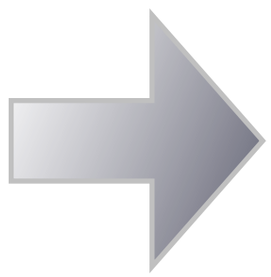
First of all

... as freshly entrusted with DAQ/ReadOut coordination (*thanks to everyone for the confidence !*):

Priorities

- going through the related topics



- report to the **SC** about the needed manpower/task

tommaso.chiarusi@bo.infn.it

T. Chiarusi

The **INFN-Bologna** Group

S. Biagi, T. Chiarusi, A. Margiotta, M. Spurio ***et al.***
INFN-Sezione di Bologna, University of Bologna

Presented by A. Margiotta
(or by TC, if the connection is good !)

et al.

Full Time

- 1 Informatics INFN Post-Doc

arriving by the end of February !!!

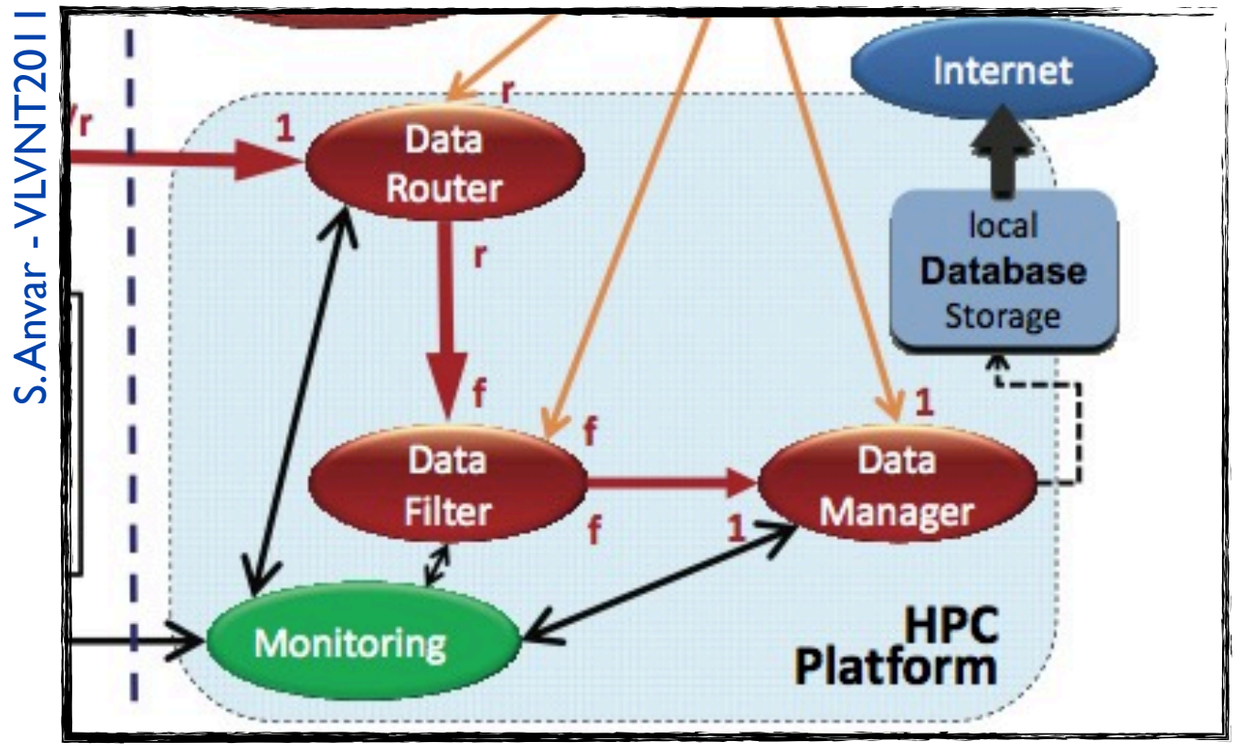
Part-Time

- 2 senjor Computer Engineers (Univ. of Bologna)
- 1 Computer Engineers Post Doc (Univ. of Bologna)

