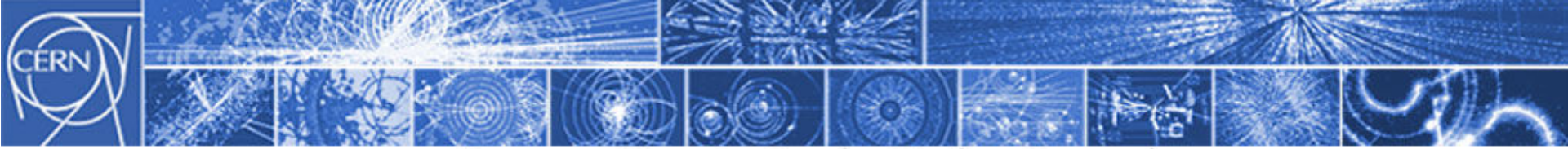

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European Organization for Nuclear Research
Organisation Européenne pour la Recherche Nucléaire

THE TECHNOLOGY TRANSFER NETWORK FOR PARTICLE PHYSICS

RD51 Collaboration Meeting, 25 November 2009 *Hartmut Hillemanns & Bernard Denis*

Introduction

Specificity of Particle Physics:

- Research in curiosity-driven science is an important driver for technological innovation and economic success
- PP is a highly collaborative open science environment requiring expertise in many technology domains
- PP experiments are extremely demanding in terms of equipment design, and they generate novel technical approach which ultimately benefit society
- Technological innovations from PP benefit many disciplines

Expectations of Particle Physics Funding Agencies:

- Discoveries alone are no longer sufficient to substantiate the investment level of MS in fundamental science.
- High Energy Physics is required to demonstrate its importance and usefulness to Society:
  - Communication
  - TT

Council approved European Strategy for PP

Delegations show a strong interest in improving KTT

Original: English
18 September 2009

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE

CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

Action to be taken		Voting Procedure
		-

INCREASING EFFICIENCY OF TECHNOLOGY TRANSFER ACTIVITIES IN MEMBER STATES

REPORT ON THE ACTIVITIES OF THE TECHNOLOGY TRANSFER NETWORK WITHIN THE FRAMEWORK OF THE EUROPEAN STRATEGY FOR PARTICLE PHYSICS

TTN in a nutshell

Purpose: Build corporate identity

- Establish a genuine partnership / collaboration amongst institutes active in Particle Physics in MS
  - Bridging the gap between the institutes members of the TT Network and industry
    - Be an attractive partner for industry
    - Enlarging the KT & TT Offer
    - Making the PP offer more visible
  - KT & TT/IP practices and tools
    - Exchange experience and practices
    - Improve capabilities amongst TT Network members
- Develop the image of the PP community as a source of knowledge that benefits society

Programme of work:

- 3-year project to develop tools and methods in order to support a permanent operation
- Elaborate structures for the TT network permanent operation

Financing

- During the execution of the project, the TT Network members will cover their own costs

Organisation & Composition

Organisation (during project phase):

- TT Network Board composed of one designated representative of each node to review the advancements of the programme of work and take all appropriate actions for its execution.
- Steering Committee composed of the work package conveners and the Network Coordinator to ensure the execution of the programme of work.
- LIP is candidate
- NIKHEF and FZJülich interested

Institute	Member State	Category
CEA/IRFU	France	RI-HEP
CERN		RI-HEP
CHALMERS	Sweden	University
Copenhagen University	Denmark	University
CNRS/IN2P3	France	RI-HEP
DESY	Germany	RI-HEP
EPFL	Switzerland	University
GSI	Germany	RI-G
INFN	Italy	RI-HEP
JSI* Jožef Stefan Institute	Slovenia	RI-G
PSI Paul Scherrer Institute	Switzerland	RI-G
National Technical University of Athens	Greece	University
STFC*, Science & Technology Facilities Council	UK	RI-HEP
University of Sofia	Bulgaria	University

