

Forming an R&D collaboration – the next (recommended) formal steps

(what we did in RD50 5 years ago)

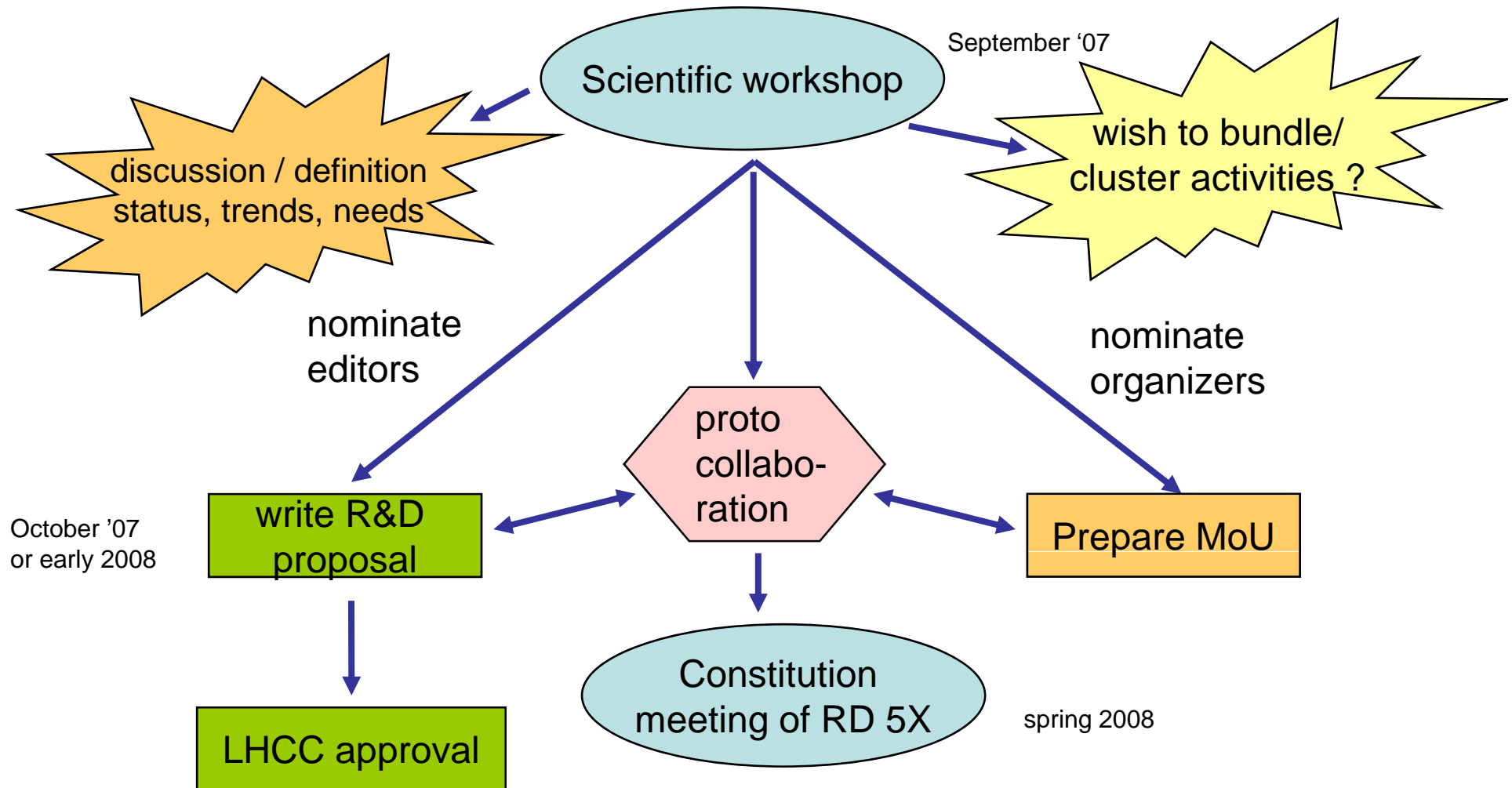
Assumptions:

