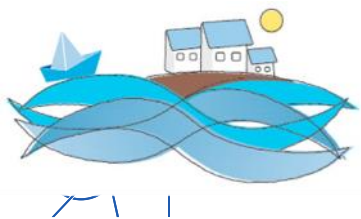


Knowledge Transfer @ CERN



Photo: CERN



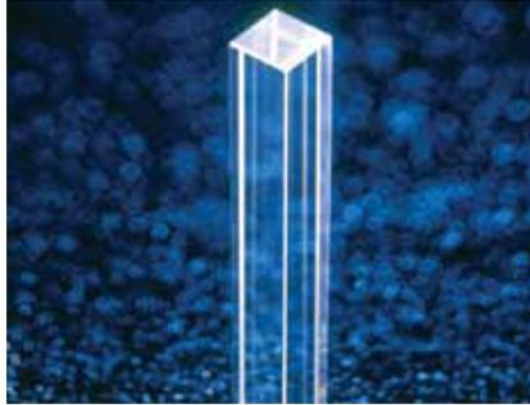
Mediterranean
Thematic Workshops
in Advanced Molecular Imaging *ion*

Medical Applications Section Leader
CERN Knowledge Transfer Group
Industry, Procurement, and Knowledge Transfer Department

Manuela Cirilli@cern.ch

From physics to...

Medicine
and
biology



Safety



Aerospace



Global
communities



Knowledge Transfer happens everywhere at CERN



cern.ch/knowledgetransfer

knowledgegetransfer.web.cern.ch

CERN Accelerating science

Sign in Directory

CERN › KNOWLEDGE TRANSFER

Knowledge Transfer

Search

Home Intellectual Property Dissemination Medical Applications Spin-off Ideasquare Our team Contact us

****OPEN** TWO KNOWLEDGE TRANSFER OFFICER POSITIONS.**
Deadline for Application 15th May 2016

Quick links

- Knowledge Transfer Opportunities
- The KT Fund
- KT Networks
- Frequently Asked Questions
- Our Mission

Knowledge Transfer 2015 Report

see additional reports and other documents

From Physics to Medicine Knowledge Transfer through People Energy Sustainability



KT Mission

Maximize the technological and knowledge return to Society, especially in the Member States

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



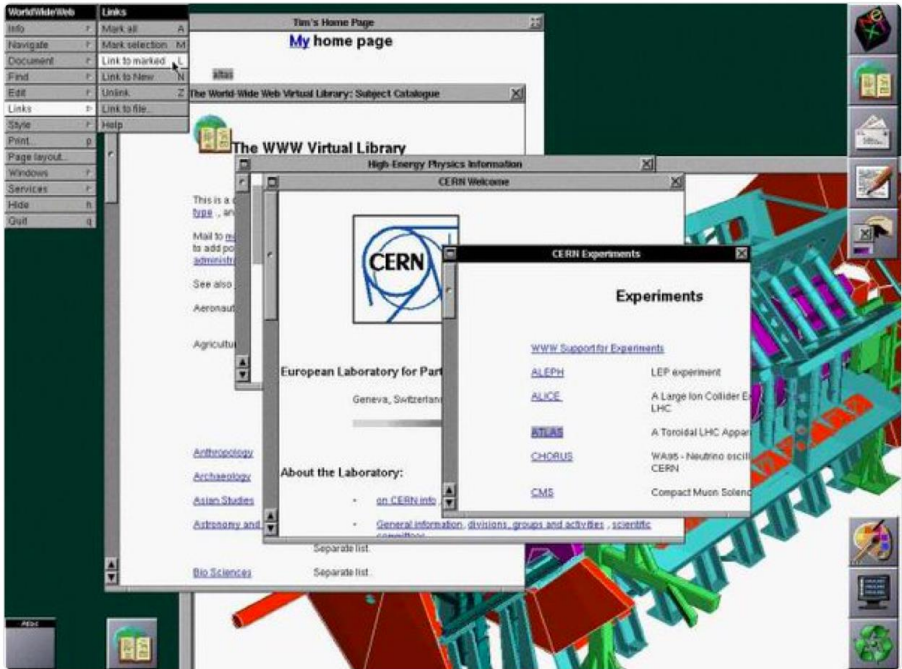
Key words: dissemination and impact!



How to achieve impact?



