

# Timing Workshop Summary

## *Summary of the Timing Workshop held 15<sup>th</sup> February 2008*

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### **Workshop AM Agenda:**

- Introduction to the Workshop [JS]
- CERN – Background and Requirements [JS]
- GSI – Background and Requirements [UK]
- Institut de Physique Nucleaire de Lyon (IN2P3) – Background and Requirements [CG]
- ITER – Scope and Schedule [FDM]
- FERMI LLRF – Sub-Nanosecond Timing [TR]
- Zurich University for Applied Sciences – Synchronous Ethernet and IEEE 1588 [HW]
- Cosylab – Supplier of Control Electronics for Particle Physics [JD]
- Austrian Academy of Sciences / Oregano Sensor Systems [PL]
- Micro-Research Finland [JP]

### **Workshop PM Agenda:**

1. Technical Issues
  - a. Synchronous Ethernet plus PTP (IEEE 1588) (pro & con).
  - b. Alternative Solutions in the Short Term.
  - c. Form Factors
  - d. Interest in Higher Level Protocols
2. Project Management Issues
  - a. CERN driving project, remaining organisational structure.
  - b. Open source definition.
  - c. Timescale of work.
  - d. Quantities of components / machine requirements.
  - e. Financing.
3. Initial Thoughts Regarding Potential Work Packages.
  - a. Synchronous Ethernet plus PTP (IEEE 1588) Background (theoretical)
    - i. Study Robustness of Cascaded Systems.
    - ii. Study Multiplexing Issues of Upward Traffic.
    - iii. Concrete Overall Design Specification.
  - b. Synchronous Ethernet plus PTP (IEEE 1588) Prototype / Proof of Concept
    - i. Drivers.
    - ii. Test Programs.
    - iii. Generator.
    - iv. Switches, Study Combining of Ethernet and IEEE 1588 in Switch.
    - v. Receiver.
  - c. Synchronous Ethernet plus PTP (IEEE 1588) New Standardisation?