

# Front-end software

C.H.Sicard

# Agenda

- Motivations
- Work Packages
  - Scope
  - Objectives
  - Budget & Human Resources
  - Some issues
- Conclusions

# Motivations

- Replace all legacy Front-End software by FESA for all systems (unless short-lived)
  - Justified by loss of knowledge on GM or SL-Equip and by missing features required by upper layers ('Notify', cycle stamp...)
- Integrate new HW boards (on new PC platform, or replacing old VME boards)
  - cf J.Serrano's talk

# Scope

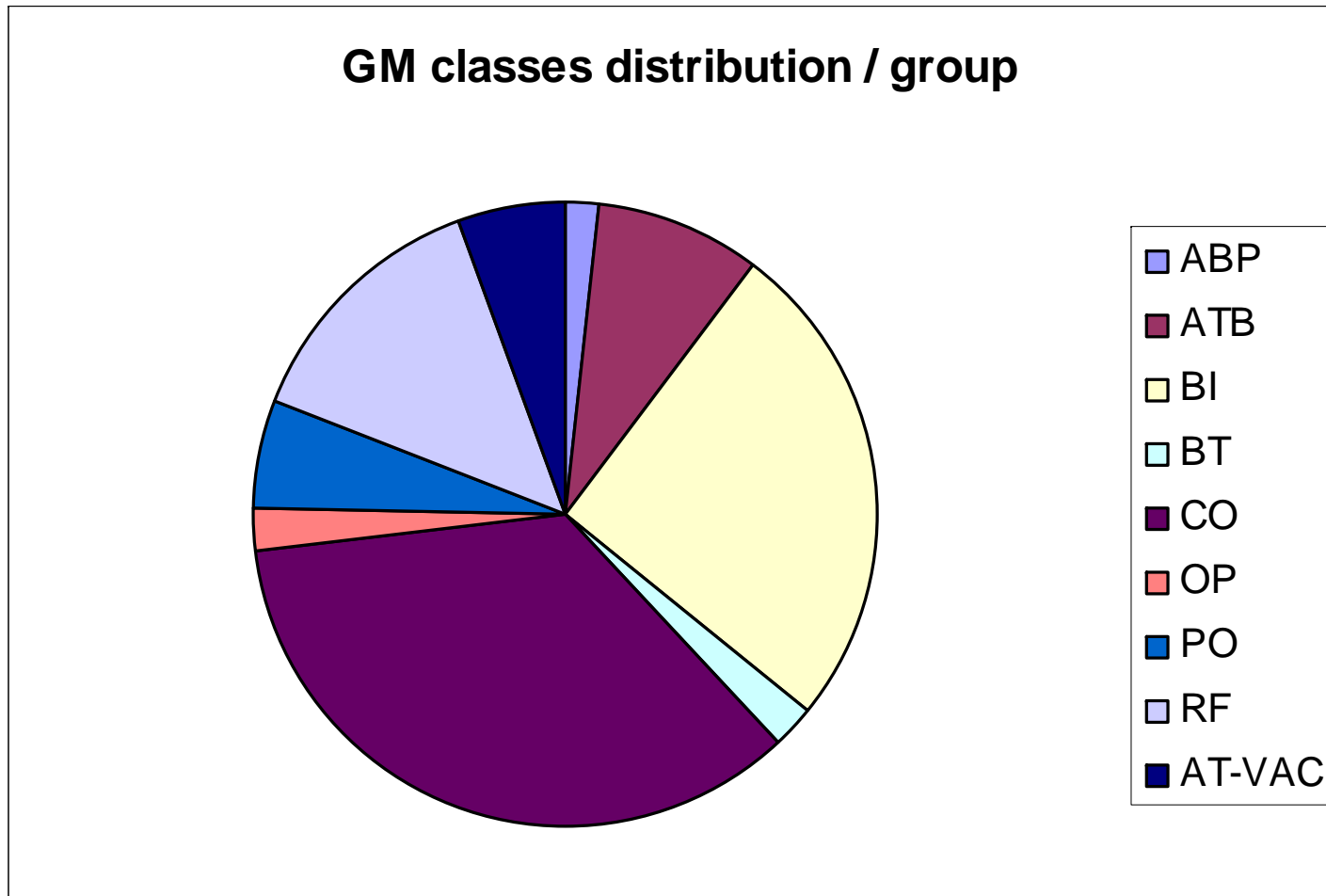
- Front-end GM classes implemented by CO in PS complex and which are not taken over by other equipment groups due to:
  - Their general use (with Std CO boards)
  - System responsibility is inside CO (Timing, Video, Oasis...)
  - Or no software competence exists in the equipment group (to negotiate...)

*(responsibilities: cf CO3 meetings 2006-13 & 2007-01)*

- SPS legacy FE SW under CO responsibility (Equipment Bus, generic data modules on gpsbax...) which needs to be kept for more than 2 years

- New FESA classes supported by CO (new hardware)  
NB: Excludes central timing generation sw (other project)

# Existing GM classes in PS Complex



# Global estimates

- Of the existing 44 GM classes under CO responsibility, about half refer to obsolete hardware (Camac,...) or systems, ~20 remain to be ported:
  - Generic I/O (9), Video (3), Central timing (8)
- CO has agreed to port some GM classes (5) made by CO when no sw competence can be found in the eq group (ABP, AT). However the group in charge of the associated system must be in charge of sw configuration and first-level diagnostics.
- SPS & Exp.areas: max 6 classes if we need to keep old HW running (Equipment Bus or 1553-controlled crates) for several years

# Work Packages

Package	Starts	Ends	FTE	Comments
PS-GM FESA CO (9 classes)	01/09	02/10	2.0	Mostly generic classes, Video,
PS-GM FESA -> EqGrp (~5 classes?)	07/09	02/11	1.0	For ABP (sources) / AT-MEI (field meas)
FESA/ Timing	10/09?	02/11	1.0	Depends on INCA reqs & OpenCBCM
FESA for New HW	01/09	02/10	1.0	Extend generic classes
EqGrp support	01/09	02/11	0.5	Knowledge Transfer
SPS CO Legacy	?		0.5?	f( replacement plans) [ATB motor ctl, ..]

# Resources & time plan

Year:	2009	2010	2011	<b>total</b>
FTE	2.5	2.0	1.5	<b>6.0</b>
KCHF	-	-	-	-

Plan to be refined w.r.t. dependencies on:

- New HW needs support libraries (CO/HT)
- FESA3.0 needed features (class inheritance/composition)
- Eq Group FEs renovation using Generic CO classes



# Integration: 2 examples

- VME with new Function Generator (CVORB)
- PC-based control of 1553 & RS-422 power supplies

# Comments, Issues

- New requests (e.g. RexTrap) and gray responsibility areas not counted (this may increase the given estimates)
- For efficiency, one could organise a development team (of additional manpower) shared with other groups?

# Conclusions

- CO commits to provide generic FESA classes for Eq Groups (provided a renovation plan is made available in time)
- This assumes all equipment groups take charge of the SW porting under their responsibility –as agreed in CO3 - within the time frame
- CO will start an assessment of SPS legacy FE software under present CO support for Q2-09
- Ref: CO3 meetings 2006-13 & 2007-01  
<http://ab-mgt-controls-coord.web.cern.ch/ab-mgt-controls-coord/>