

Summary on Parallel Session 2 / Hardware Issues

attendees:

Dave Hareh (ITER IO), Antonio Pinto (EURATOM/IST, P), Jorge Sousa (EURATOM/IST, P), Padro Lousa (INOV, P), Richard Dussiot (Schneider Electric, F), Adriano Bigongiari (Caen, I), Risto Tiusanen (VTT, SF), Peter Agerbaek Nielsen (Automatic-syd, DK), Pascal Spuig (EURATOM/CEA, F), Jean-Pierre Burel (Data Systems & Solutions, F), Danile Lazzaroni (Siemens, F), Murali Ravindran (National Instruments,), Adriano Luchetta (EURATOM/IGI-CNR, I), Vito Marchese (EU/FZK, D), Maurizio Forcieri (Thales Alenia Space, I), Gerhard Raupp (EURATOM/IPP, D)

1 PCDH document

what we liked

- that it exists: thanks to ITER IO
- that it improved rapidly Vs2->Vs3->Vs4 Xmas ??
- that we were invited to comment (even if our response was ... poor)

...PCDH document

what we would like

- specific EMC standards (EMC 89/336/EEC, EN 61000-3-2...6-2)
- specification of fusion environmental conditions (radiation, mag. field, heat rejection / ventilation,)
 - also needed for HW analysis studies / selection procedure
- **know about applicability of**
 - referenced documents (ProjRqms, PltDscrDoc, EDH, ...) also valid; mutual priority
 - listed industry standards (scope, info<>enforced,...)
- **structuring of open TBDs**
 - prioritize TBDs <-> PCDH version, i.e. make PCDH-next.vs. forecast, with scope, decided TBDs (and modification history)
 - urgent HW : PLC, controller, fieldbus, dedicated networks,
- enough time to review / respond to new versions (...also valid for bid)
- condense PCDH;
- focus on needs, avoid solutions, as long as not adopted (1588, hardwired)

2 Hardware selection

what we liked

- that standardization will be an important issue;
and we tried to understand
 - the specific ITER needs coming from in-kind procurement (35yrs..., > long-term maintenance / upgrading strategy)
 - the standard > non-conformity & obsolescence management escalation strategy
- that the choice will be limited*

...Hardware selection

what we would like

- that the choice will not be too much limited*
 - market-penetration of choice
 - **clarify black box policy**
 - how to handle proven / industrial solutions (complex equipment coming with own control logic) : re-invent ? (-> cost, risk)
 - a statement how to handle property rights of embedded knowledge
 - clarify how to handle technical evolution
 - evolution of preferred / recommended lists
 - regular modernization & maintenance contracts vs. administration of outdated? HW
- ? ongoing obsolescence management discussion within ITER
(CODAC/PCDH -> ProjectOffice/DA document)
- a **transparent selection procedure**
 - communicate selection criteria; leave fusion community time to respond, explain result

- DA-wide framework contracts for chosen components
 - make sure all EU suppliers get same best price
 - who pays for bad choice ?