(*) members since June 09

Results

Intellectual Property charter

- Set of principles aimed at helping PP institutions to adopt a sensible approach for KTT and IP matters and support the associated implementation measures while remaining compatible with open science
  - Intellectual Property policy
  - Knowledge and Technology Transfer policy
  - Collaborative and contract research policy

Prototype version of the TT Network website for internal use and evaluation

- Make PP technologies & expertise more visible to industry
- PP Offer: Standard presentation of technologies, service capabilities & R&D opportunities
- Successful applications in research disciplines other than PP and in industry

Preliminary analysis of survey's results to derive Key Performance Indicators pertinent for PP

- Discrepancies between Multidisciplinary and PP Research Infrastructures, and Universities
- Indicators related to patenting are not sufficient to illustrate KTT activities in PP

Work plan 2009 - 2010

Approbation of the IP charter

- TT Network nodes
- Seek approval by other institutes active in PP

First operational release of TT Network website

- Include concerted offers of pooled technologies

Indicators

- Consolidation of the analysis on an enriched dataset
- Develop additional indicators for knowledge transfer and technology transfer

Build Network corporate identity

- PP brand, concerted communication strategy, community building tools (web, training, mobility, ..)
- Development of Push/Pull mechanisms (incl. technology pooling) and Collaborative scouting
- Further exploratory actions for other possible pilots such as Si Strips sensors and Si photomultipliers

Task force for establishing a training programme on KTT matters

Set-up a programme of work to address socio-economic impacts of PP

Implementation proposal

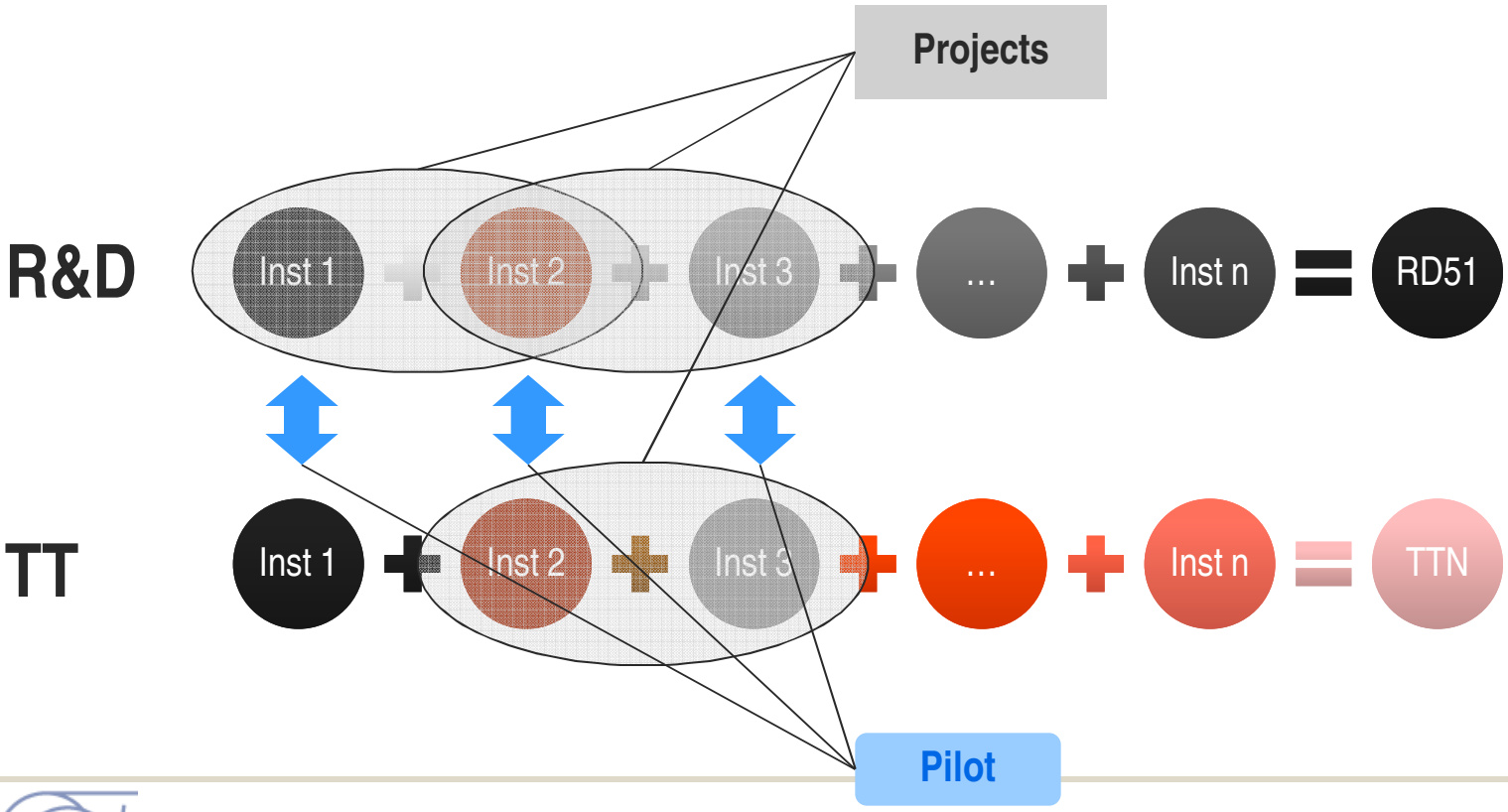
Implementation on practical cases that will be used as a pilots to develop and validate tools and methods necessary to build a PP corporate identity:

