

Minutes of Plan meet of 12 Dec 2012 (follow-up of some pending topics from different areas) :

1. Documentation related :

1.1 Documentation : follow-up on level 2 (ITR) -- from 21 Nov & earlier : conversion of older reports : pulsed noise source by BE and 250-500 LNA by FE) to check progress and see if the reports are ready.
==> BE has done pulse noise source; FE to complete -- ANR to look into it; check after 2 weeks.

1.2 Documentation : SoP for antenna base work -- from 21 Nov (SSK/ANR/HRB) : updated version to be made ready for (i) installation of upgrade systems and (ii) ensure proper working of existing systems.
==> some work has been done on (ii) but not much progress on (i); to check status after 2 weeks.

2. FE & OF related :

2.1 Directional coupler for 250-500 FE system -- from 27 Nov (ANR/SSK) : update on final performance (especially the insertion loss) and comparison with existing 325 system -- to discuss note circulated by ANR and decide course of action.
==> old one has lower insertion loss 0.02 to 0.05 dB ($\lambda/4$ length with narrow bandwidth -- 6 dB variation of coupling strength); new design has IL of 0.1 dB and coupling loss is more like 0.5 to 1 dB across the band; ANR would like to try one more expt with $\lambda/4$ and his current substrate -- 5880 (Eps2.2) vs Eps10.2 substrate; agreed to get PCB for both sample designs (note : there will be individual units for each poln) -- get sample of both made and tested and decide; take up after 4 weeks.

2.2 Mass production of 250-500 FE system -- from 27 Nov (ANR/SSK) : (i) status update on development of notch filters for 243 military satellite and 540 TV line.

==> 243 filter has 10 dB points at 240 and 270 MHz; initially to be tested at antenna base and leave provision to move it to FE box later on (if needed); 540 filter specs not finalised yet, but it will be available shortly; follow-up after couple weeks.

(ii) finalisation of the FE box for 250-500 system : FE team to circulate a block diagram of final proposed system.

==> agreed for 2 weeks time for circulating first version which can be fine tuned later on. follow-up after 2 weeks.

(iii) to review timelines for completion of new systems, including repairs of existing systems.

==> C6 system brought down and tested in lab -- appears to be OK, will be put back. Can target to start putting the systems as soon as the feeds come, from end Dec onwards. Check status after 3-4 weeks.

2.3 Polarisation performance of 250-500 feed -- from 27 Nov (SK/DVL/YG) : to report on polarisation calibration comparison of narrow-band vs broad-band feeds.

==> (i) polarisation isolation test being done by SSK and team : good results for C8 and W1 (~80-90%), but slightly poor result for S2 (70-80%); done for spot freq of 325; should plan to reproduce over full 250-500 range later when a few more antennas have these feeds. (ii) more updates from DVL/YG next week.

2.4 Developments for 130-260 feed -- from 31 Oct & 27 Nov (HRB/GSS) : feed with improved mechanical design of dipole etc to be ready and tested.

==> work under progress to finalise the drawing of new support structure for dipole and sleeves; fabrication should start by next week; check after 2 weeks.

2.5 New LNA for 130-260 system -- from 23 Oct & 7 Nov (VBB/SSK) : FE team to report about new LNA on modified substrate and testing of same.

==> PCB will be collected today and some work-around for the PTH problem will be tried; should be ready soon for testing; can check after 2 weeks.

2.6 Status of improved 500-1000 MHz cone-dipole -- from 21 & 27 Nov (HRB/GSS/SSK):

==> Item not discussed ?

(i) comparison of ver 1 and ver 2 of CDF feed, including testing ver 1 dipole in ver 2 cavity etc.

==>

(ii) comparison of measured parameters with simulations; also effect of solid vs perforated cone.

==>

(iii) difference in sensitivity of CDF and CSIRO feeds : could be filters, could be perforated cavity, could be focus offset -- any updates on these aspects?

==>

(iv) results from test range

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2.7 Update on status of test range -- from a few months ago (GSS/SSK) : (i) to report if test range is working ok or not (ii) phase centre measurements for 500-1000 CDF (iii) phase centre measurements for 250-500 CDF.

==> (i) test range now back to working, but needs some BPFs for mobile, 540 TV etc, and one Sirenza amplifier; for (ii) and (iii) agreed the following: to measure phase centre for one CSIRO feed (already at Pune) as a cross-check for performance of 500-1000 CDF; to check the valuse for 250-500 CDF, one dipole needs to be made ready. To check after 2 weeks.

