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Operations Overview and Engineering Ops

Douglas Bock
Assistant Director - Operations

CSIRO

Welcome

ATUC Members

Sarah Maddison (Chair)
Chris Phillips (Secretary)
Hayley Bignall *
John Dickey
Simon Johnston *
Tara Murphy *
Tim Robishaw *
Chris Springob
James Urquhart *
Justin Bray * – student
Jacinta Delhaize * – student

* = last meeting

Updates from last meeting

Matters arising:

- #1 CABB forum – Edwards
- #2 Mopra web camera – Edwards
- #3 Proposal abstracts in ADS – Edwards
- #6 Microphones – working!
- #9 ATCA mosaicing limitation – Edwards
- #10 ATCA drive problems – Edwards
- # 11 OTF mapping at Tidbinbilla – Edwards

Updates from last meeting

Recommendations:

- #1a SOC trials – Chapman
- #1b Operations plan – August/September
- #1c Student experience – Braun
- #2 CABB Software – McConnell
- #3a Users Guide – Edwards
- #3c ASKAP web pages – Reynolds
- #4 Guest Instrument Procedures – Bock
- #5 Warwick Wilson succession – Carrad
- #7 Support for large Projects – resource limitations; Chapman
- #8 CABB scheduler access – Edwards
- #10 ATNF memo series – Carrad/Reynolds

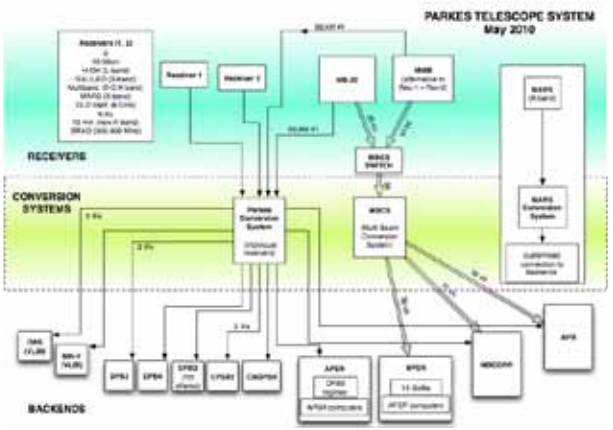
Operations staffing

- Brian Madden new electrician at Narrabri (Rod Tomlinson resigned)
- Kate Brooks moves from Millimetre Scientist role to ASKAP/ SKA
- Bev Wilson (Parkes Visitor Centre) takes administrative support at Parkes (Laura Black resigned)
- Sam Barry and Elsa Kachwalla (Visitor Services Marsfield) moved to other positions; Leanne Edwards in casual appointment

Guest/PI instrumentation guidelines

"guiding principles" reviewed by ATUC last year. Individual written agreements will generally be needed.

- CSIRO resources estimated in advance
- "National Facility" instruments
  - Criteria for adoption in advance
  - More support
  - Higher level of documentation and change control



- Data obtained must be made publicly available, in appropriately documented formats, at the end of the normal proprietary period
- Any exclusive use period will be limited and agreed in advance.
- Sunset clause. Continued competitive proposals.

Guest/PI instrumentation – Parkes instrument

- New Parkes backend project (UWA, Curtin, Swinburne, Oxford, CSIRO) approved
- Multibeam spectrometer with pulsar processing cluster. Would replace BPSR and AFB.
- Intent is that the multibeam spectrometer be a National Facility instrument, subject to ATNF resources
- Pulsar processing backend may be “shared risk”
- CSIRO in-kind contribution ~ $50k

Guest/PI instrumentation – NRAO policy

I. NRAO sponsored. Main thrust of policy but program no longer in operation

II. PI instruments intended for community use

- NRAO support
- Budget, plan, risk assessments well in advance of approval (e.g. proposal deadline)
- Implies a plan to make use feasible for all telescope users
- Up to 100 hrs could be scheduled before other users have access

III. Proprietary instruments

- Includes instruments without user interface or documentation appropriate for general use
- No preference for observing time
- Limited support
- Remote after 18 months

No unusual rules on proprietary periods or data formats..

CSIRO

Parkes remote operations capability

- Completed
  - Drive control enhancements
  - Backend/frontend switch matrix
- Underway
  - Power reliability
- Needed
  - Telescope protection system
  - Software, VNC
  - Policy and procedures

