Electronics Spares for StepIV Operations

MICE CM39

C.Macwaters 25/6/14

Aim:

- To provide a spares and replacement service of "mission critical" electronic items to allow the reliable running of MICE Step IV operations

- More formalised version of what I do now

- To be point of contact when a problem occurs, particularly if electronics owner is not at RAL

- To hold stock of lead-time items

- Not hold items we can get in 24Hr from RS, Amazon, Scan, Ebuyer etc.
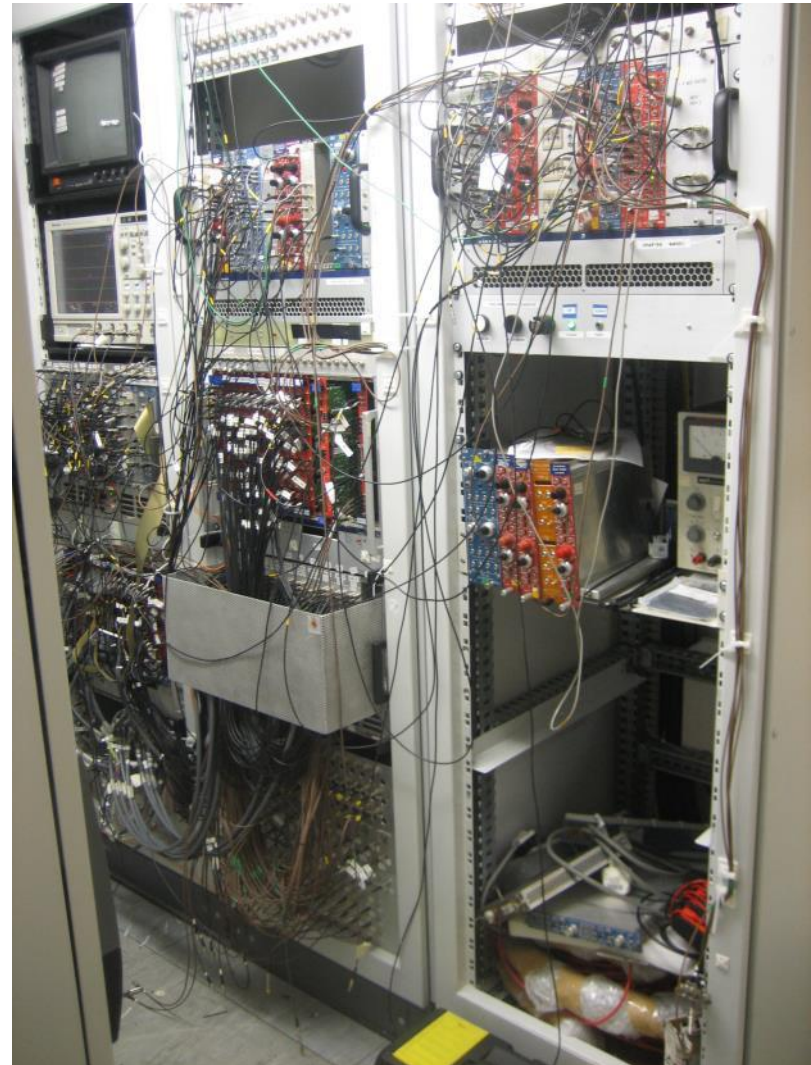
Sub System Managers

- DAQ – C.Rogers

- Computing – C.Rogers

- DL Control Systems – S.Griffiths

- Instrumentation (Detectors) – P.Soler

DAQ Systems

- Basically the DAQ racks

- Yordan/Smith owners

- VME, NIM, CAMAC

- Modules, crates, PSU's, fan trays

- CRT monitor, Scope?