Experts in S/W & *middleware* for distributed computing

- 1 Informatics System Technician (INFN/Sez. Bologna)
- Support from Electronics Technicians of INFN/Sez. Bo

Tasks of interest in Bologna

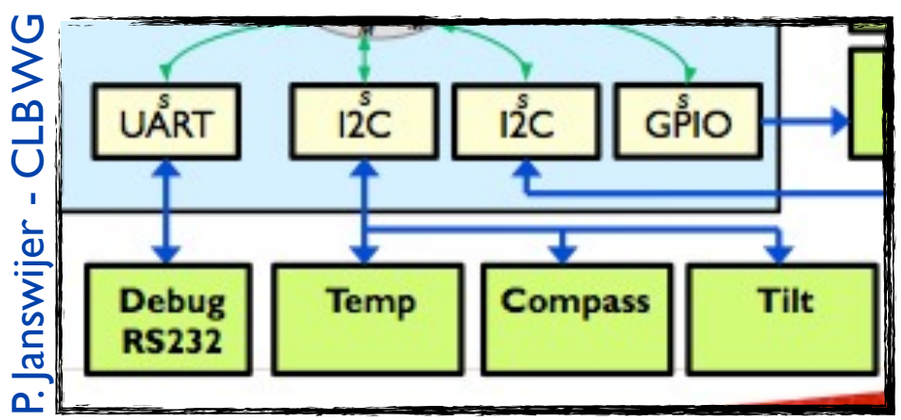


T. Chiarusi et ***those*** al.

- Development of data-filters + data managers (+ all needed simuls. of HW interfaces)
- Development of Monitoring
- Development of Middleware for data routing and process communications

S. Biagi, with Italian electronics group (P. Musico, INFN-GE)

- Development of CLB interface to a part of the SC instrumentation, e.g. see figure below:



Common task

- Test-benching with available hw&sw

a kick-off (done) list
part 1 - Software

✓ Purchased benchmark "twin" server

E-Rack 7126 - 4 x 4 bays SATA 2,5

2 x Dual Xeon – 5520 – Server Dual

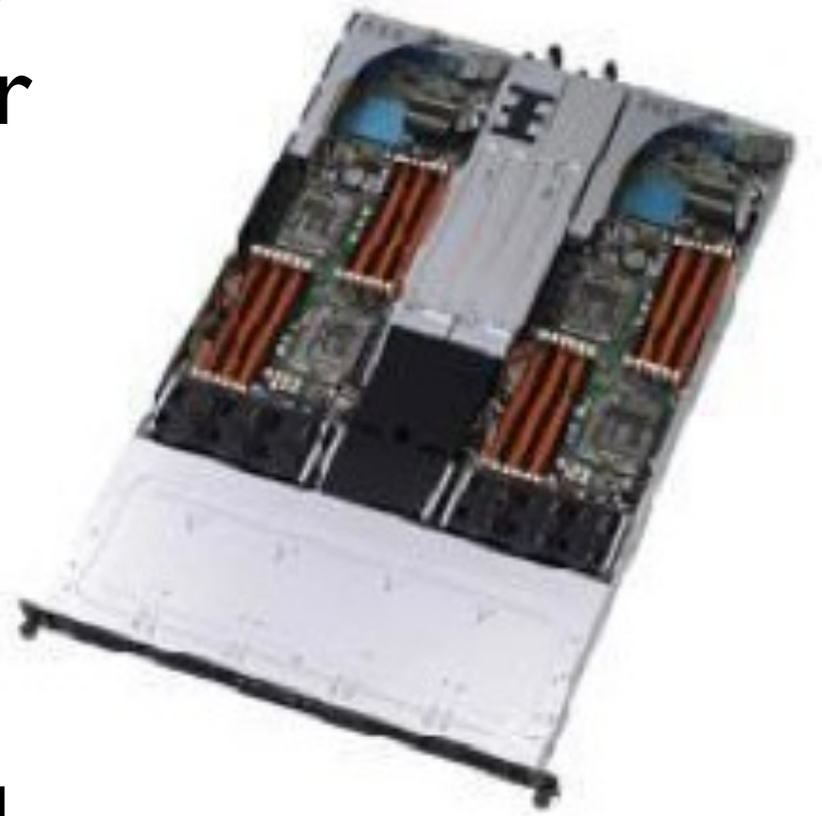
2 x 13179 Intel ICH10R SATA II Raid 6 port

