ATUC Report to the Director - June 2011

This meeting of the AT Users Committee was held at the ATNF Headquarters on 28 June 2011.

Attendance: Sarah Maddison (Chair), Chris Phillips (Secretary), Tara Murphy, Hayley Bignall, Chris Springob, Tim Robishaw, John Dickey, Justin Bray (student representative) and Jacinta Delhaize (student representative - online from Narrabri).

Apologies: Simon Johnston (@ Parkes), James Urquhart

Date and Format of the next meeting:

The next ATUC meeting is currently planned for October 2011.

Thanks:
The committee thanks the following outgoing members for their service and contributions to ATUC: Hayley Bignall, Tara Murphy, Justin Bray, Jacinta Delhaize, James Urquhart, Simon Johnston (change of CASS position) and Tim Robishaw (leaving Australia).

Commendations and Successes

- ATUC congratulates the VLBI team on their recent eVLBI success between the ASKAP and Warkworth antennas and the rest of the LBA.
- ATUC is impressed by the progress made with the ATOA upgrades and the interface to both the MALT90 data products and the Parkes pulsar data.
- ATUC congratulates the Narrabri staff for continuing to provide an excellent student experience.
- ATUC congratulates the Parkes staff for their efforts towards ensuring Parkes remote operations, particularly with the revamped MCP.
- ATUC is delighted to see the Mopra webcam installed on site!
- ATUC is also delighted to see the lecture theatre microphones have been installed.

Note:
Given that this delayed ATUC meeting, initially scheduled for 26 May, did not discuss future operational issues or issues that required large resource allocations (due to delays in finalising the 2011-2012 CSIRO budget), a number of the Matters Arising from May 2010 and Recommendations from October 2010 are simply carried over until the next ATUC meeting once the budget situation is clear.

Matters arising from the May 2010 ATUC report

1. Recommendation #12: A summer student project looking at on-the-fly (OTF) mapping at Tidbinbilla is currently continuing as an Honour thesis. ATUC encourages CASS to continue supporting the investigation OTF mapping at Tidbinbilla, which will be of value to users.

2. Recommendation #14: ATUC strongly recommends that continued efforts be made by CASS to help users get their data, both locally at the telescope after an observing run (firewall issues and the pink cable are only 100 Mbps compared to the 1 Gbps blue cables) and remotely from their home institutes (where state-of-the-art network based data transfer protocols are needed to transfer large datasets).

Matters arising from the October 2010 ATUC report

1. Recommendation #1: All three recommendations — (1a) that SOC trials continue and ensure that a wider range of observing modes are covered, (1b) that ATNF release a proposed operations plans for the SOC, and (1c) that ATNF carefully consider the student experience with the telescopes — remain. We would like to stress that the student experience at ATCA and Parkes be very carefully considered when planning for the Sydney-based SOC. While we appreciate that students involved in the MALT90 SOC trials really enjoyed their Marsfield experience, this is not the same as the hands-on experience gained at the telescopes.

2. Recommendation #2: ATUC appreciates the review of data reduction software carried out over the past few months and reported on at this ATUC meeting. It is clear that some tasks cannot be done by with either Miriad or ASKAP reduction software, and some tasks are better served by CASA procedures. However, we argue that the scientific productivity promised of CABB cannot be fully realised until these issues are resolved. The level of Miriad support remains a concern. If CASS advises users that some tasks require CASA, then ATUC recommends that there be an allocated CASS-CASA "go to" person to assist users. The second recommendation — (2b) that ATNF advice users how to reduce their CABB polarisation data — remains. Users are unsure what polarisation data can be reduced and how to do it.

3. Recommendation #6: ATUC appreciates that there is now an Overseas Travel Application form for students in the CASS Graduate Student Program. There is, however, still confusion amongst students with CSIRO top-up funding about how they are to access their $10K per annum research support funds. Specifically, should CSIRO top-up scholarships recipients complete the same CASS Graduate Student Program travel form for their national and international travel requests? Does a separate form need to be completed for non-travel related research support requests (such as equipment and textbooks)? Clarification for CSIRO top-up scholarship students would be greatly appreciated.

4. Recommendation #7: ATUC was encouraged by the great work done importing the data products (datacubes and associated files) for the MALT90 project into the Australia Telescope Online Archive (ATOA), and their own project interface at http://atoa.atnf.csiro.au/MALT90. ATUC was asked at the open session to make recommendations to the ATOA group about the sort of projects they might tackle next, be it another Mopra large project, or one of the legacy HI projects. Given that the ATOA group worked with the MALT90 team from the outset of the project, designing a system for that specific survey, it would be worthwhile to (a) test how expendable the existing system is to other large Mopra surveys, and (b) to determine how much work is required to apply the same process to some historical/legacy non-Mopra large projects, such as HIPASS or GAS, as well as non-HI surveys like AT20G.

ATUC Recommendations [ATNF response requested]

1. Mopra scheduler:
    - The Mopra scheduler currently only supports "square" maps, while it would be useful to users to be able to include rectangular maps.

i. *Recommendation 1*: The Mopra scheduler is extended to support rectangular on-the-fly mapping.

2. TAC feedback:
    - There were concerns from some users that recent TAC feedback was not up to the expected standards. Specific complaints suggested that in some cases feedback received from the TAC appeared to be more focussed on the level of English and proposal formatting than on the scientific content. There were also concerns about the perceived preoccupation with what future instruments which are still under construction might do, and that this can potentially compromising the science that users can and want to do now. Specifically, it appears that some projects were not being allocated time now due to the future arrival of instruments such as ASKAP. With ASKAP still a long way from completion, it seems somewhat unfair and short-sighted to "stall" viable projects which can be run now with the superb existing instruments such as the ATCA with its current CABB capabilities.
        i. *Recommendation 2a*: TAC feedback should focus on the scientific content of proposals, so that the feedback can help users understand the score they received (and ideally help them improve future proposals).
        ii. *Recommendation 2b:* The TAC should also consider whether the proposed science can be done now with existing instruments rather than simply defer to future instruments that are still under construction.

3. Mid-week RFI:
    - Users understand that "mid-week RFI" is causing some trouble (particularly for L-band observations at 1280 MHz) and that CASS is trying to help mitigate these problems. However, it appears that the "mid-week RFI" is not only a mid-week phenomenon, but can occur throughout the week including over the weekend. So far it appears to not occur overnight.
        i. *Recommendation 3*: ATUC recommends that CASS make clear to observers the known issues surrounding mid-week RFI, and where possible put in place scheduling constraints to assist in avoiding L-band users being affected where possible.

4. LBA amplitude calibration:
    - There are some concerns within the VLBI community about the ability to obtain calibration information for the LBA, which affects user satisfaction. Users would like to see improvements to the procedures to ensure that amplitude calibration information (i.e. system temperature measurements and gain curves) is easier to access and apply. Ideally the system gain and gain curves would be measured regularly for each telescope and also made readily available to user
        i. *Recommendation 4:* ATUC recommends that LBA observations start with the necessary calibration to ensure that amplitude calibration is conducted and that appropriate time (and human resources) should be allocated in all LBA runs for this calibration. The procedure by which users access calibration information should be reviewed to ensure that this information is easy for users to obtain and apply.