S&C Developments, Issues and initiatives

At least, we can address the 'Issues' part easily ...

... by doing my July Collaboration meeting backward ...

BROOKHAVEN NATIONAL LABORATORY

Conclusions ...

... Only two

There is a BIG challenge coming ahead ...

There are several drastic code changes coming our way
We need PARTICIPATION & FEEDBACK FROM PWG

Reco, what's coming ?

- My 2 cents ITTF success condition (grossly un-subliminal message)

We need PARTICIPATION & FEEDBACK FROM PWG

Same story than for DAQ100 ...
Either we are serious about it, or we aren't !!...

Beta-Testers exists, always room for more ...
Lacking representative from several PWG

Issue # 1, DAQ100 Physics evaluation

- Physics evaluation started on June 05th, nice summary on the web
  /protected/strange/magestro/cluster/

- Since then ?
  Email sent to the PWG list (July 28th) requesting
  - Suggestion for relevant studies
  - Event sample size
  - Extraneous testers

NULL FEEDBACK EXTREMELY WORRISOME !!??

Issue # 1, DAQ100 Physics evaluation

- Does this mean we are satisfied with the results from the first pass ??
- Or are we planning to do the Physics evaluation after data taking ???

Or maybe we are actually not serious about it ??

- YES, we have to find time for it and we are all busy
- YES, there are other priorities

BUT THE SOONER THE BETTER !!!

Help not to late to provide, nor is feedback ...

Would definitely appreciate some ...

Issue # 2, ITTF

- **Review happened on September 23rd , 24th .**

  Chair : Rene Bellwied

  Committee Members : Jan Balewski, Helen Caines, Yuri Fysiak, Mike Lisa, Alan Poppleton, Karel Safarik, Iwona Sakrejda, Alex Suaide, Bernd Surrow, Thomas Ullrich, Jamie Dunlop, David Hardtke, Morton Kaplan, Tonko Ljubicic, Jim Thomas, Jerome Lauret

- **Committee has strongly endorsed STI as the future tracking code in STAR and recommend to officially deploy the code and STOP support for existing one as soon as possibly achievable**

Issue # 2, ITTF

Extracts from the review report

- **If core developer group dedicated, can be completed by December.**
- **But was 20% less efficient than TPT (P_t and b/b_{max}).**

  Needs to be fixed before final approach.
- **Deployment : Year3 d-Au with ITTF (as well/only)**

  In all cases, MUST have it for Year4

Manpower issue recommendations :

- **1 person from each detector sub-system (TPC/ SVT/ EMC/ ...)**
- **2 testers from each PWG**

Issue # 2, ITTF

Specific points to STAR management :

- **Extra Manpower needed (1 FTE)**
- **Code/Institution responsibility**

Will be discussed at the Advisory Board meeting
Full report of the ITTF review on the S&C meeting page

Are we done with Issues ??

The other issues ... trouble ??

- Need more $!! We are on the edge !! There are no reserves for contingency plan !!

Ring a bell ??

Equation is : + = **no budget**

And this, in the middle of major upgrades

- Farm upgrade
- HPSS upgrade
- ...

Practically, this means

- Promised extra 80 nodes in CAS being delayed (end of november now)
- HPSS upgrade may not be completed
  - Allocate ALL new resource to DAQ/Data sinking
  - Won't be able to use the reco farm at full potential (expected 60%)
- Disk space ?? Not even close to be on the horizon ... Purchases will come in chunks (and cannot borrow like last year)

First time you hear this may happen ?? Hum ...

Survival plan ??

The (not quite) final frontier slide ... THE survival plan

Distributed disk : We need to use it RIGHT AWAY

Project schedule / priority modified

- **Scheduler (WSU, G. Carcassi)**

  scheduler-hn@ Forum

  /STAR/comp/Grid/scheduler/

- **DRM not in place at all !!!**

  Should be evaluated within 6 month, Y3 production problematic AND will mean STOP Y2 analysis

- **FileCatalog**

  /STAR/comp/sofi/FileCatalog.html

Better to get accustom to those tools NOW !!!

A detour ...

- **Computing page**
  Please Help
  /STAR/comp/general/tasks.html
- **Also on the Service Task Committee page**

