

List of topics for Plan meet of 13th April 2011 :

RFI related :

- 1.1 Air Force RFI : current status
- 1.2 Update on Powerline RFI checks
- 1.3 Mobile phone RFI : shifting to operators to 1800 MHz -- status
- 1.3 Design of RFI proof enclosures for ABR components (e.g. Rabbit, PC104)
- 1.4 RFI testing of BLDC system (lab + in-situ at C04)
- 1.5 Leakage from New digital lab & New servo lab : before & after comparison

Any other items:

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Minutes from Plan meet of 6th April 2011 :

1.1 : Rabbit Card testing :

(i) field test of Rabbit card in serial port : still pending;

ACTION : CPK to try and clear by next few days.

(ii) Rabbit card in ethernet mode : ascii based command tested; using XML parser based system (from XML file) -- both tested on C3 antenna; will test with wrapper for PSL work -- can also be incorporated with ABC com later :

ACTION : note from Ops group summarising various kinds of testing to be produced, in about 2 weeks.

1.2 : RFI shielding of Rabbit card : Rabbit module piggy back in old MCM card tested in RFI box : suppression ~ 30 dB seen (?) -- needs some clarification; prelim report circulated (to put on Plan website); further detailed tests need to be done.

ACTION : Ops + RFI team to sit together for this and produce next level of report; in about 2 weeks.

1.3 : Development of new MCM card : 2-layer card PCB routing done using Altim; components : all have come for prototype level (analog mux is last piece whose testing is going on) -- 2 weeks more; PCB fab : Argus finalised (first time), good for small component count of ICs; TTL (5 V) still OK.

ACTION : End of April to beginning of May for PCB to be available.

1.4 : Software for new MCM card : 3 parts

(i) part 1 : basic software development : item is covered under 1.1;

(ii) USB to serial interface no progress/work of late; to try again and see;

ACTION : relook at the matter; also, ICH to check for any way of sourcing old laptops with serial port.

(iii) GUI development : item on back-burner for the present.

1.5 : Rugged, RFI friendly PC for ABR : Comint as one option (Kontron band); servo group had found a lead for another option.

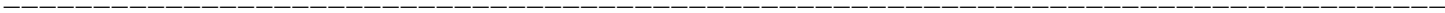
ACTION : to follow-up both; place indent for Kontron and check with SS about other option (within one week).
Meanwhile, 5 new PCs for interim use at ABR -- procurement underway; JPK to ensure 3+1 working old PCs for immediate use.

1.6 : documentation : see 1.1 & 1.2 for 2 reports to be completed (2 weeks); to check older ones on Plan web page.

1.7 : SACE update : demo was successful ; JPK + AA to produce a report on SACE work; JPK to continue some level of development and testing on 3 antennas.

1.8 : 31st antenna problem : work ongoing; will take some more time -- may or may not get solved, as COMH

reprogramming may be required. ACTION : to report back after 2 weeks.



List of topics for Plan meet of 27th April 2011 :

Collection from FE, OF, Ops, RFI topics, from recent Plan meetings :

1. FE :

1.1 Update on CSIRO feed problem : ANR to circulate doc compiling current set of results (from 23Mar11 meeting).

1.2 Update on Eleven feed testing: to try test with 2 types of 150 LNAs & do a sky test to see how it works (from 23Mar11 meeting).

1.3 Update on noise injection with probes : DM to check for cross dipole feeds at Arecibo and send a response; FE team to try couple of simulation studies (from 23Mar11 meeting).

1.4 Update on purchase of environmental chamber (from 23Mar11 meeting).

2. Operations :

2.1 Update on field test of Rabbit card in serial port in next days (from 6Apr11 meeting).

2.2 Note from Ops group summarising various kinds of testing of Rabbit card on ethernet to be produced, in about 2 weeks (from 6Apr11 meeting).

2.3 ICH to check for any way of sourcing old/new laptops with serial port (from 6Apr11 meeting).

2.4 Ops group to follow-up 2 options for RFI-quiet PCs in ABR : place indent for Kontron and check with SS about other option (within one week) -- from 6Apr11 meeting.

2.5 JPK to ensure 3+1 working old PCs for immediate use at ABR.

2.6 Update from Ops group on 31st antenna problem after 2 weeks (from 6Apr11 meeting).

3. RFI :

3.1 Air Force RFI : follow-up on action taken to contact AF station (from 13Apr11 meeting).

3.2 Mobile phone RFI : draft letter to BSNL; follow-up with Vodafone (from 13Apr11 meeting).

3.3 Update on improved performance from RFI proof enclosure testing of Rabbit card : Ops + RFI team to sit together for this and produce next level of report; in about 2 weeks (from 6Apr11 & 13Apr11 meetings).

Any other items:

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Minutes from Plan meet of 13th April 2011 :

1.1 : Air Force RFI : Some evidence that RFI still comes in protected band (322-328); frequency is very less on week-ends and these could be selectively used for 243 and 325 MHz observations.

Action : To get clear evidence of RFI line in protected band from aircraft, for discussion with AF; PAR to follow-up with AF personnel and set-up a meeting.

1.2 : Update on powerline RFI : (i) Results from Ultrasonic testing of poles on 2 HT lines : list of bad poles and joints available; information passed to electrical. Need follow-up with MSEB on this. (ii) Sugar factory sub-station related

issues : to get space loss results for the proposed location to W5, W6 etc. to understand effect of "hill" in between to W06. (iii) RFI from harmonic filter unit in GMRT sub-station : significant RFI is seen; problem needs to be resolved.

1.3 : Mobile phone RFI : Most operators within 20 km zone (GSM) have moved to 1800; now we need to keep monitoring any new ones that come up; the worst ones beyond the 20 km zone have been identified and are being addressed; two worst ones are BSNL near Alephata and Vodafone beyond the E-arm : BSNL tests have been tried to improve the shielding by changing orientation of their antennas on the tower etc, but have not worked; follow-up letter is needed; Vodafone: they were short of 1800 equipment and now need to be contacted again to see if situation has changed. CDMA : Tata-Indicom is at or beyond Manchar, Junnar and Alephata and they have not come closer; Reliance has not complied; we need to get details of Rel tower locations and signal strength.

1.4 : Design of RFI proof enclosures :

Development of EMI shielding box Rabbit card housing has been developed (can be used as a sub-rack); results show fairly good shielding; some further improvements are possible -- to investigate the same; effectiveness of the shielding : 30-40 dB over freq of interest. Action : to continue to next level of testing with Rabbit in different modes. To take up PC104 a bit later on.

1.5 : RFI testing of BLDC system : (i) confirmation of BLDC lab report as a benchmark that can be used for rfi testing of new racks that will be assembled.

(ii) tests of actual running system : results are not very clear. Need to be clarified by the RFI team, and a proper comparison needs to be done.

1.6 : Measurement of change in shielding effectiveness (if any) of new digital lab and new servo lab : there was a debate about what is the best diagnostics for estimating the quantity of interest; agreed that it should be a direct measure of shielding effectiveness; appear of new lines is interesting / useful information, but comes under a different topic of discussion.

Action : to provide results on measurement of shielding effectiveness : original and present values.

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