

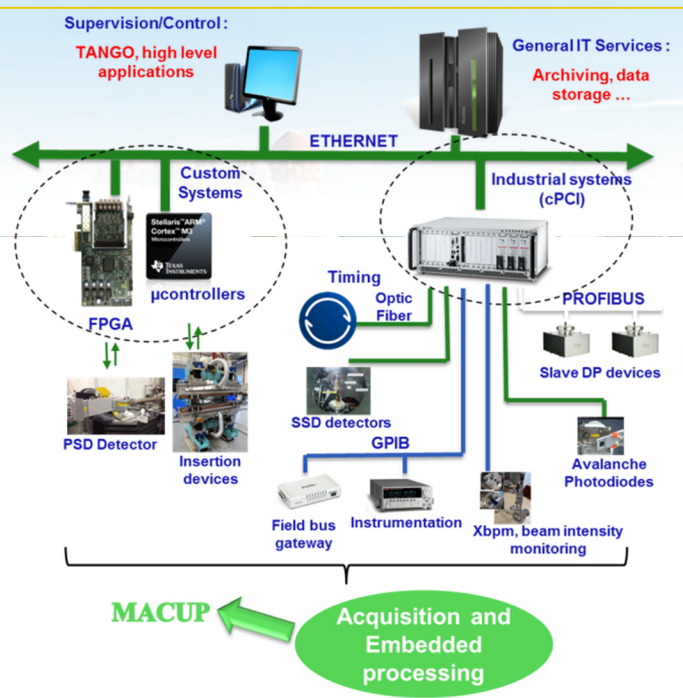


MACUP (Material for Acquisition Upgrade): Project focusing on DAQ architecture upgrades for SOLEIL

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THMPA09

Context and goal of the project

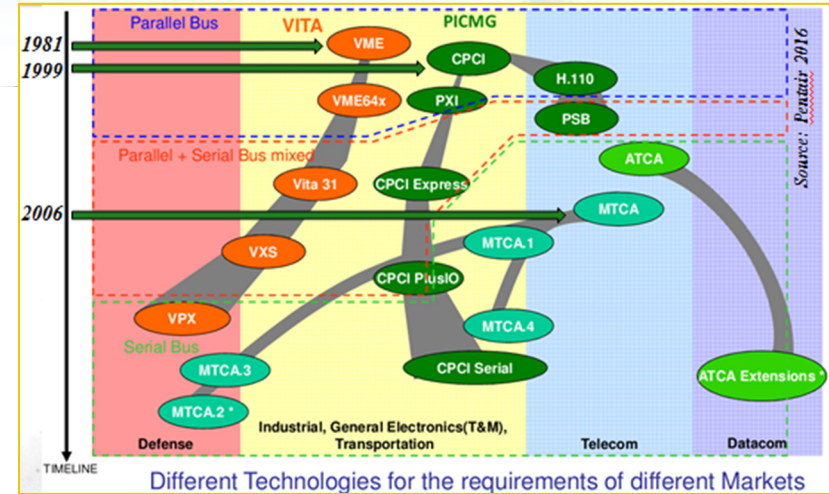


Applications targeted: **fast analog/digital**,
instrumentation and **field bus** processes

- How to ensure the operational continuity of the systems in production (MCO) ?
 - How to improve acquisition systems and introduce more performances ?
 - The answer: the MACUP project
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- 10 years of operation with the same DAQ technologies
 - More than **1000 boards** in production
 -  **Obsolescence's issues are increasing**
 -  **Technologies not recommended for new projects requiring high performances**

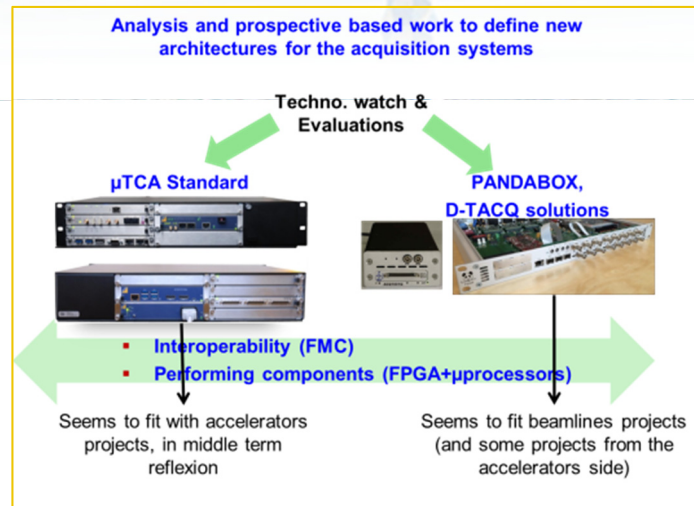
MACUP Methodology

- Organisation:
 - Establishment of an **advisory committee** (largely cover requirements from all field of activity or science)
 - **Census of future projects**
- Analysing factors
 - Reassessing the existing CPCI architecture
 - **Technology Prospecting**
- External Exchanges
 - Industrial Partners (Adlink, NI, NAT, Pentair...)
 - Institutions (CNRS...), partnership facility (ESRF, MAX4, DLS...)



First results and future technological orientations

- For the existing in operation DAQ systems:
 - Big CPCI hardware migration campaign: 200 CPUs to be replaced (2 year work)
- Projects: 47 identified at the end of the census
- New platforms selected:
 - Xilinx Zynq SOM based platforms (PandaBox available for users)
 - MicroTCA platform Evaluation and new Zynq based AMC
 - A reflexion on the existing open and modular frameworks (with FPGA developers community) has to be done



Thanks for your attention
Poster Session : THMPA09