4 x 14033 Xeon SixCore E5645 2,40Ghz 12MB 5,86GT/sec

12 x 19496 Modulo DDR3-1333 Reg. ECC 8 GB

2 x 73125 Intel Gigabit ET Dual Port Server E1G42ET

2 x 15224 SEAGATE 1TB 2,5" SATA 7.200RPM



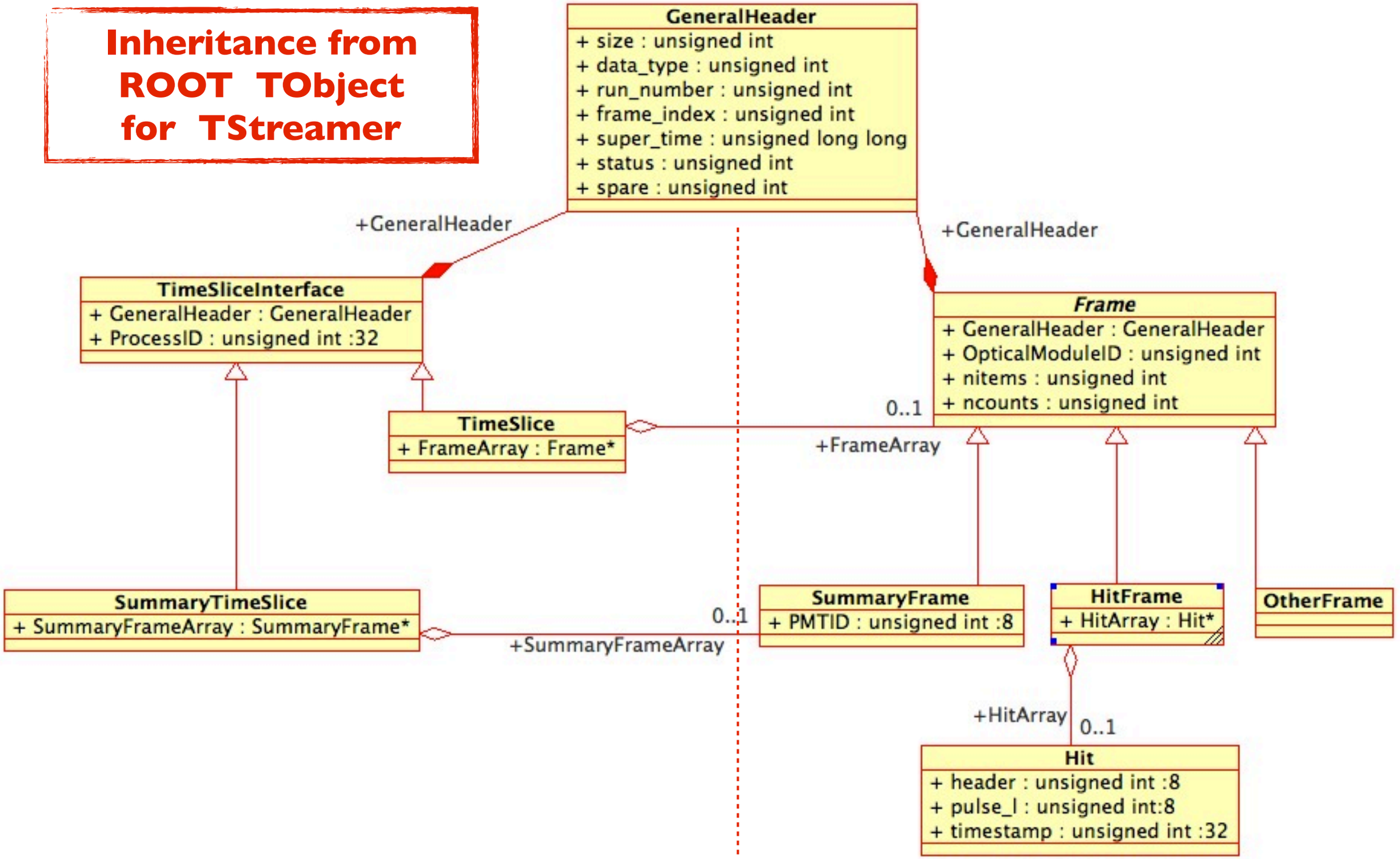
✓ Translation and Optimization of MdJ "*Data Format*" proposal into an actual class design + initial study of "`ANTARES_DAQ`"