2.8 Follow-up on delivery of 550-900 MHz filters -- from 27 Nov (ANR/SSK) : delivery of prototype meeting full specs.

==> chassis change didn't solve the problem; now vendor is redoing the PCB also; ANR to check and send an email update on latest time-scale from vendor. Check again 2 weeks later.

2.9 Spares for L-band FE electronics -- from 14 Nov (ANR/SSK) : FE group to confirm if PCBs are ready and tested.

==> (i) RFCM-type card was needed : this is work underway, VBB has to verify the design and then card has to be made.

(ii) mini-crisis about LNA : 5 units to be taken up for tuning and see if they can be reused -- if successful, then more spares can be done.

(iii) filters : need chassis and connectors.

(iv) noise gen : has to be assembled.

(v) post-ampl and phase switch also need to be checked.

(vi) integration only when spare feeds come.

To check status after one month.

2.10 Filters at different stages of receiver chain -- still pending from 31 Oct & 27 Nov (SSK/BAK) : still waiting for SSK to circulate a draft for discussion.
==> details still taking time; to see if a skeletal version can be done; check after 2 weeks.

2.11 Finalisation of design for temperature detectors for FE system -- from 21 Nov & 27 Nov (SSK) : (i) choice of device to be clarified
(ii) prototype to be built and tested with FE or CB in lab and results to be reported from the same.
==> FE group is going ahead with the TC1047 design (offset voltage facility; SMD allows easy mounting etc); to wait for the PCB (coming this week) -- can check 2 weeks later.

2.12 Finalisation of design for total power detector for FE boxes -- from 21 Nov (ANR/SSK) : to check about results from prototype unit.
==> testing is going on; some patching of PCB was needed -- but may be good enough to test linearity and dynamic range; check after 2 weeks.

2.13 OF systems :

(i) Further installation of new systems -- from 31 Oct (SSK/PAR) : to check plans for installation -- components, PIUs, wiring etc...
==> count of WDM coupler was underestimated by factor of 2 ==> fresh order needs to be done; pig tails : full quantity still pending... last 10 ants to be done; PIUs for remaining will be inspected this week; some facia panels etc remaining...
(ii) Characterisation of new OF systems -- from 21 Nov (SSK/PAR) : plots for all antennas (at L-band) to be produced. This has not yet been done !
==> agreed to split into 2 parts : quick, dirty results can be circulated to few people and then after clean-up and improvement a more detailed report can be circulated.
Overall follow-up after 3-4 weeks.

3. RFI related matters :

3.1 Effect of military satellite RFI in 243 band -- still pending from 31 Oct (PAR/SSK) : first version of report has been released -- to be taken up for discussion.
==> could not be done as PAR was not present; to check again next week.

3.2 Follow-up on UPS RFI -- from 27 Nov (SSK/PAR) : (i) results from tests of improved 1 kVA unit at GMRT and (ii) follow-up for trying the 3 kVA unit.
==>
(i) output AC cable of better RFI quality has been given and needs to be tried;
(ii) 3 kVA with same RFI capabilities as 1 kVA is available with Miltech -- to follow-up on purchase of sample unit.
Check status after 2 weeks.

3.3 Miltech : i7 PC order : to modify to add shielded eth port and shielded kbd and mouse in the order... CPK to follow-up with purchase. Check next week.

4. Operations :

4.1 PCs in antennas for testing M&C softwares -- from 27 Nov and before (JPK/SN/RVS): Ops group to check overlap of antennas with eth and UPS and report back with plans for installation of the PCs. Need update on this matter.
==> waiting for response from RVS...; check next week.

4.2 Using new MCM card on ethernet of PC for upgraded analog backend -- from 27 Nov and before (JPK/CPK/BAK) :

(i) updates on completing tests on multiple Rabbit card system etc.

==> online can give cmd to Rabbit card and simulator; completion of putting all the commands is ongoing... then to test in Rx room; then to replicate for multiple cards for 8 antenna system....

(ii) status of completion of 8 antenna system.

==> waiting for part (i) to be completed.

Can check status after 2 weeks.

5. Back-ends :

5.1 Release of analog FE mass production for 8 ants, dual pol -- from 27 Nov (BAK) : check if 8 ant system with basic control set-up can be released.

