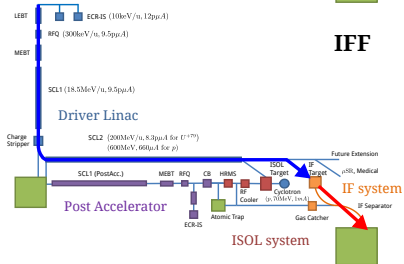
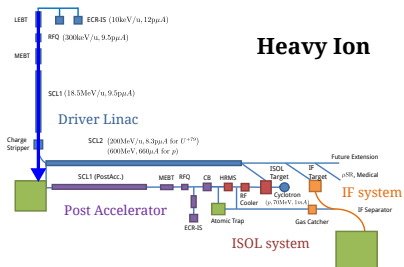
RISP - Aerial Conceptual View



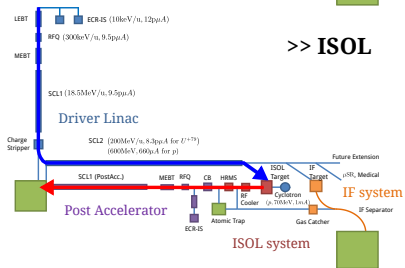
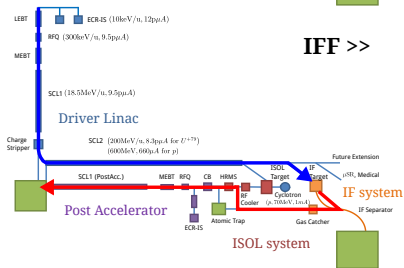
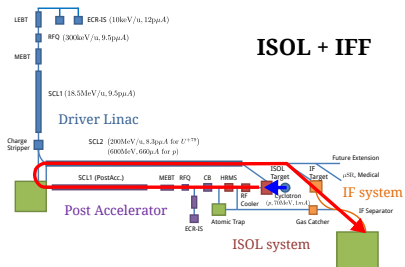
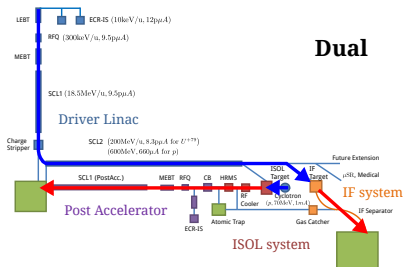
RAON - Early CAD Sketch








RAON - Single Modes



RAON - Multi Modes



Philosophy Facts

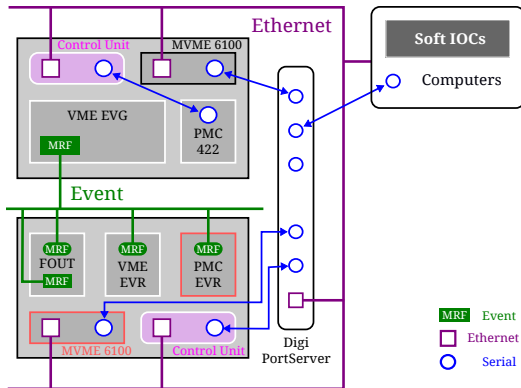
- ▶  **EPICS**, All and Sundry systems ;-)
- ▶  Debian Linux for OS
- ▶  PostgreSQL for SW and configuration
- ▶  SVN or  **git** for sources & documents version control
- ▶ International / market standard hardwares
- ▶ 1 GB Edge Switches / 10 GB Core Switches
- ▶ CSS and Open XAL for user interface frameworks

Goal

- ▶ gain experience and knowledge on EPICS, VxWorks, and so on
- ▶ understand how to setup the desired timing system for RAON