#TBT 1993: CERN triggers the spread of the World Wide Web by making the free software public cern.ch/go/9sg7



RETWEETS 399 LIKES 421

4:42 PM - 28 Apr 2016



Ways of doing KT



Results 2015



96

EXTERNAL
OPPORTUNITIES



84

INTERNAL
OPPORTUNITIES



50

CONTRACTS
SIGNED



2

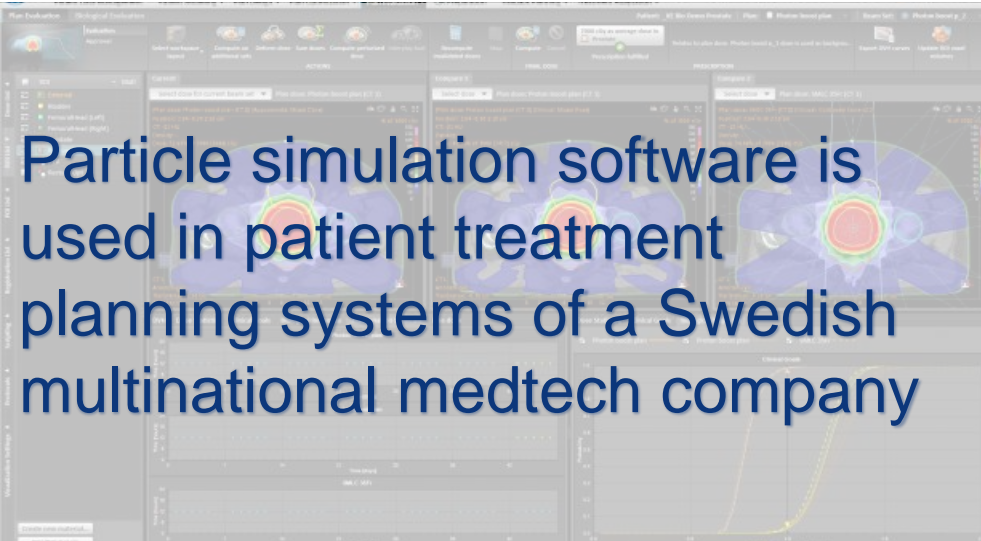
PATENT
APPLICATIONS
FILED

Patents filed (2015)

Title	Filing date	Application number	Application type	Owner(s)
Continuously Transposed Conducting Cable	3 August 2015	EP15179513.5	EP	CERN
Scintillator array for gamma ray or X-ray detection with Depth of Interaction information	22 October 2015	PCT/EP2015/074462	PCT	CERN, Univ. Of Milano Bicocca, PETSYS Electronics SA

