

Silicon Sensor Alliance Preparatory Meeting

Wrap-up

18 June 2009, CERN

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VTT

Planned Activities



Fabrication of Si Sensors for CERN (Joint Venture)



R&D for future detectors (FP7, ...)



Network for the Detector Ecosystem (COST)

Joint Venture (JV) to fabricate Si Sensors for CERN

- Vision: JV is a reliable vendor for CERN and collaboration between JV and CERN is smooth and well-organized
- One single strong supplier with a distributed production infrastructure (=JV)
 - Supply Chain Management
 - Quality control
 - Roles of Partners
 - Liabilities (“jointly and severally responsible ..”)
 - Risk management
 - etc..
- Special study will be started in September to address the supply chain management issues in a holistic way

Added value of JV

- Vertical integration vs. horizontal integration?
- JV could deliver highly integrated modules readily functionally tested
 - Simplification in procurement logistics
 - CERN procurement could make a market trial on vertically integrated detector modules
- Big fabs vs network of smaller vendors
 - Commitment of big fabs?
 - Smaller fabs can be strongly committed. To fulfill the capacity needs, a joint effort is needed.
- Organization of JV
 - Could become very difficult
 - Subclustering to fulfill reliability and capacity requirements for certain Si Sensor products (potentially with high vertical integration)

Roles of JV partners

- Wafer manufacturer
- Si sensor manufacturing
 - Several manufacturers with varying production capabilities
 - Several partners have or will have in near future 150mm production capability
- *Vertical integration incl. integration with the read-out circuit*
- *Flat panel assembly*
- *Other electronics such as power electronics, DC-DC conversion?, ..*
- *Si sensor testing*
- *Module level testing*
- Management functions needed for the JV
- Missing roles?
- Missing partners?

Preliminary discussion of roles

- Okmetic: M-Cz wafer production, 150mm + ..
- Acreo: detector fabrication, 100mm
- CiS: detector fabrication, 100mm & 150mm
- CNM: detector fabrication
- Detection Technology: detector fabrication, 150mm
- FBK: detector fabrication, 100mm
- 4-Labs: detector fabrication, 150mm & 200mm
- SiTek: detector fabrication
- SINTEF: detector fabrication, 150mm
- VTT: detector fabrication, 150mm
- MiUn: Research
- Alter: Testing
- Arquimea:
- *Additional partners?*

Need to go further towards integration of detectors and readout circuits, hybridization, ..?

Next steps

- ***Joint Venture meeting in October 14 at CERN***
- ***Preparatory meeting in September 16***
 - ***Sign up if you are interested***
- Letter of Intent to CERN on the Joint venture
 - First draft in Sept 15
 - To increase awareness and to gain acceptance in CERN and among CERN collaborations
 - To start joining R&D projects with CERN and the JV
- Continuous discussion between CERN and CERN collaborations
- Further clarification of CERN guidelines
- Further involvement of industry. Consider national in-kind contributions (Procurement Model A)
- Finalize the consortium
- MoU, comments by end of July
 - 2nd draft by Sept 15
 - Signing in October meeting

Joint Venture Agreement MoU

- After MoU has been signed, JV agreement discussions will be started

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FP7 Capacities Work Programme

- Draft work programme available
- Work programme calls for an action in
INFRA-2010-1.1.29: Detectors for future accelerators. *A project under this topic should aim at integrating the key research infrastructures in Europe for the development of advanced detector technologies.*

Call 6 - call identifier: FP7-INFRASTRUCTURES-2010-1

Date of publication: 30 July 2009

Deadline: 3 December 2009, at 17.00.00, Brussels local time.

Indicative budget: EUR 217 million

Combination of Collaborative projects and Coordination and Support Actions (CPCSA-INFRA)

Next steps

- There may be also also other relevant FP7
- Preparation of the FP7 Capacities project
- Need advice from EC on expectations (who knows the EC officer?)
- Propose the general goals and project structure (need a task force from key research infrastructures)
- ***Preparatory meeting in September 15 at CERN***
 - *Sign up if you interested*
- Draft the idea and get further feedback from the EC officer

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Applying COST funding

- Purpose: to get funding for running an open network of European players for enhancement of knowledge transfer in advanced detector technologies
- Deadline for Project Outline 25 September 2009 (1500 words)
 - Max 1500 words
- Full Project Proposal January 2010
- Project 2011-2014 (?)
- Eligible costs: networking costs only (no R&D)
- Coordinator?
- ***Joint meeting on COST preparation and FP7 project preparation at Sept 15 at CERN***
 - ***Sign up if you are interested***

COST Network