✓ Preliminary test of data streaming I/O

✓ Built up software for versioning (SVN), tracking and managing ----------→

Very first implementation of DataFormat Classes
A logical view

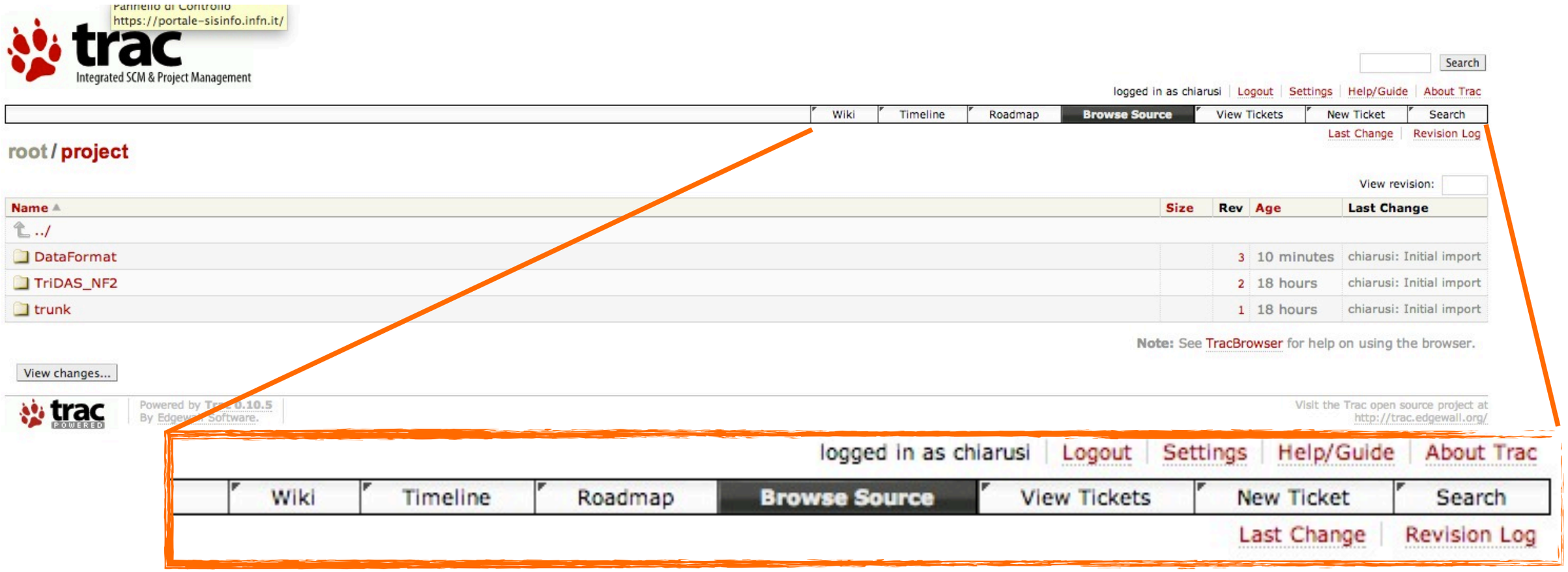
Inheritance from ROOT TObject for TStreamer