- We want to form an ‘organized’ collaboration,
- recognized by LHCC (or an equivalent body),
- with a workplan, milestones, annual reports
- with a (small) common budget,
- with a publication policy,
- with a policy for Intellectual Property handling

RD5x: Advantages and Inconveniences

- Recognition by LHCC → allows groups to search for national funding.
- Bundle and structure ongoing activities.
- Avoid unnecessary duplication of work.
- Regular exchange of information, samples, results.
- Share resources, e.g. lab equipment, test beams, irradiation campaigns.
- Good overview of all developments in the field.
- Produce regular overview publications which document the status of the field.
- Allow small groups easy access to knowledge and technologies.
- Get in touch with new potential collaborators.
- need to write a proposal (program, plan, milestones).
- need to convince LHCC referee(s) and committee members.
- need to write status reports.
- need to contribute to common fund.
- need to write common publications.
- need to build and run a collaboration (new applications, inactive groups, not paying groups, unfair behaviour,...)
- need to organize collaboration meetings
- need to build and maintain web pages, lists, data bases,...

RD 5X



R&D Proposal

DEVELOPMENT OF RADIATION HARD SEMICONDUCTOR DEVICES FOR VERY HIGH LUMINOSITY COLLIDERS

Dipartimento Interateneo di Fisica & INFN - Bari, Italy
D. Mauro De Palma, V. Radicci

Centro Nacional de Microelectrónica, Campus Universidad Autónoma de Barcelona, Bellaterra
(Barcelona), Spain
M.Lozano, F.Campabadal, M.Ullán, C.Martínez, C.Fleta, M.Key, J.M.Rafí

NCSR DEMOKRITOS, Institute of Materials Science, Aghia Paraskevi Attikis, Greece
G.Kordas, A.Kontogeorgakos, C.Trapalis

Universität Dortmund, Lehrstuhl Experimentelle Physik IV, Dortmund, Germany

etc.

Table of contents

1	Summary	6
2	Introduction	7
3	Radiation Damage in Silicon Detectors	8
3.1	Radiation induced defects.....	8
3.2	Radiation damage in detectors	8
3.3	Present limits of operation	10
4	Objectives and Strategy	10
4.1	Objectives	10
4.2	Strategy.....	11
4.3	Collaborations with other R&D projects.....	12
5	Defect Engineering	13
5.1	Oxygen enriched silicon	13
5.2	Oxygen dimer in silicon	16
6	New Detector Structures	17
6.1	3D detectors.....	18
6.2	Thin detectors.....	19
6.3	Cost-effective solutions	19
7	Operational Conditions	20
8	New Sensor Materials	20
8.1	Silicon Carbide	20
8.2	Amorphous Silicon.....	21
8.3	GaN- and AlGaAs-based materials.....	21
9	Basic Studies, Modeling and Simulations	21
9.1	Basic Studies	22
9.2	Modeling and Simulation	24
10	Work Plan, Organization and Resources	25
10.1	Work Plan.....	25
10.2	Timescale	26
10.3	Milestones.....	26
10.4	Organization.....	27
10.5	Resources.....	28
	Appendix A	30
	References	35



remaining LHCC meetings in 2007

- 25 September
- 21-22 November

Proposal must be submitted ~4 weeks before the LHCC meeting.

Is Fri, 19 Oct., a realistic deadline (5 weeks) ? Look to tight to me.