==> All 8 installed; 6 ants are working; MCM cards for 2 ants were having some problem -- 1 bit stuck, SPI port not working; 2 other cards can be given this week. 8 ants (of 12) which have attenuator control at antenna base are hardwired to the 8 units; this list to be put up in control room and circulated. Confirm status after 2 weeks.

5.2 Plans for beyond 8 antennas for analog back-end systems to be reviewed -- from 31 Oct (BAK).

==> components available (may need some replenishment), cables etc ok, PIUs Ok, chassis work still pending, will need new network of eth switches; space in the racks : 8 more can be done; beyond that, some rearrangement will be needed; to generate a plan for the same for discussion; to take up one month later.

5.3 Final online control for GPU corr -- from 27 Nov & before (SSK/JPK/NR) : to check pending items and see if working version is available for use.

==> integration with GUI still not tested; also, offline utilities on ldata are not yet fully validated. Need to prioritise this work. Follow-up after 2 weeks.

5.4 GPU corr -- from 27 Nov & before (SHR/BAK) : status updates on following :

(i) release of 4 node, 8 input, 200/250 MHz version and 8 node, 16 input, 150 MHz version -- current status to be reported.

==> not much change since last update;

(ii) update on testing of K10 system of nvidia.

==> some progress in logging-in and running, but no concrete results yet.

(iii) updates from testing of Supermicro system.

==> trials under progress, but success not achieved...

(iv) test of time slicing dynamically on FPGA or while transferring to PCs.

==> work under progress; will resume more actively with student from IIT-B now started on it.

(v) plans for walk through the code for further optimisation, improvements, rationalisation and documentation.

==> no progress on this.

5.5 Packetised corr -- from 21 Nov & earlier (SCC/BAK) : to confirm a stable working pipeline for analysis of data.

==> can a SoP be generated for this? Check status after 2 weeks?

5.6 Plans for further astronomical tests -- from 21 Nov (DVL/YG) : implementation plan of tests proposed by DVL to be drawn up with BE team.

==> not taken up, as final working modes of system not released yet; to check after 3 weeks.

6. Other items :

Nothing to be discussed here this week !

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Minutes of Plan meet of 19 Dec 2012 (follow-up of some pending topics from different areas) :

1. Documentation related :

1.1 Follow-up on level 3 (NTR) -- pending for long : from 5 Dec & before (SSK/DO):
To check status of report on design of OF system.
==> no inputs; to take up again on 9th Jan.

1.2 Detailed design doc -- pending for long : from 5 Dec & before (SSK/BAK) :
follow-up on subsystems to be converted : (i) OF Rx system completed? (ii) OF Tx
to be started (iii) analog BE system to be completed.
==> no inputs; to take up again on 9th Jan.

2. FE & OF related :

2.1 Update on RF dump tests for new feeds -- from 5 Dec & before (HRB/GSS/SSK)
(i) new data and results for 130-260, 250-500, 550-900 (HRB/SSK)
==> no work done; to be followed after couple of weeks (9th Jan).
(ii) matlab procedure for ON/OFF and (ON-OFF)/OFF calculatsion (HRB)
==> first version with results discussed and different feedbacks given; HRB to
follow-up with Fevi Bansal and matter to be taken up again after 2 weeks (9th Jan)
(iii) scheme for (re)calculation of expected values across the broad bands to be
finalised (and added to measured curves) -- (SSK and team).
==> no work done on this yet; to follow-up around 9th Jan.

2.2 Signal flow analysis related items -- from 5 Dec and before (GP/ANR/SSK)
(i) cross-check of new analysis against previous one to match results (7 Nov)
==> some differences found with earlier analysis -- maybe due to the fact that
some factors have been overlooked : loss in OMT and input cable to FE; 16 dB
factor due to RF cable from top to bottom; coupler yet to be added; new broad
band ampl in common box is included ==> some improvements in dynamic range; to
add column for noise temp; to add effect of couplers and complete the analysis;
to see if one system can be assembled on the bench to check the figures; follow-up
on 9th Jan.
(ii) add effect of couplers for power monitoring and redo analysis (7 Nov)
==> see item (i) above
(iii) to try system with extra amplifier at antenna base & measure the performance
for checking the 6 dB margin (from 23 Oct)
==> no updates on this; to check after 2 weeks (9th Jan).
(iv) plans for trying analysis of 250-500 system
==> to get the numbers for each element of FE box for 250-500 and do the analysis.
To follow-up after 2 weeks (9th Jan).