Using

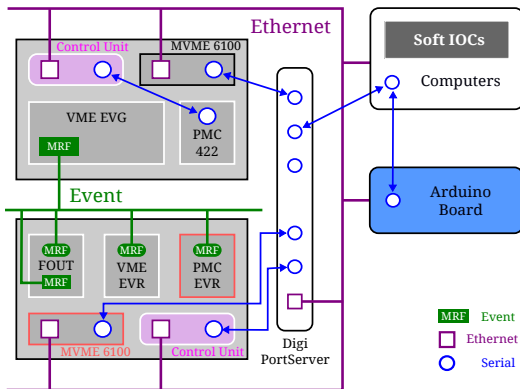
- ▶ EPICS 3.14, Debian 6
- ▶ VxWorks 6.x
- ▶ MVME 6100
- ▶ VME Crate (SNMPv3)
- ▶ MRF EVG/EVR/FOUT
- ▶ PMC EVR
- ▶ Digi PortServer TS
- ▶ **Arduinio Uno**



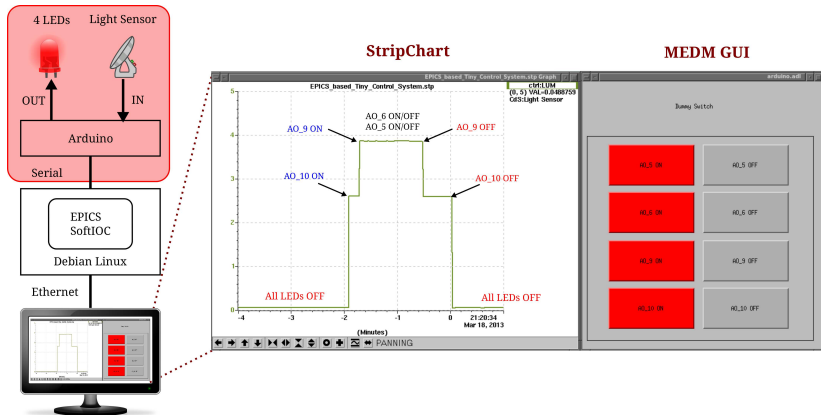
Many Thanks to Yamamoto Noboru!

Using

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A Tiny Little Step Forward during Delays



A plan is to build a basic example to learn EPICS by using PC, Arduino, LED, and one light sensor. (Cheap and Simple)

Ready, Get Set, and after Delays

- ▶ EPICS 3.14
- ▶ Debian 6
- ▶ Arduino Uno
- ▶ Digi PortServer TS
- ▶ Raspberry Pi
+ VME Crate Monitor
- ▶ PostgreSQL 8.4
- ▶ PMC EVR
- ▶ VxWorks 6.x
+ MRF EVG/EVR
- ▶ MVME 6100

MRF EVG 230

MVME 6100

Ethernet Switch

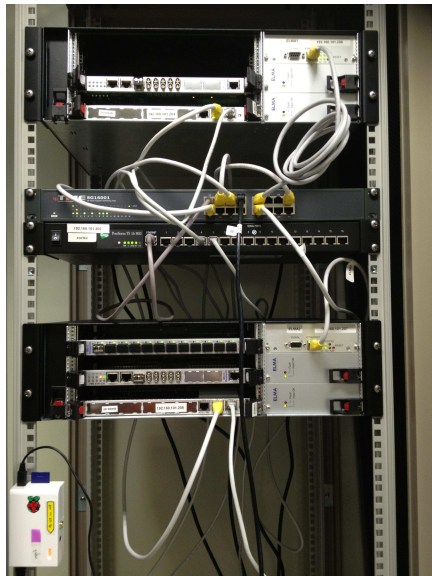
Portserver

MRF FOUT


MRF EVR 230

MVME 6100

Raspberry Pi



Summary and Outlook

- ▶ It is time to **Go** after Ready and Get set to study more EPICS and MRF timing products
- ▶ To gain experience of EPICS, VxWorks, and MRF products and to find robust and reliable methods to handle RAON various modes shown in this talk at the same time.
- ▶ We are completely open to any kind of collaboration works for this. These works will contribute to the future EPICS community.
- ▶ We would welcome any advice, comments, and suggestions with open arms. My email is jhlee@ibs.re.kr
- ▶ Please support RISP to make yet another great story of  **EPICS**

For the opportunity to present this tiny little step to all of you,

감사합니다!

Thank you!

Dankeschön!

ありがとう!

謝謝!

¡Gracias!

Merci!