- Maintenance: Macwaters/Smith

- Have new VME & NIM crates. Need to stock check modules
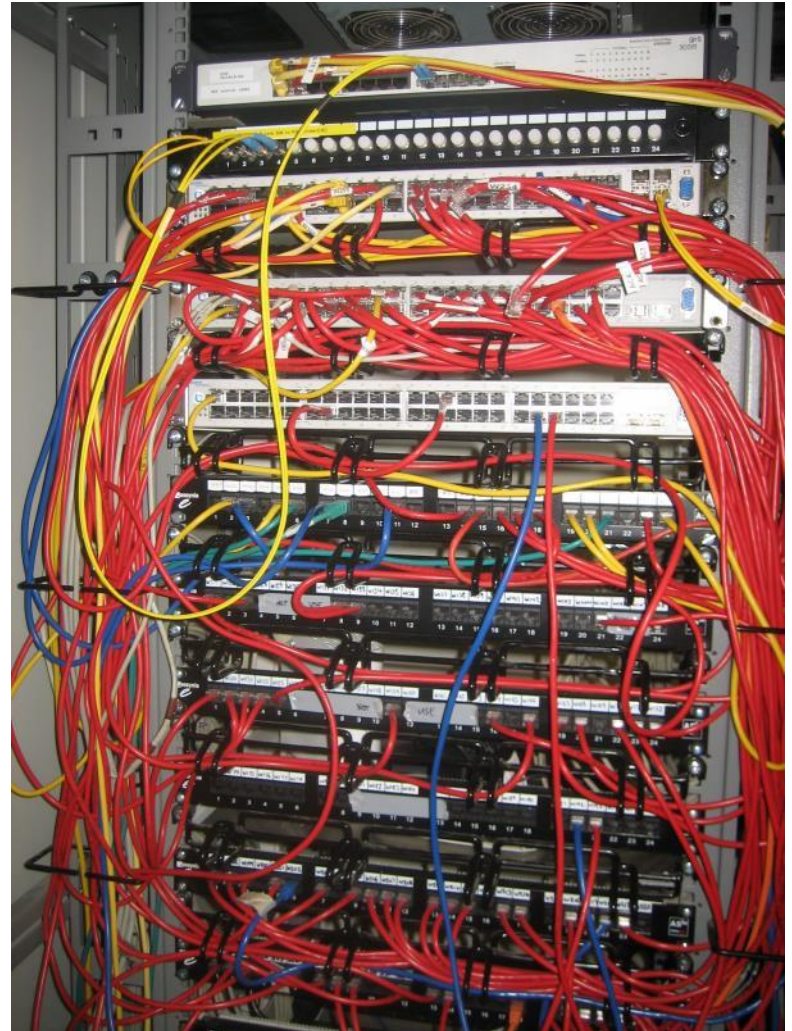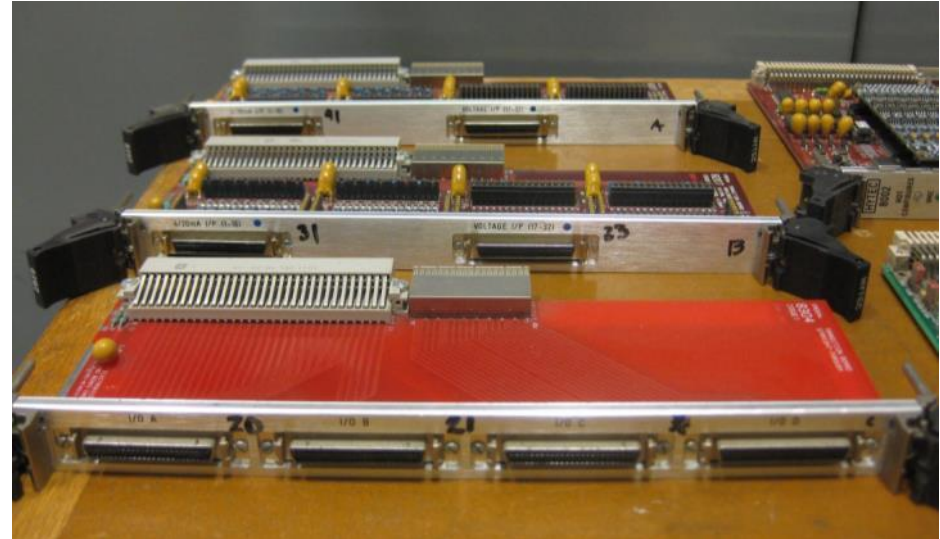
Computing

Computing

- Basically the Computers & Peripherals

- Smith, Rogers, Nebrensky the owners

- OPI & IOC Computers, MLCR servers, PPD servers

- Also network switches, KVM, UPS, webcams etc…

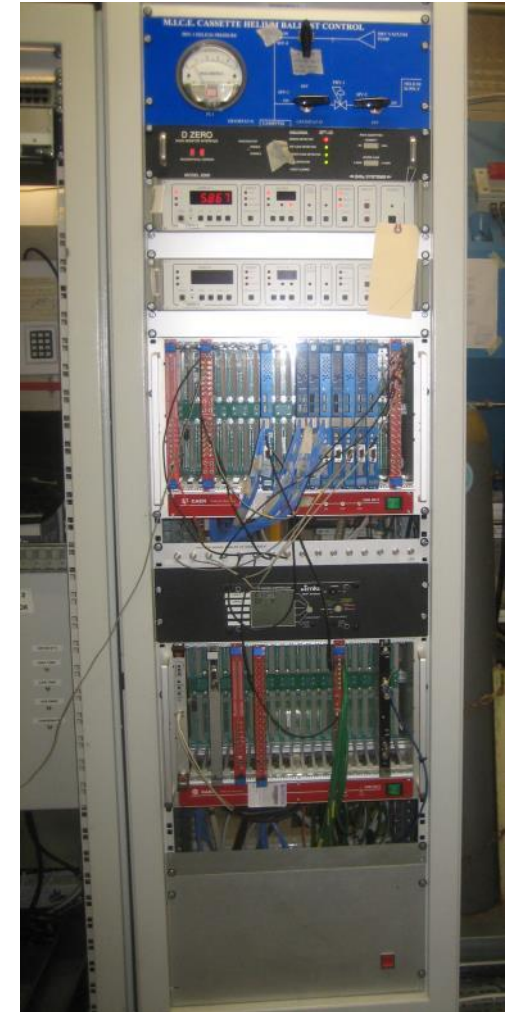- Maintenance mostly Smith with Macwaters back-up