2.3 Polarisation performance of 250-500 feed -- from 27 Nov (SK/DVL/YG) : to
report on polarisation calibration comparison of narrow-band vs broad-band feeds.
==> work in progress; can try for an update next week (2nd Jan).

2.4 Walsh switching arrangement in FE -- from 21 Nov (SSK) : results from lab

tests on new L-band system.

==> rediscussed the problem : phase switching rate and frequency range of the switching needs to be verified / characterised; FE group to respond about doability of this (esp item 1) and then follow-up with plans for bench test. Check after 2 weeks (9th Jan).

2.5 Work orders for CSIRO feed with 2 parties -- from 21 Nov (HSK/JNC) : status update about delivery.

==> no updates; follow-up after 2 weeks (2nd Jan).

2.6 Status of improved 500-1000 MHz cone-dipole -- from 21 & 27 Nov (HRB/GSS/SSK) :

(i) comparison of ver 1 and ver 2 of CDF feed, including testing ver 1 dipole in ver 2 cavity etc.

(ii) comparison of measured parameters with simulations; also effect of solid vs perforated cone.

(iii) difference in sensitivity of CDF and CSIRO feeds : could be filters, could be perforated cavity, could be focus offset -- any updates on these aspects?

(iv) results from test range

==> item not taken up for formal discussion; meeting proposed between feed team and YG (+APK as consultant) on 20th; to follow-up on 2nd Jan.

2.7 Fabrication of spare L-band feed -- from 5 Dec (SSK/HSK) : to check status on quotes to be obtained from vendors for fabrication, and order to be placed.

==> no updates; to follow-up on 2nd Jan.

2.8 Calibration scheme with radiator at apex of antenna -- from 5 Dec and before

(SSK/PAR/SRoy/DO/YG): follow-up from first round of discussions of 5th Dec. : results from basic tests to be reported.

==> no discussion took place due to unavailability of individuals; to follow-up on 9th Jan.

3. RFI related matters :

3.1 Effect of military satellite RFI in 243 band -- still pending from 31 Oct (PAR/SSK) : first version of report has been released -- to be taken up for discussion.

==> no discussions and no inputs from concerned persons ! follow-up 2nd/9th Jan.

3.2 Miltec PC RFI testing & improved report -- from 5 Dec, 21 Nov & 7 Oct (SSK/PAR) :

(i) shielded serial port and ethernet tests need some more work : to try with Rabbit card as the terminating load and some other arrangement for serial port.

(ii) test results from use of shielded connectors obtained from vendor.

(iii) plans for updated report : to fold in all the new tests and results and give detailed comparison with earlier measurements (from March 2012).

==> no discussions and no inputs from concerned persons ! follow-up 2nd/9th Jan.

3.3 Ethernet switches for antenna base -- from 5 Dec (SN/BAK/SSK) : RFI tests

on integrated system with OF transceiver + switch + Miltech PC + MCM cards have been done; report needs to be completed & circulated.

==> no discussions and no inputs from concerned persons ! follow-up 2nd/9th Jan.

3.4 Radiation from CAT5 cable -- from 27 Nov, but matter dragging from 25 Jul

onwards ! (SSK/PAR): RFI group to report results from tests with sample shielded

units obtained by them.

==> no discussions and no inputs from concerned persons ! follow-up 2nd/9th Jan.

3.5 Mobile phone RFI -- from 27 Nov and earlier (SSK/PAR) :

(i) updates on characterisation of the effect at E6 from far away towers (pending for a long time)

(ii) discussion about how to identify frequency, location and power of operators.

==> no discussions and no inputs from concerned persons ! follow-up 2nd/9th Jan.

4. Operations :

4.1 PCs in antennas for testing M&C softwares -- from 27 Nov and before (JPK/SN/RVS): Ops group to check overlap of antennas with eth and UPS and report back with plans for installation of the PCs. Need update on this matter.

==> matter to be finalised with electrical soon; follow-up on 2nd Jan.

4.2 Miltec PC purchase related -- from 12 & 5 Dec (CPK/JPK/SN) : follow-up on order for 2 nos of i7 model from vendor, with improved RFI characteristics.

==> new indent and quote for 1 unit with shielded USB & eth connectors and shielded kbd+mouse unit (+ 1 normal unit) -- ready to order; should come in a month or so; to check after one month.

