



MAGNET TECHNOLOGIES + + + + +

**+ PRECISION MACHINING + VACUUM TECHNOLOGIES + CRYOGENICS +
MANUFACTURING TECHNOLOGIES + MATERIAL DEVELOPMENT**

Trends, Development and Collaboration Possibilities

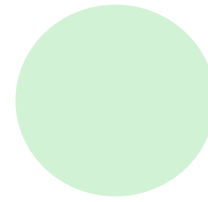
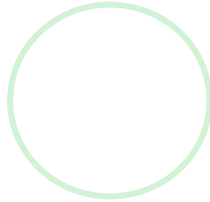
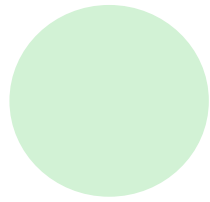
7th and 8th of June 2006 at Geneva (CERN)

Status Report M. Streit-Bianchi



Internal Network 14th June 2006

Aim



- The Magnet Technologies Workshop has been a two-day synergy event taking place at CERN. It's main objective was to provide an overview of:
 - technologies available for licensing
 - collaboration possibilities in the Big Science projects for R&D, pre-procurements and procurements
 - future trends for magnet development
 - take profit from industrial experience acquired in producing magnet for LHC

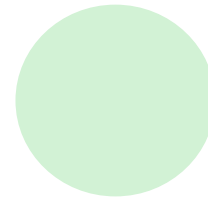
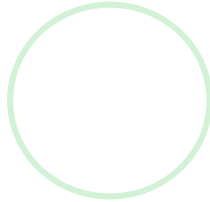
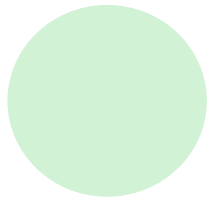
The participants have been able to network with:

- CERN experts
- companies providing parts and know-how for the core of the LHC project
- Industry Liaison Officers looking after companies interests in various Big Science projects in Europe



Internal Network 14th June 2006

Agenda



- **14:00** Welcome and CERN general presentation (M. Metzger)
- **14:15** Overview of new science projects (K. Peach)
- **14:50** Trends in Magnet technologies (D. Tommasini)
- **15:20** Overview of upgrading present installations and trends in future experiments (D. Denegri) + Additional comments (D. Campi)
- **16.00** Material development issues (S. Sgobba) and Clic (G. Arnau)
- **16:40** Coffee break
- **17:00** Technology Transfer opportunities (E. Sirage, B. Bressan, M. Bianchi-Streit)
- **17:30** Companies attending and their focus for co-operation (A. Heikkila)
- **18:00** Overview to Big Science projects and their collaboration possibilities (J. Holmberg, A. Heikkila and N. Hill)
- **20:00** ITER requirements for magnet development (A. Portone)
- **20:30** Observation and discussion on afternoon presentation outcomes between NTTOs, TT Group members and Industry representatives during the dinner.



Agenda Cont.



- **08:30** Visit to CLIC test facility, [CTF2/CTF3](#)
- **09:15** Visit to dipole magnet test assembly, [SM18](#)
Main building
- **10:15** Pre-scheduled meetings between companies and CERN experts (Organized jointly by ILOs and TT) With a focus on:
- [In-licensing](#) R&D collaboration, Deliveries and partnership

- [Salle A Bat. 503 1st floor:](#)

- **11:45-1300** Meeting with inventor of CERN selected technologies.

Device for magnetic calibration 3D, Diaphragm System, Hood Clamshell tool, Cryogenic saving unit, Optical fibre cryogenic temperature sensor, Titanium Polishing, Medipix 2 (F. Bergsma, A. Ijspeert, W. Scandale, E. Sirage, A. Golebiowski, L. Ferreira, M. Campbell)

- [Auditorium AB Meyrin:](#)

- **14:30** Round table discussion (introduced and chaired by A. Siemko AT Dpt with W. Kalbreier, L. Rossi, D. Tommassini, L. Walckiers, W. Wuensch)
- **15:30** Wrap-up of what has been discussed (M. Streit-Bianchi)



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Country distribution of Companies



- 24 Companies:
- Be 1, CH 2, D 3, E 2, Fi 5, Fr 2, I 2, Pt 1, Se 2, UK 4



Outcome

- Talk appreciated especially K. Peach and Tomassini.
- Much appreciated information on how to interact for TT with CERN.
- Large interest for the technologies presented with the inventors on thesecond day.
- Valuable information for TT Group from the interaction when showing the technologies, large interest from companies and very efficient way for interacting with Industry.

Companies are interested that such new way of networking is pursued and TT organize regularly (1/year was suggested) in collaboration with Departments similar workshop to illustrate:

- technologies ready for transfer
- possible TT partnering opportunities

Question to be solved:

- appropriate timing to tackle the various domains (magnets, cryogenics, electronics, detectors, cryogenics etc)
- what will be a reasonable time scale?



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Proactive actions requested by Companies



- To ensure that small and medium size companies are able to keep competencies during the period when new projects are not yet ready that TT and CERN take a proactive role in identifying and offering small projects, prototyping and new funding opportunities (i.e. with Bruxelles)
- Finding modalities by which small size companies may contribute in large size projects (i.e. by conceiving or subdividing R&D into small parts and components)