Prio	Task description	Likely tools / knowledge	Taken	Responsible Person
	Detector alignment/calibration development (w/ ITTF)	C/C++, STAR makers		David Hardtke
*	Offline DAQ Reader and DAQ100 format implementation	C/C++, STAR makers	H. Ward	Jerome Lauret / Tonko Ljubicic / Jeff Landgraf
*	Offline trigger interface	C/C++, STAR makers		Jeff Porter/ Jeff Landgraf
	Shift sign-up and credit/training accounting	PHP/MySQL		Jeff Porter
*	Disk Resource Manager	C/C++/Perl/Java		Jerome Lauret
	FileCatalog development	Perl/MySQL		Jerome Lauret
	TPC Calibration/monitoring for DAQ100			Fabrice Retiere
*	~~L0, L1, & L2 scaler processing and DB feed~~			Jeff Porter
	Electronic ShiftLog development	Java/Perl/MySQL	G. Carcassi	Jeff Porter/ Jerome Lauret
	QA development for Year3	Perl/ROOT		Lanny Ray
	Embedding development work: mixer maintenance	C/C++, STAR makers & Chains		Jerome Lauret
	Online DB data migration to Offline	MySQL/ROOT	X	Jeff Porter
	Online web server development / STAR web mirror	HTML/Apache Server		Jeff Porter
	Expand Online Db browsing tools (RunLog Browser)	PHP/Perl/MySQL		Jeff Porter
	Expand Offline Db browsing tools	PHP/Perl/MySQL		Jeff Porter
	Common MuDst/ embedding	ROOT	X	
	STAR Web design and maintenance	HTML/Perl/CGI/Apache Server		Jerome Lauret
*	Online histogram development/ DB feeder	ROOT	X	Jeff Porter
*	Online cluster configuration documentation	Some Linux Admin, HTML		Jeff Porter
*	Integrated beam+scaler+star-data time dependent monitoring tools	ROOT/Perl/MySQL		Jeff Porter & Jeff Langraf
*	Hypernews development	Perl		Jerome Lauret
	Investigate CVS server setup	CVS		Jerome Lauret
	New compliler investigation	ROOT/StRoot/STL		Jerome Lauret

On the road to a new production ...

- **Minor problems or refinements not affecting everyone**

➲A few bug / miss-features were found and fixed in diverse code, some problems were pilot errors

➲Current dE/dx is being re-assessed (2 weeks) Yuri

➲Minor bug in GEANT routines (fixed) Jim / Pavel

On the road to a new production ...

- Potentially problematic and/or unresolved
  - Central / minbias (0-5%) may be OK (Strangeness?)
  - There are remaining field effects seen on ratios not well understood. **Still the case ?? Folded in error bar ??**
    - ⇨Maybe related to RDO mask / time dependence on ϕ gg1 gg2 anyone ?

✓SVT checking TPC T0 calibration — Helen & Gang

✓Vertexing problems — (*Jon Gans*)

✓Infrastructure bug being fixed in dev — Victor

✓ Space Charge studies — (Jim Thomas)

On the road to a new production ...

Number of events given as RAW (in DAQ) we have to go through ...

- **Scenario 1 ⇨ Running pp only**

  24 M (18 M) - 25 days at expected df

  - let's say a month + change

- **Scenario 2 ⇨ Running AuAu + pp**

  MinBias 5.0 M (3.1 M) 26 days (~ 1 month)

  Central 6.25 M (3.0 M) 70 days (~ 2 month)

Total 4.5 month

Developments & Initiatives ... Simulation

GOOD NEWS

Maxim Potekhin coming on board. Started to work with Pavel last week ...

Officially starting on November 12th .

- **GEANT Geometry being re-worked (*Pavel Nevski*)**
  New detector implementation

- **Embedding (service task anyone ?)**
  Need a scheme to include other sub-systems
  Trigger info was of interest and failed last summer

Developments & Initiatives ... Online / Offline

- Promised electronic shift log + paper logbook burning patrol ... Gabriele Carcassi
- Shift sign-up (Defined by November 1st) Jeff Porter
- NO ! Did not forget about QA Lanny Ray
  Gene, Herb, ...

Reminder : Nothing like analysis for real QA-ing

Developments & Initiatives ... Online - Offline

- **DAQ100 and beyond**
  - **Offline DAQ Reader part done** — **Herb Ward**
  - **EventPool library in offline under evaluation** — **Herb**

- **Triggers in FY03** — **(*Jeff Landgraf*)**
  - **Will need some offline code to read it back**
  - **Same problem with scalers**

DO NOT Hesitate to volunteer for this service task

Developments & Initiatives ... Calibration

- DAQ100 + amount of data
  - TPC Pad level gains via Pulsers for DAQ100
  - Automated calibration pass (drift velocity, ...)
  - dE/dx
  - CTB
  - ...

Calibration discussion starcalib-hn@

Possible short meeting on November 7th

Planning to have identified tasks with all the blanks ... and names.

Developments & Initiatives ... Sub-Systems

- **FTPC update** (*Joern Putschke*)

- **SVT updates** (*Helen Caines*)

  Lots of work there using pp data, mentioned T0 adjustments.

  Note that to use SVT efficiently, we need ITTF ...

- **EMC updates and plans** (*Alex Suaide*)

- **EEMC added as a new sub-system** (*Jan Balewski*)

  Lots of work to be done ...

Developments & Initiatives ... Sub-systems

- **BBC/ FPD/ CTB/ MWC (?) / ...**

BBC & FPD new DAQ format (offline) (Mirko Planinic)

Lots of developments for BBC

BBC geometry, Simulator, StEvent

(Akio, Yiqun & Kopytine)

More work to be done (calibration, reco) ...

(Les, Bernd, Akio, ...)

Need a Software coordinator (on its way)

Conclusions ...