

Minutes of OTC telecon, Wednesday June 14, 2006, 15:30 UTC.

2006-06-14. Last revised 2006-06-16, DTE.

OTC members present: Richard Bradley, Walter Brisken, Darrel Emerson (chair), Rick Fisher, Tony Kerr, Rich Lacasse, Peter Napier, Roger Norrod, Marian Pospieszalski, Dick Sramek & John Webber.

Ken Kellermann also attended.

Minutes of last meeting For reference, the final minutes of our last meeting are at:

http://www.tuc.nrao.edu/~demerson/otc/otc_2006-03-02.pdf .

Agenda:

- 1. Introduction, welcome to new members**
- 2. The responsibilities of the new Technical Leader of R&D, and**
- 3. The relationship between the Technical Leader and the OTC**
- 4. Collaboration between the OTC and the OSC**
- 5. What are the OTC's next tasks, both immediately and longer term**

1. Introduction and Welcome

Darrel welcomed the new OTC members, and thanked the long-standing members for agreeing to continue with the OTC. The new complete membership list now is:

Richard Bradley	Peter Napier
Walter Brisken	Roger Norrod
Bill Cotton	John Payne
Darrel Emerson (chair)	Marian Pospieszalski
Rick Fisher	Dick Sramek
Tony Kerr	Art Symmes
Rich Lacasse	Dick Thompson
Matt Morgan	John Webber

Darrel reminded the group that OTC material, including minutes of meetings and documents produced, are always available on <http://www.nrao.edu/~demerson/otc/> . The OTC makes recommendations to the NRAO Director, with an emphasis on the future R&D directions of the observatory. The formal charge given to us by the Director is included in the minutes of the meeting of 2004-04-16.

2. The responsibilities of the new Technical Leader of R&D,

and

3 The relationship between the Technical Leader and the OTC

These agenda items were taken together. There had been questions to NRAO about its participation in the SKA project, and clearly NRAO needs to have its own house in order. Rick explained that the Director had told him he should make whatever use of the OTC he wishes to, in order to help with his task. Rick will be looking at the very long term picture – where are we going in the next 30 years? He needs scientific input, and part of his job is to be a bridge between scientists and engineers. He is talking to as many engineers, site managers and interested scientists as possible. The OTC recommendations are the basis for planning, but need more essentially science-based themes. Should we be looking at higher frequencies? More emphasis on RFI excision? We need a coherent picture of how it all fits together from the scientific point of view.

Rick is encouraging ideas from individuals, from research engineers as well as engineers doing design work for specific telescopes. He is visiting labs and telescopes to find out what's going on, putting a coherent picture together. Rick has already found there to be many good ideas around, but they are not currently being encouraged; Rick wants to find the ideas and to encourage them. At present, there is a need to embark on projects that can produce results but which don't take a lot of resources, and are capable of being ramped up over 3, 4 or 5 years. We can see the end of the ALMA/EVLA construction projects in about 5 years, so we need to fill in the open time with new ideas, without leaving gaps. We need to pick up important R&D ideas now, probably in collaboration with others. There should be a smooth transition from the existing projects to R&D.

John Webber asked about external money. Rick responded that this should be considered on an individual basis. Most NSF programs are closed to us, but not to universities, so that is one motivation for collaboration – on things of mutual benefit.

John asked about the incentive for bright young engineers joining NRAO. One attraction in the past was that engineers could be supported, doing R&D, at NRAO without the distractions of writing grant proposals, committee memberships and teaching responsibilities. It may be difficult arranging the right balance.

Peter Napier agreed that we need to get started without necessarily having a defined budget, but it is a difficult situation. As projects wind down, yes in principle engineers might have time to begin to work on new projects. BUT those very engineers are paid from project budgets, so their salaries will disappear when those projects finish. So, NRAO needs to find salary money to keep these engineers when they leave the projects and the project funding goes away.

Ken Kellermann asked if project engineers were actually research engineers. Peter responded that this is rarely the case.

John said that NSF had already asked NRAO for a long term budget plan that would meet the goals of NRAO's mission. NSF has been shown a schedule for bringing a large number of NRAO engineers from ALMA construction into (1) ALMA support, maintenance and repair, and long term production for ALMA, and (2) to provide a ramp up of engineering expertise carried with the operation budget, along with M&S funds, from the OTC's priority #1 items. NSF has been shown these dollar numbers. The NRAO plan for 2008-2012 shows a substantial move of ALMA people on to the regular NRAO budget. Note however that NSF looks at the end of the EVLA as being a net saving to NSF, and there is no intention to continue extra support money for the EVLA. However, the main point is that NSF has at least been alerted to this issue.

Rick remarked that there is no management or budget involved in his new role. His goal however is to get R&D investment back to at least the level it was at NRAO 20 years ago.

Darrel asked about RadioNet: might there be interest in collaboration. Rick answered that perhaps, on a case-by-case basis, but not as an institutional policy. Darrel agreed to circulate information he has about RadioNet.

John remarked that he is leery of schemes involving cooperation in big international projects. LOFAR provides examples of the difficulties that can arise. John is skeptical about serious collaboration, involving expenditure of resources, unless the collaboration is on something that we are not already interested in.

Ken agreed, but said that there are some things – data transmission etc. – that may already be appropriate. Admittedly these are not big projects, but collaborative research projects, decided on a case by case basis, may be ok.

Marian Pospieszalski said that we needed some metric of success. Traditionally this has been measured by what instrumentation ends up on the telescope. True research success could be defined in terms of paper published in refereed journals, but he thought that practical demonstrations, not just published papers, should be what define success.

Rick agreed with Marian's point. However, even enabling technology could be useful as a demonstration for some potential future major telescope instrumentation project.

Marian said we do nevertheless need to be more precise in what we mean by “Research and Development.”

4. Collaboration with the OSC

(Dale Frail had been invited to talk about this, but was unable to attend the meeting.)
The OTC 5-year R&D plan had not yet received comments from the scientific staff. If Dale hasn't already, Darrel should send the URL of this to all scientific staff.
Peter also asked that Rick distribute the document he has prepared, to the entire OTC.

5. Future OTC tasks, short term and long term

There were questions about the status of the R&D Contract Review; this was an unknown subject for the new OTC members. The OTC is supposed to have the option of reviewing significant development contracts before they are awarded. See [Future Review of R & D Contracts awarded by NRAO. Recommendation to the Director, 2005-04-15](#). This is not currently happening. Peter and John both pointed out that relatively large ALMA contracts, in particular for photonics projects, were about to be given, and yet there had been no opportunity for the OTC even to look at procurement specs for comment.

Darrel agreed to find out what was happening; the business division was implementing the contract review scheme, but nothing appeared to have happened.

John reminded us that one of the OTC's goals is an annual update of the 5-year plan. However, the first step is to get input on the current plan from NRAO's scientists.

6. Action Items

- a. Darrel will distribute to the OTC information about RadioNet projects
- b. Darrel will find out from the business division, what is the status of our OTC Procurement Review process?
- c. Rick will distribute his document to the entire OTC
- d. Darrel will work towards getting scientific comment on our current 5-year plan, if necessary distributing the plan directly to all scientists
- e. All OTC members are asked to think about what they would like to see the OTC doing. The next OTC meeting will be arranged by Darrel, about one month from now.

DTE, 2006-06-14