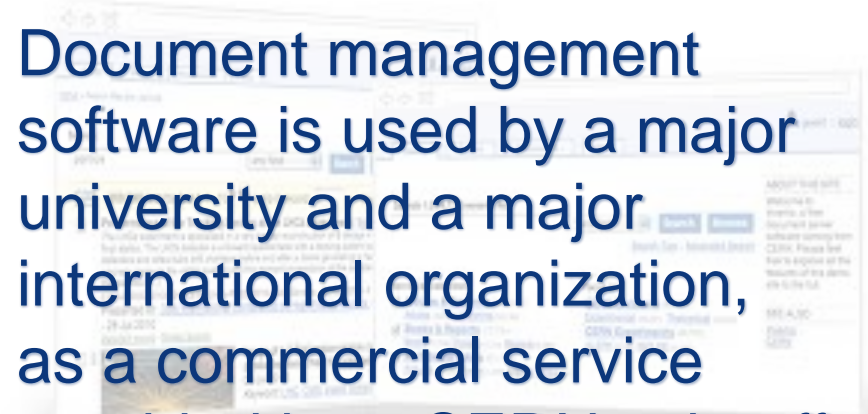


Examples of transfers 2015

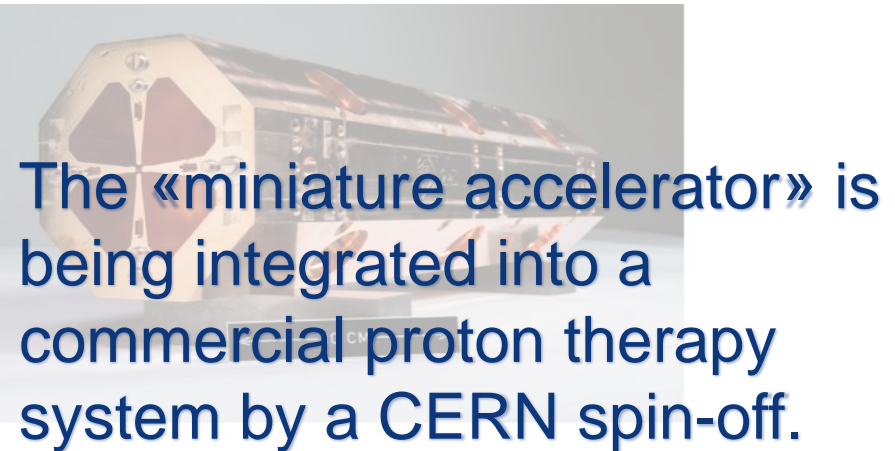


Particle simulation software is used in patient treatment planning systems of a Swedish multinational medtech company

Document management software is used by a major university and a major international organization, as a commercial service provided by a CERN spin-off.



Radiation monitoring technology is commercially available as an off-the-shelf product of a young Italian company



The «miniature accelerator» is being integrated into a commercial proton therapy system by a CERN spin-off.



Knowledge Transfer Agreements 2015

Organisations



Companies



Universities



KT Contracts - examples

Giving the worldwide detector community access to standardized commercial grade readout electronics (SRS)



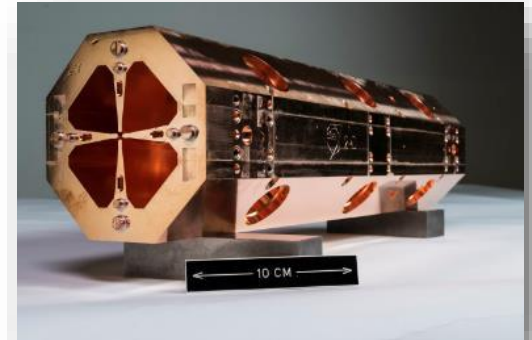
Medipix3: three commercial licenses to start-up companies



Kryolize, ActiWiz, Roxie softwares:
12 academic license agreements

KT contracts - examples

License of the High Frequency Compact RFQ to ADAM SA



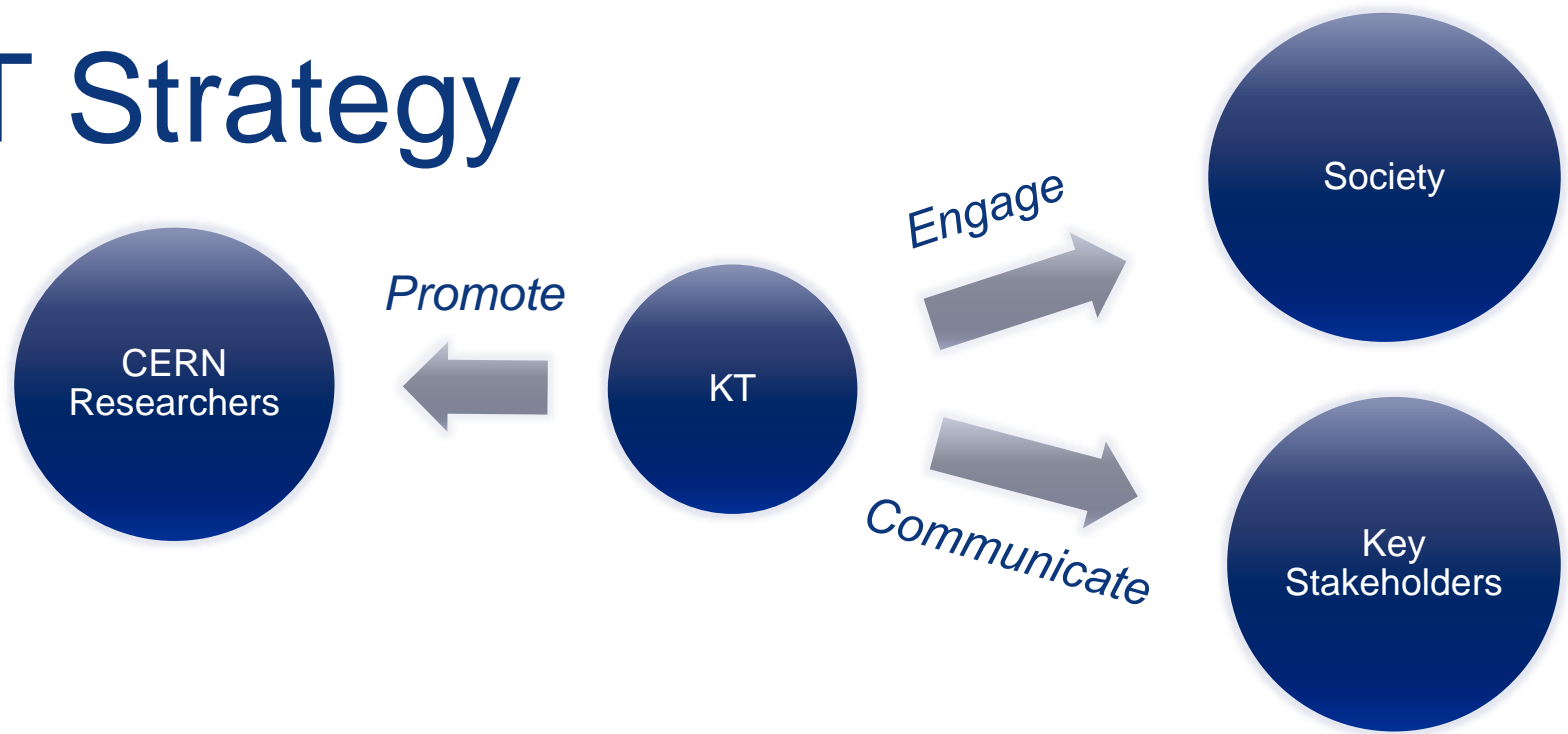
Medastron: Extension of collaboration and exploitation of jointly developed know-how