- PP specific technology
- Important and visible case with recognized TT potential
- Very good illustration of PP collaborative spirit
- Complex enough to address final goals: enhancing the attractiveness of PP technology
- General enough to trigger interest amongst TT Network members to validate/consolidate the results on other cases

RD51 and TTN

Some Similarities:

- Participating nodes share common vision, goals, strategy and projects
- Best practice exchange among participating nodes (TT is a sort of open science too …)
- Concerted communication and community building



Why a MPGD-Pilot Proposal ?

First pilot case: Micro Pattern Gaseous Detectors

- Large collaborative R&D efforts from PP community (RD-51, more than 60 institutions involved, not only PP institutes, important interest from industry);
  - Good case to define a collaborative scouting model
- Evidence for patent pooling (GEM, micromegas, front-end readout, software, etc.)
  - Very good case for the development of a collaborative push and pull model
  - First data to test community building tools; specify value and meaning of a PP brand
  - Test of concerted communication strategy
- Important and very visible case currently addressed by members of the TT Network individually with a limited collaboration at the TTO level
- TT Network member institutes participating in RD-51
  - CEA, CERN, CNRS, DESY, INFN, GSI
  - NTU, KFKI (TT Network Observer)

What are the benefits for RD51 ?

"The main objective of the R&D program is to advance technological development and application of Micro Pattern Gas Detectors." *http://rd51-public.web.cern.ch/RD51%2DPublic/*

- Increased visibility and awareness of RD51 technologies and expertise through concerted communication and building a MPGD community brand
- Image of an organised community:
  - More attractive R&D offer to industry in partnership
  - Concerted offer more attractive for industry to manufacture
- Promote and strengthen the image of RD51 as reference source for MPGD technologies
- Possibility to offer customer specific solution packages, expertise and services rather than raw technology components
- Simplified access to RD51 technologies, patent pool and expertise
- One SPOC (single point of contact) for facilitated identification of and access to RD51 technology offer

Some FAQ's

Do I have to patent my technology ?

- No. The decision to file a patent on a MPGD technology is at the entire discretion of a RD51 member. If you decide to file a patent, please inform the other collaboration members.

If I file a patent, can I continue to quickly publish my results ?

- Yes. A patent can be filed within 3 – 6 weeks

Does a participation in the MPGD pilot impact my freedom of research ?

- No.

How much additional work and costs I will have in participating to the MPGD pilot ?

- The pilot essentially requires some consulting effort on MPGD technologies from the TTN nodes concerned

Thank you for your attention

For more information and questions please contact:

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