DL control systems

- EPICS IOC systems for DS, Target, Magnets, AFC, Vac/Compressor, Cooling channel and PPS

- Includes Crates, VME, IP modules & carrier cards

- I have record of the parts on the different systems

- Loose maintenance agreement has been myself with DL support & 2nd line

- Need more stock!

Instrumentation

- Mostly rack based Instrumentation associated with detectors

- Tracker, EMR, HV rack

- CKOV, TOF, KL

- Normal crate electronics

- Also pump, gauges etc

- Maintenance Macwaters driven by owner supervision

- Also PH environment sensors, Proton absorber, Neutron monitor etc.

Spares storage

- Main storage will be caged area in R9

- Tracker spares in dedicated lab in R1

- Basic computing spares in MLCR drawers/rack store

- Secure but key available to MICE out of hours

- Maintain stock levels

Spares spreadsheet (excerpt)

Sub-System	SS Elec. owner	Budget	Level 1 container	Level 2 item	Qty	Spares required?	Spares Held
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	AFE IIt DAQ PCB	16	4	4
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Wiener PL508-LX psu	4	1	0
Tracker	Macwaters	STAK00058 01.03	Tracker cryostats	AFE backplane	4	1	0
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Lid heater box components?	4	0	0
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Vesda VLF-250 smoke detector	1	0	1 broken
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	MKS I-mag 423 CCG vac gauge	4	1	0
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Sumitomo RDK-415D cold head	4	?	?
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Sumitomo CSW-71D compressor	4	1	1
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Leybold SL80 CF63 turbo pump	4	1?	
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Leybold TD400 turbo controller	4	1?	
Tracker	Macwaters	STAK00058 01.02	Tracker cryostats	Siemens 24V/10A psu for TD400	4	1?	
Tracker	Macwaters	STAK00058 01.02	Tracker racks	CAEN VME 8011 crate	4	1	2
Tracker	Macwaters	STAK00058 01.02	Tracker racks	Oxford ITC503C temp controller	4	1	0?
Tracker	Macwaters	STAK00058 01.02	Tracker racks	MKS 937A vacuum gauge	2	1	2+
Tracker	Macwaters	STAK00058 01.02	Tracker racks	D Zero 8300 rack monitor	2	0	0
Tracker	Macwaters	STAK00058 01.02	Tracker racks	Cassette Helium gas panel	2	0	0
Tracker	Macwaters	STAK00058 01.02	Tracker racks	Roughing pump	2	0	0
Tracker	Macwaters	STAK00058 01.02	Tracker racks	General desktop PC	3	1	1
Tracker	Macwaters	STAK00058 01.02	Tracker VME control crates	SBS PCI VME optical interface	1	1?	?
Tracker	Macwaters	STAK00058 01.02	Tracker VME control crates	VME SBS crate controller	2	1?	?
Tracker	Macwaters	STAK00058 01.02	Tracker VME control crates	VME CAEN V977 I/O register	2	1	1
Tracker	Macwaters	STAK00058 01.02	Tracker VME control crates	VME CAEN V976 4fold fan in/out	2	1	?
Tracker	Macwaters	STAK00058 01.02	Tracker VME control crates	VME Fermilab 1553 comms	2	1	?
Tracker	Macwaters	STAK00058 01.02	Tracker VME DAQ crates	VME CAEN V2718 crate controller	2	1	1
Tracker	Macwaters	STAK00058 01.02	Tracker VME DAQ crates	CAEN PCI VME optical interface	2	1	2
Tracker	Macwaters	STAK00058 01.02	Tracker VME DAQ crates	VME VLSB memory module	16	4	?
Tracker	Macwaters	STAK00058 01.02	Tracker VME DAQ crates	VME CAEN V977 I/O register	2	1	1

Details

- Will have conversation with Roy about available budget

- Remember mission critical items only

- Keep current available spares list on Excel sheet on MICEmine

- Sent out email to System managers 1st May to distribute

- If I do not get a list of spares back from the electronics owners then I will assume they are sorting out their own kit & problems. If they are not present at RAL could prove difficult!

- I will only be operating a basic debug and swap out service. The owners will need to support this and be involved. Beyond this it is there responsibility to get their kit back online