FLUKA License to Raysearch for patient treatment planning



KT Strategy



Promote

to CERN's researchers the benefits of KT for the Organization, identify new opportunities, provide a high-quality and timely service

Engage

with the outside world (in particular member states industry, institutes, and KT representatives) to disseminate and maximize the impact of CERN's knowledge on society

Communicate

on CERN's KT activities to key stakeholders (in particular to decision makers in CERN's Member states)

New technology/know-how

A low-threshold approach

Informal contact with KT

Meeting with KT officers

Technology disclosure form



Identify new kt opportunities

INET – Internal NETwork

representatives of all CERN departments

KT Innovation days

organised by KT for individual
departments



The KT fund

CERN's incentive scheme to help transferring our knowledge and technologies

Projects selected by a committee composed by the Department Heads and the KT group

Since 2011:

32 projects financed, with amounts from 15 k to 190 k CHF

(not including 2016)



KT Fund Examples –

Funded:

Prototype of a hand-held radiation survey meter operable in high magnetic fields



The KT Fund has catalysed the creation of



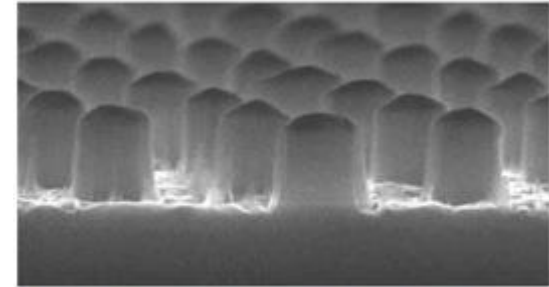
Off-the-shelf industrial-grade radiation survey meter by a company from a state



KT Fund Examples – Photonic Crystals

Funded:

Nanostructuring for improved light extraction from scintillating materials



Si₃N₄ layer nanostructured to produce a photonic crystal



The KT Fund has catalysed the creation of



An industry-driven collaboration to achieve breakthrough PET scanning performance for breast cancer diagnosis



Business Incubation Centres (BIC) in CERN Member States

BICs of CERN technologies assist entrepreneurs and small high-tech businesses in taking innovative ideas from technical concept to market reality

CERN contributes with technical visits to the Laboratory, support to the companies in the BICs, and preferential-rate licensing of CERN's IP

The BIC managers provide offices, know-how, access to local and national networks, business and fundraising support