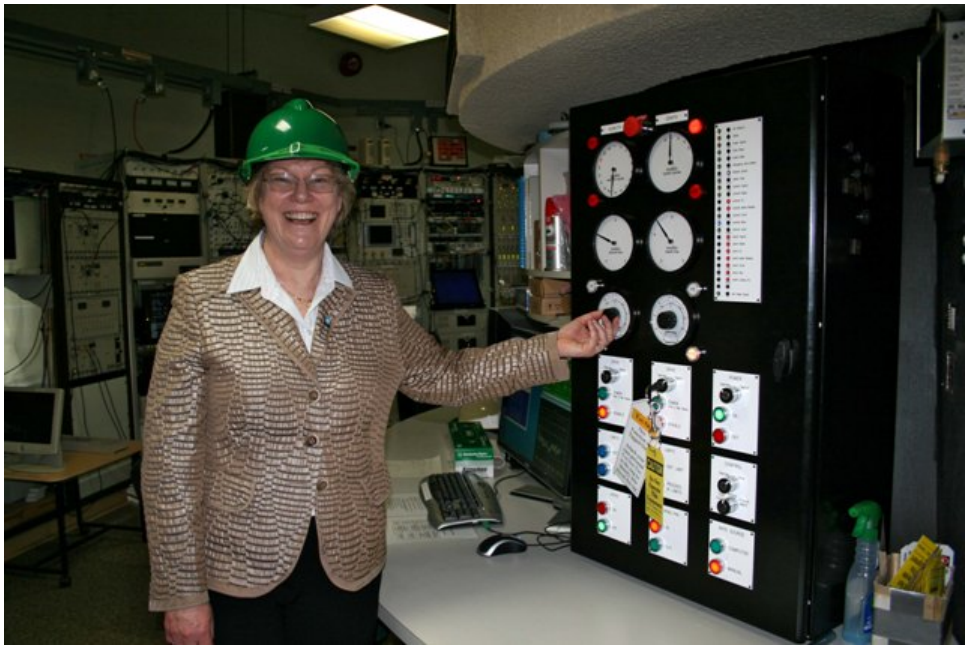
GOAL:

- *Safety of the telescope is the responsibility of automated systems*
- *Efficient use of the telescope is the responsibility of the operator (observer)*

Parkes October Shutdown
"The Matrix"

Parkes March 2011 Shutdown: "The MCP"

- Previously the "**M**anual **C**ontrol **P**anel"
- Now remotely operable "**M**aster **C**ontrol **P**anel"



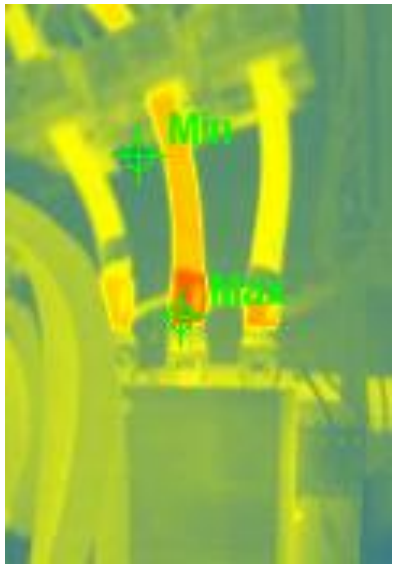
The new MCP is fully duplicated, documented and operable, though some sofware integration needed ahead of full remote operations.

PARKES Power Systems

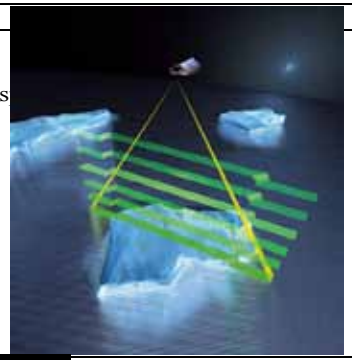
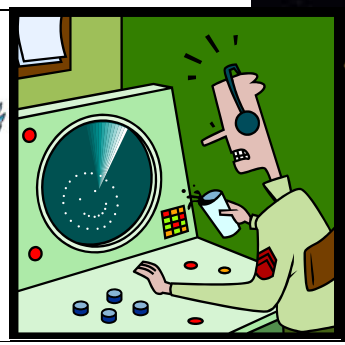
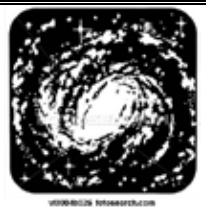
- UPS upgrade, uptime 60+ minutes! (prev.14)
- Generator Synchroniser (Nov 2010)
- Underground HV cables

FUTURE WORK

- HV Transformer & Regulator ($150k +), in planning.
- Switchboards &Thermal Imaging



“Mid-week RFI” (L-band)

Column 1: ITU Radio Regulations Table of Allocations			Column 2: Australian Table of Allocations
1 240 – 1 300	  		**1 240 – 1 300** EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION AUS90 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 328B 329 329A SPACE RESEARCH (active) Amateur 282 331 332 335A AUS1 AUS1A AUS87
1 300 – 1 350	  		**1300 – 1350** AERONAUTICAL RADIONAVIGATION 337 RADIOLOCATION RADIONAVIGATION-SATELLITE (Earth-to-space) 149 337A AUS1 AUS87
			1 350 – 1 400 RADIOLOCATION Fixed Mobile 149 339 AUS1 AUS87
1 400 – 1 427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 340 341		**1 400 – 1 427** EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 340 341 AUS87

“Mid-week RFI”

AUS1 *This band (1240-1400 MHz) is designated to be used principally for the purposes of defence. The Department of Defence is normally consulted in considering non-defence use of this band*.

AUS87 *Radio astronomy facilities operated by the CSIRO at the [listed] observatories conduct passive observations in the frequency bands 1250-1780 MHz [+ list] using receivers that are highly sensitive to interference*.

+ GOODWILL