

Open Source vs Closed Source IP, and how the 2 relate to the business of particle accelerators

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CERN – a few relevant facts

- An intergovernmental organization
- Financed by 22 + 6 Member and Associate Member States
- CERN's Core Mission is Basic Research in Particle Physics
- From the CERN Convention:
“The Organization shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character, and in research essentially related thereto... the results of its experimental and theoretical work shall be published or otherwise made generally available.”
- IP generated by CERN's employees belongs to CERN



CERN KT Mission

Maximize the technological and knowledge return to society, in particular through Member States industry

Promote CERN's image as a center of excellence for technology and innovation

Demonstrate the importance and impact of fundamental research investments

Key words are dissemination and impact



What makes KT at CERN unique ?

- **Technologies for fundamental research**
Gap between CERN's use and industry (Technology).
Fundamental research is first and foremost priority (Time).
- **Global collaborations**
Shared ownership.
Collaborative exploitation.
- **A culture of openness**
Open dissemination models – Software / Hardware.
Building a bridge between industry's interests and CERN's openness.
- **An intergovernmental organization**
Duty of return to all member states.
Equal treatment.



How does this translate to our dissemination strategy ?

1. Focus on Impact
2. Open dissemination
3. Protect only when strictly necessary
4. Create local impact in Member States



1. Impact – in broad terms

- How does CERN generate impact:
 - The scientific results
 - The technological knowledge
 - Training of students and personnel
 - Outreach activities
 - Collaborations with industry for CERN's needs
 - KT activities (in Member States, for the benefit of Society at large)
 - ...



2. Open Dissemination

- Open Access Publications
 - Open Data
 - Open Source Software
 - Open Source Hardware
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- Industry – Open Innovation



3. Protect only when strictly necessary

- Protection comes at a cost:
 - Patents at financial cost
 - Trade secrets at an organizational cost
- Patents are a poor indicator of innovation
- When is there a benefit ? When dissemination would not happen in absence of either the patent or the trade secret

4. Local Business Impact

- CERN Network of Business Incubation Centres (BIC)
- Benefits:
 - Preferred access to CERN technologies
 - 40 hours of consultancy
 - Access to CERN labels
 - Seed funding (through local partner)
- Entrepreneurship Development at CERN



Dispelling a few myths

- Large collaborations and knowledge transfer are incompatible.
- R&D in High Energy Physics is too far from the market.
- Industry is only interested in exclusive access





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