CERN BIC Network today

UK – STFC-CERN BIC

Netherlands – NIKHEF-CERN BIC

Norway – NTNU BIC of CERN Technology

Greece – Technopolis BIC of CERN Technology

Austria – Austria BIC of CERN Technology

France – InnoGEX BIC of CERN Technology

Finland – Finnish BIC of CERN Technology

Spain – Spanish BIC of CERN Technology



STFC-CERN BIC (UK, 2012)



CamsTech Ltd



NTNU BIC of CERN Tech. (NO, 2014)



NIKHEF CERN BIC (NL, 2014):



Austria BIC of CERN Tech. (AT, 2014):



InnoGex (FR, 2015):



Entrepreneurship@CERN

Support the entrepreneurial spirit through:

Activities and events:

- Entrepreneurship meet-up

- Global entrepreneurship week

- CERN-NTNU Screening Week

- Entrepreneurship support provided to THE Port Hackathon and IdeaSquare Challenge Based Innovation Programmes

Material and documents made available to CERN people:

- Business plan package tailored for CERN scientists and engineers

- Financial spreadsheets for start-ups with explanations



Entrepreneurship Meet-Up

Organized by KT every other
Wednesday at 18:00

For CERN people interested in
entrepreneurship

Often with external guest speakers

Usually around 20 people per meet-
up

120 people on mailing list



Pitching competition:
8th of July 2015
13 Participants
~60 in the audience



TIND Technologies

MANAGE, SHOWCASE AND PRESERVE
ALL LIBRARY RESOURCES.

UN Library
@UNLibrary

We've selected @T
Library's Digital Libi
preserve our digital

Caltech Library
News

Press Release: TIND Technologies [January 4, 2016]
ITU goes live on TIND Library Management System

NO INFRASTRUCTURE
Eliminate the need for in-house IT resources such as staff and infrastructure. Let us deal with the technicalities.

ALWAYS UPDATED
Get continuous access to forefront CERN technology. We update your system seamlessly and with no downtime.

FOCUS ON CURATION
Free time to support your scholarly community and preserving the intellectual output of your institution.