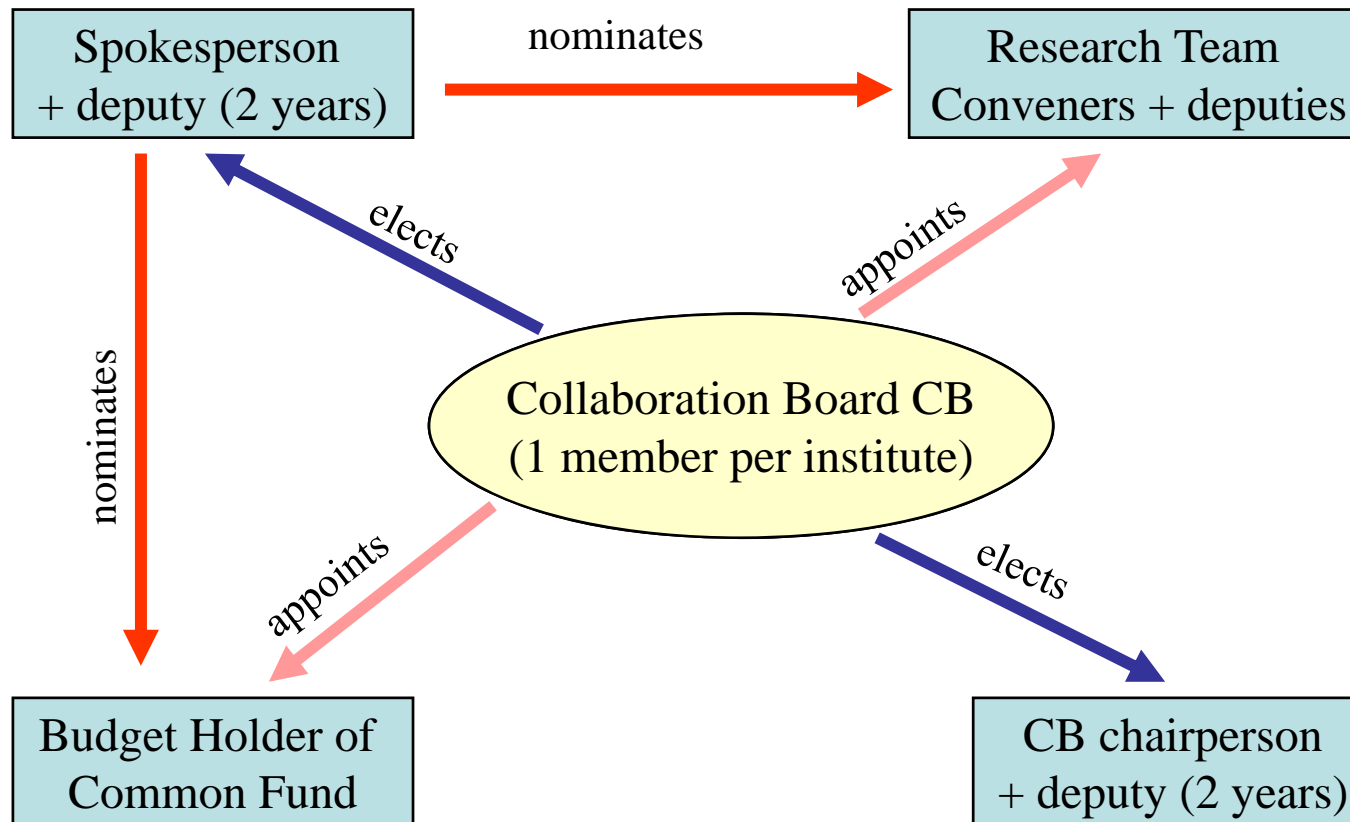
Proto-collaboration

Institutes expressing their intention to participate in RD 5x

- Contact person
- Names of group members (+ time fraction devoted to RDXX) → authors of proposal
- Current activities
- Field(s) of interest
- Available resources (instrumentation)



MoU: Agree how to run the collaboration



RD50, Feb 2002



How to find candidates for the role of the spokesperson ?

Proposal:

- Agree today on “3 wise persons”
- These 3 contact “discretely” the participating institutes and talk to/about potential candidates
- Finally they propose a list of candidates to CB (no ranking!).
- Any CB member can add names to this list.
- CB elects the spokesperson and the deputy from this list.

Proposed criteria for a spokesperson:

- He/she should be able to attribute a very substantial fraction of his/her time to this commitment.
- He/she should not have a comparable function in another scientific collaboration.

Proposals / volunteers for the 3 wise persons:

RD50, Feb 2002