Versioning: SVN
code access &
management with

trac
Integrated SCM & Project Management

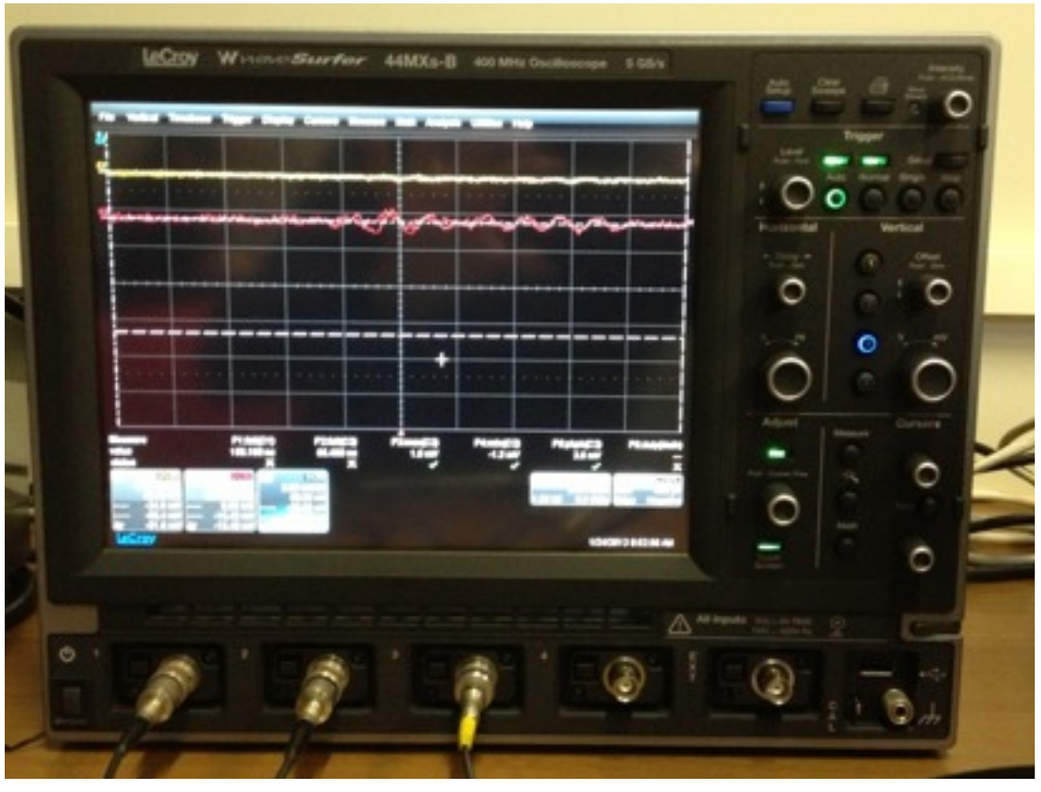
Web-access project managing



a kick-off (supplying) list
part 2- **Hardware** recently purchased

Arbitrary waveform generator
RIGOL D05072 @ 70 MHz

FPGA - Virtex 5 ML 501
evaluation board



LeCroy Wave Surfer 44MXs-B
400 MHz, 5 GS/s

in addition to:
other pulsers (analog./digit.), oscilloscopes, power supplies, cables and connectors.

We've prepared (so far) a basic-equipped lab .

outline

Short-term goals

- S/W: Optimize Data Format streaming and I/O
- S/W: Implement a data-stream Simulator
- H/W: Start "programming" FPGA (ISE WebPack)

Long-term goals

- M/W & S/W: the effective TriDAS (on-shore DAQ) design and implementation
- H/W: cover an uncovered item (Slow Control or similar business)

a.s.a.p.-term goal

- Setup a test-bench in Bologna for H/W - S/W match