spin-off

<http://tind.io>

Knowledge Transfer | *Accelerating Innovation*

Manuela Cirilli, MEDAMI 2016



INTERNATIONAL CONFERENCE
ON TRANSLATIONAL RESEARCH IN RADIATION ONCOLOGY

PHYSICS FOR HEALTH IN EUROPE



Photo Salvatore Fiore <https://www.flickr.com/photos/salvafiore>

Communication

Knowledge Transfer **2015**



MEDIPIX

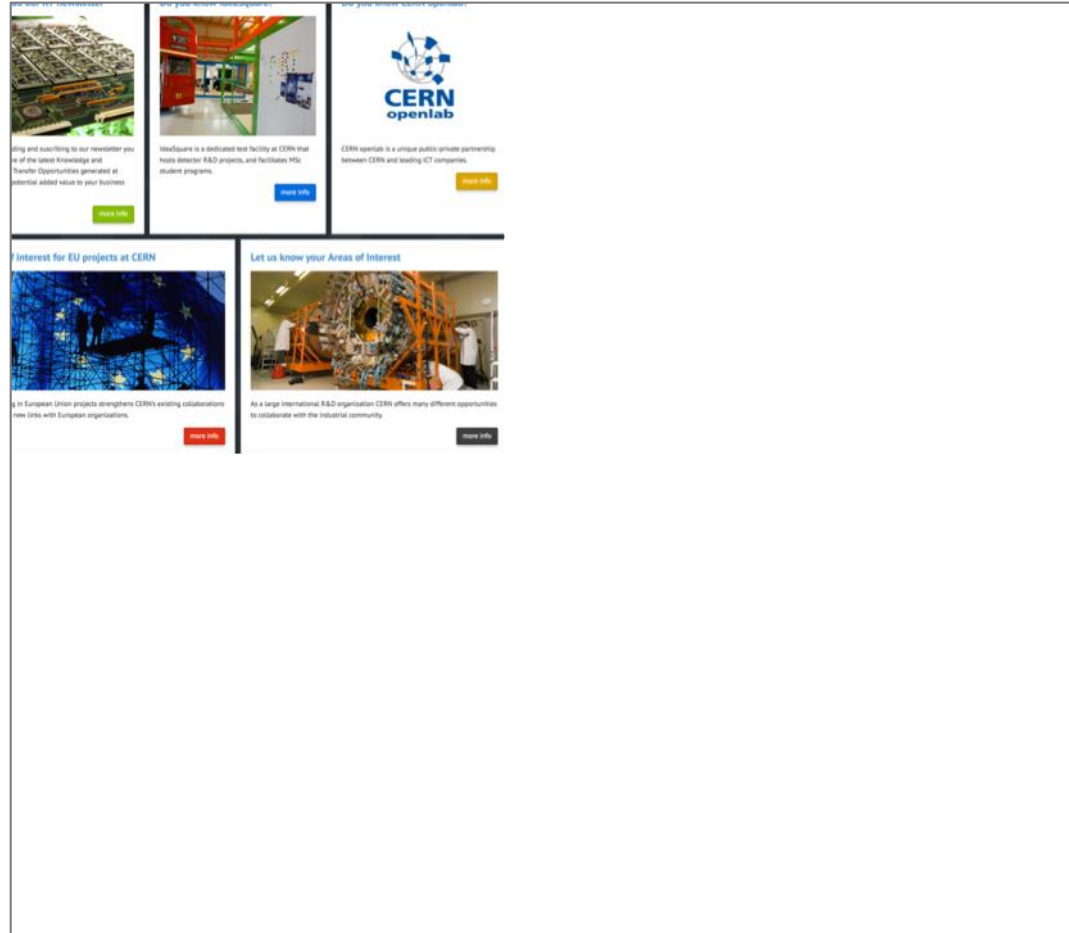


SME network

Downloadable bi-annual
KT newsletter

(allows to create an
internal database of
SMEs)

Accessible also to large
corporations, research
centres, universities, etc.



SME network

Launched November 2015.

Jan-March 2016:
more than 300 visitors

More than 100 subscriptions
(with 50 SMEs)



CERN
Technology

NEWSLETTER KNOWLEDGE AND TECHNOLOGY TRANSFER NETWORK

#1 | November 2015 | Find out more <http://knowledge-transfer.web.cern.ch>



Thank you for downloading this newsletter edited by the Knowledge Transfer group at CERN! It is an initial communication tool for sharing information with potential added value to your organization, business and sector. Our intention is to offer an update about our activities linked to Knowledge Transfer to make you aware of potential collaboration opportunities. We will publish this newsletter twice a year with themes that we consider your interest based on the information you provided to from your completed questionnaire. You can always find more information following the links or our CERN KT website: <http://knowledge-transfer.web.cern.ch/>

OUR KNOWLEDGE TRANSFER ANNUAL REPORT

CERN's Knowledge Transfer (KT) activities continue to deliver added value. The dissemination of Intellectual Property (IP) generated at CERN (often in collaboration with other institutes) is steadily increasing.

The idea of a network of Business Incubation Centers (BiCs) of CERN Technologies in the Member States comes closer to reality in 2014 and 2015.

The establishment of BiCs in UK, The Netherlands, Norway, Greece, Austria, France, Finland and Spain contributes to bring CERN's knowledge to the market by assisting small start-up companies from CERN Member States.

The iKT Fund is established as a very useful tool for reducing the gap from fundamental research to applications. In addition, it contributes to incentivizing CERN researchers to bring their ideas forward.



Download the full iKT report
<http://knowledge-transfer.web.cern.ch/files/knowledge-transfer-2014.pdf>
Information on CERN BiC network
<http://knowledge-transfer.web.cern.ch/bic-network>

