DCS: 2003 Run overview

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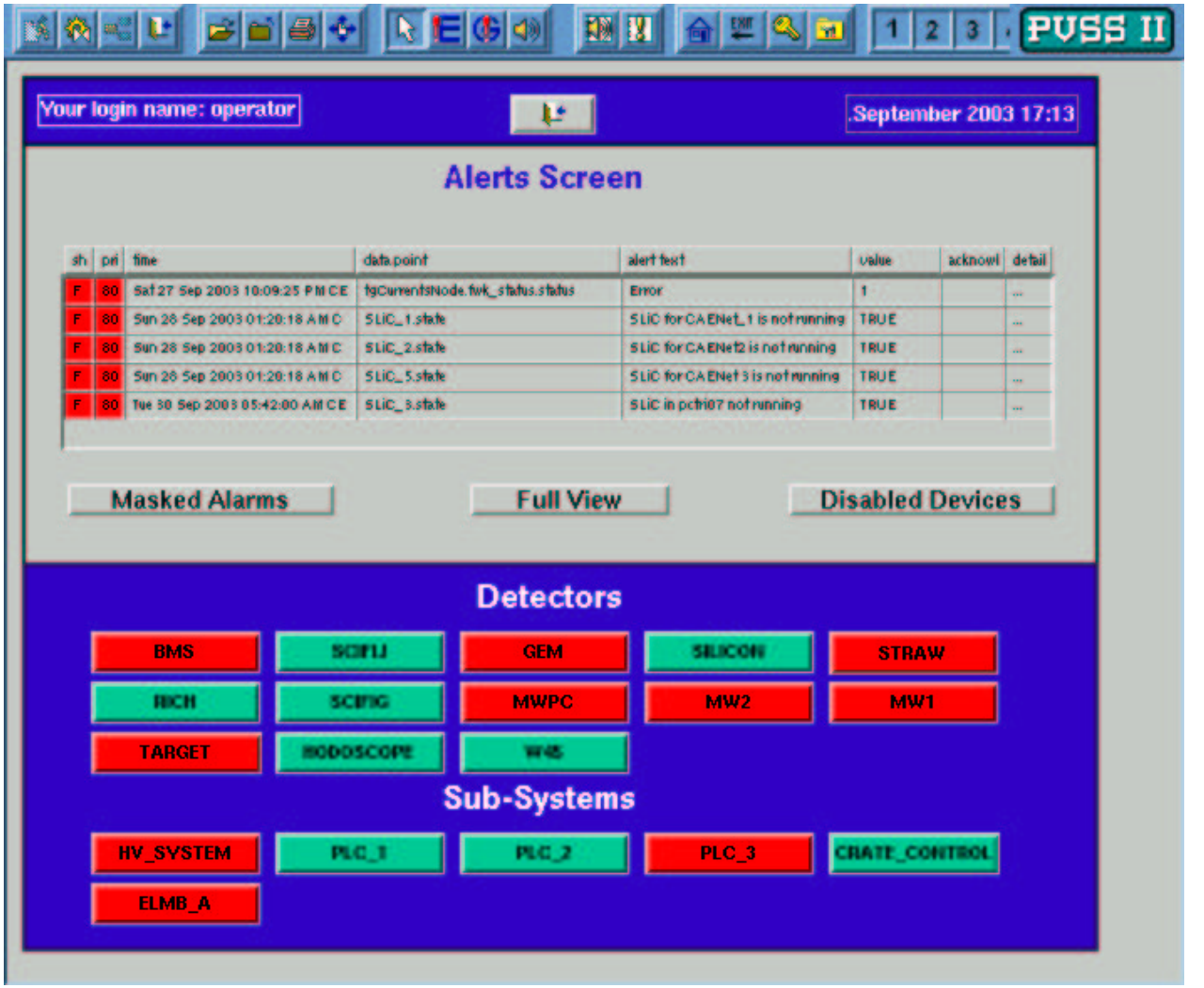

DCS reliability

- The 2 main DCS computers **pccompass04** (Linux) and **pccompass03** (Windows) had, during the entire run period, spare computers to switch to in case of need.
  ↪ Both main and spare Windows computers had severe hardware failures and were replaced during the run.
- The general backup system of CERN ADSM is used since the beginning of June to mirror the main DCS computer **pccompass04**. Both the PVSS project and the historical data are backed-up there.
  ↪ Used once to recover deleted historical files.

DCS reliability (cont.)

- Online backups of the historical data and the project were done every 2 weeks, into a dedicated backup disk resident in the linux spare computer.
- UPS units were installed in each of the main computers. In case of power cut, these allow 30 minutes to securely shutdown the system, avoiding databases corruption (automatic procedure).
  ↪ Installed in July, but no sudden power cuts since.

Performance

- During all the run, the DCS system was proven to be stable.
  - ↪ **User Interface** crashes were rare.
  - ↪ No PVSS general crash happened.
  - ↪ Performance was compromised only during online backups — problem being studied by the ETM Company.
- The control of CAEN HV channels, using the **SLiC - DIM** chain, was considerably accelerated. It now allows several readings of the monitored values during the spill (2 to 4, depending on the SLiC branch).

Performance (cont.)

- Communication with ELMBs was sometimes lost without notice — to be improved next Run.
- ELMB wrong readings and/or sudden jumps.
  - ↪ Splitting of ELMB power supplies helped to increase stability.
  - ↪ Several ELMBs were replaced during the run.
  - ↪ Similar problems were reported by ATLAS groups, and are still under investigation.

Newly implemented in 2003

- **STRAWS** HV alarms displayed in PVSS and archiving of alarms
- PLC3 monitoring: **W45**, **MM** and **DC** Gas Systems
- More HV channels added on DCS for **Hodoscopes** and **W45**
- **Polarized Target** temperatures monitored using ELMB
- **W45**, **MW1** and **MW2** LV monitored using ELMB
- Fast control ($<$ 1s) of **RICH** HV channels
- Archiving of Imon for **Silicons**, **GEMS** and Veto Inner **Trigger**
- Splitting of **RICH** HV channels for PD0 and PD2

Ongoing tasks

- Monitoring of all the Gas Systems during the shutdown (except for RICH, kept in passive mode).
- Monitoring of temperatures an humidity for all **STRAW** chambers, including during the shutdown.
- NIM Crates control for **Trigger** using ELMB.
- SLiC modifications to allow ISEG Power Supplies control.

What remains to be done

- Automatic messaging in case of Gas System alarm
  $\longrightarrow$ detector responsibles must provide mobile number for SMS.
- Full integration of **DC** and **MM** HV system in PVSS.
- HV monitoring for **Trigger** (Lecroy modules).
- Temperatures, gas system and HV for cryogenic **Silicon stations**.
- Full integration of ISEG Power Supplies in PVSS, for **STRAWs** and **Silicon stations**.
- New requests for 2004 Run?