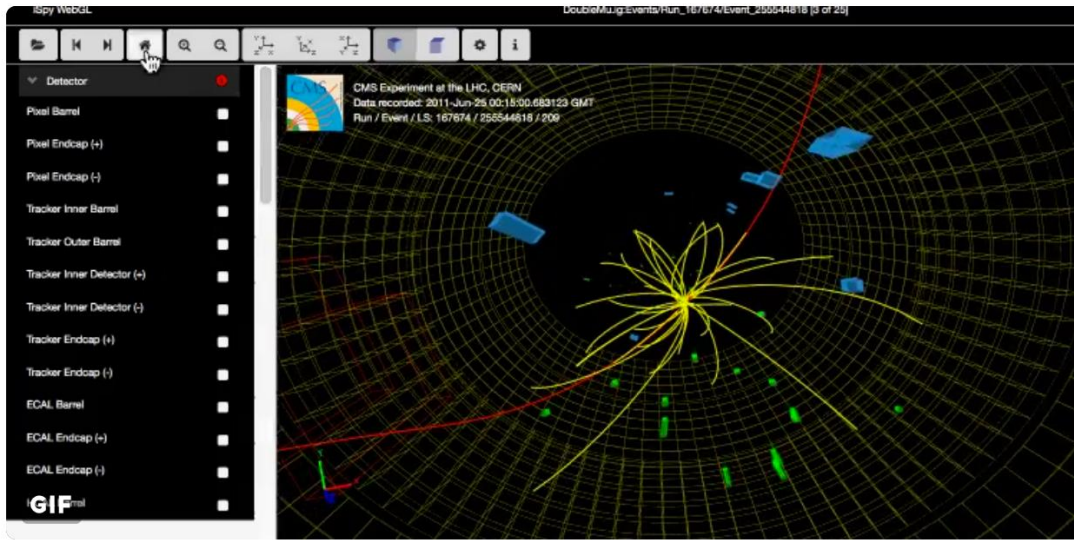


Open Knowledge



Following

.@CMSexperiment makes 300 TB of LHC research data publicly available cern.ch/go/l8vr
#opendata #openscience



RETWEETS
268

LIKES
351



6:32 PM - 25 Apr 2016

Open Access
Open Data
Open Source
Openlab
Open
Hardware



Open Hardware License (OHL)



In the spirit of knowledge sharing and dissemination, the CERN–OHL governs the use, copying, modification and distribution of hardware design documentation, and the manufacture and distribution of products.

The CERN–OHL is to hardware what the General Public Licence (GPL) is to software. It defines the conditions under which a licensee will be able to use or modify the licensed material.

Contacts

General enquiries: mail-KT@cern.ch

KT Group Leader: Giovanni.Anelli@cern.ch

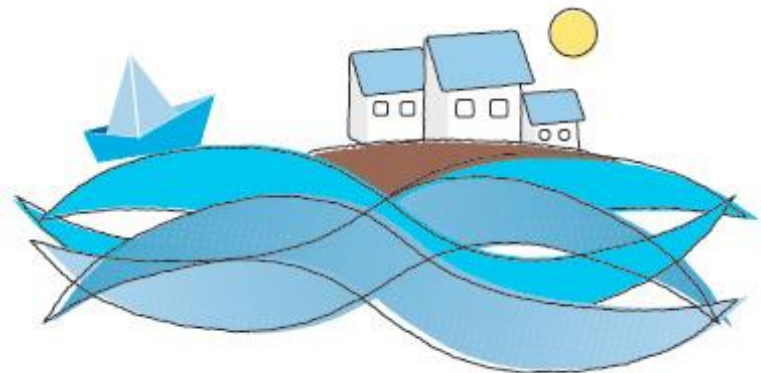
IP Dissemination: David.Mazur@cern.ch

Medical Applications: Manuela.Cirilli@cern.ch

Aerospace Applications:
Enrico.Chesta@cern.ch



cern.ch/knowledgetransfer



Mediterranean
Thematic Workshops
in Advanced Molecular Imaging

KT Fund Examples - KiCAD

SHOWS OFF NEW KICAD

CERN is Getting

posted by [janrinok](#) on Thu
from the [open-data dept](#)

"gewg_" writes:

The computer-aided design of circuit board layouts has different vendor--due to

Many years ago, Cadsoft to view/print already-created for amateurs and pros on

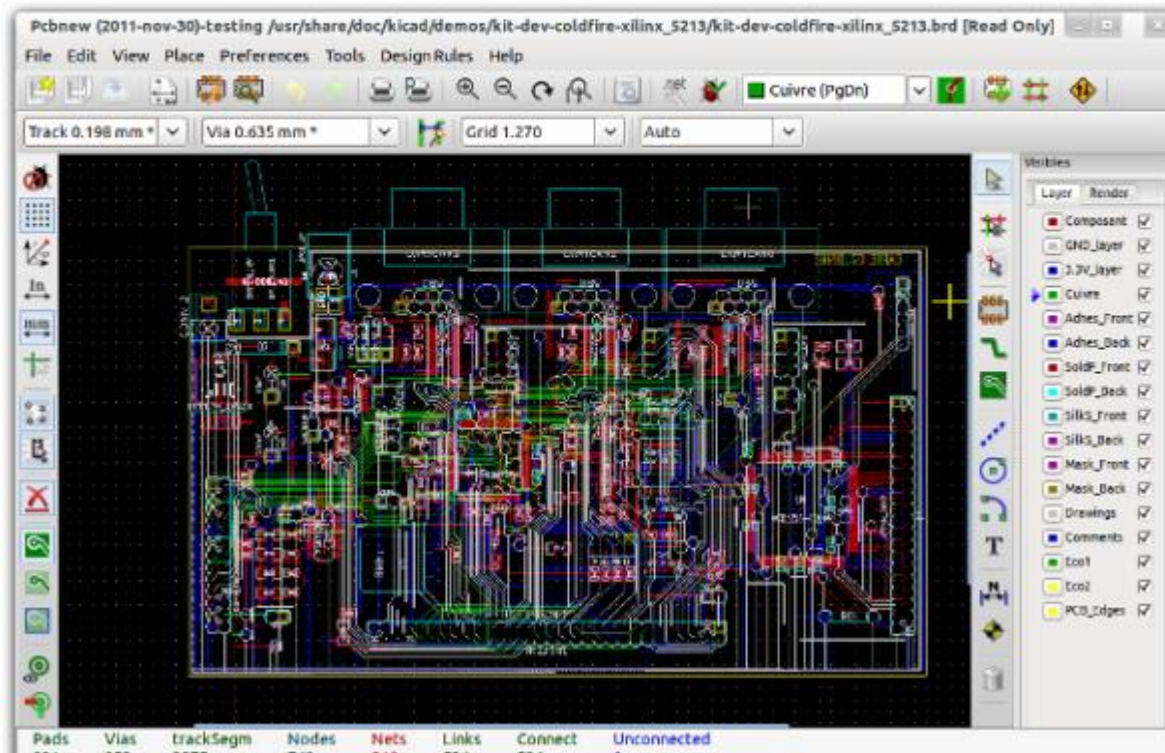
In 2006, however, Cadsoft circumstances, as [describe](#) engineers are hoping to pro

Ad

professional tool and disen

Update on CERN's investment in KiCAD

October 22, 2014 in software by DP | 1 comment



Comments

14, 2014

Circuits

and printed
age produced by a

unlimited ability
quasi-standard

under certain
community. CERN



KT Fund Examples – High Pressure Laminates

Funded:

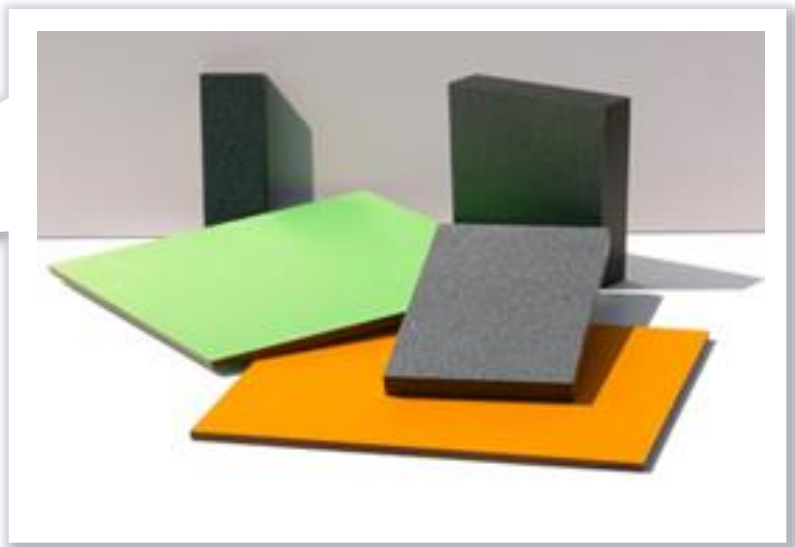
Improving production of high-pressure laminates for CERN detector lab



The KT Fund has catalysed the creation of



Durable laminates for surfaces in industrial and/or consumer environments.



KT agreements geographical distribution



Type of partner