4.3 Mass production of Rabbit MCM cards -- from 21 Nov (CPK/SN) :

(i) status of testing of cards to be reported.

==> 15 cards tested (bit slower than anticipated); now getting streamlined; can check after one month.

(ii) plans for SoP for test procedure that can be shared with other groups.

==> work ongoing, can check after 2 weeks (9th Jan/16th Jan).

4.4 Development of M&C software -- from 21 Nov (JPK/RU/SN/NGK/YW) :

(i) update on in-house development efforts (RU/SN)

==> various jobs assigned to different members; can take update after one month.

(ii) update on SACE related development with TCS (JPK/SN)

==> stake-holder inputs still not complete -- to be done asap and first version to be given to TCS end of this week; meanwhile, so use cases are being written up and finalised -- these need to be reviewed; common webmail account needs to be created for document sharing. Review after 2 weeks (2nd Jan)

5. Back-ends :

5.1 Finalisation of design for temperature detectors for BE system -- from 5 Dec (BAK) : final report on working of the unit pending from BE group : matter can be closed after that.

==> no input; follow-up after 2 weeks (9th Jan).

5.2 Packetised corr -- from 5 Dec & earlier (SCC/BAK) :

(i) updates on testing of 2K and 4K pt FFTs (with full delay).

==> lab tests done and look acceptable; need antenna test of this design; to check after 2 weeks (9th Jan).

(ii) putting 10 Gbe link in pkt design (to allow integration with GPU design) -- to check status of the 2 designs under consideration.

==> common FPGA design that meets both design goals (full BW, half delay vs

half BW, full delay) has been made; needs lab test and then sky test to be done; can check after 2 weeks (9th Jan).

5.3 GPU corr -- from 12 Nov & before (SHR/BAK) : status updates on following :

(i) release of 4 node, 8 input, 200/250 MHz version and 8 node, 16 input, 150 MHz version -- current status to be reported.

==> no update; to check next time (2nd Jan).

(ii) update on testing of K10 system of nvidia.

==> basic log-in and running of tests now possible; work on optimised code for K10 yet to be done; follow-up after 2 weeks (2nd Jan).

(iii) updates from testing of Supermicro system.

==> 2U rack mountable server (model 2027) obtained from vendor for one week of testing -- i/o tests not (yet) successful -- likely will need follow-up with vendor (Boston); to check next time (2nd Jan).

(iv) test of time slicing dynamically on FPGA or while transferring to PCs.

==> work ongoing with IITB student; getting ready to test improved design; to update next time (2nd Jan).

(v) plans for walk through the code for further optimisation, improvements, rationalisation and documentation.

==> no progress on this; need to find a way forward; discuss on 2nd Jan?

5.4 Power and cooling requirements for projected back-end systems -- from 5 Dec & earlier (BAK/RVS/YG) : check status of results from first round of tests.

==> 5 kW load addition (with new inlet and outlet vents opened) and compressor was running with 3 valves continuously in operation and no relief ==> need to discuss with Voltas and see what needs to be done; can check status after 2 weeks (9th Jan).

5.5 User SoPs for new back-end systems -- from 5 Dec (IMH/DVL/BAK) : updates on testing of multi-node version -- has this been tested and can be finalised now?

==> to check with DVL and also check about similar SoP for pkt design; to see if matter can be closed by 9th Jan.

5.6 Update on SFP+ work & future plans -- from 5 Dec and earlier (KDB/BAK).

==> both problems still unsolved; follow-up with vendor about possibilities for fixing the problem is going on; to check after 2 weeks (9th Jan).

5.7 Next-gen time & frequency standards -- from 21 Nov (NDS/BAK) :

(i) completion of tests at GMRT.

==> not yet done; to increase the priority and see if it can be done; can check status after 3 weeks (16th Jan).

(ii) plans for visit to NPL in Jan 2013 or so.

==> no action -- waiting for item (i) above.

(iii) looking into OCXOs from Oscilloquartz.

==> no action -- waiting for (ii)

6. Other items :

6.1 Plans for jobs at TIFR -- from 5 Dec (HSK/SKG) : (i) confirm about retrieval of jobs completed (ii) to decide future course of action : to continue or not?

==> retrieval of jobs can be done now. follow-up after 2 weeks (9th Jan)

6.2 Status update on 15m related items (JNC)

==> no updates; follow-up after 2 weeks (9th Jan).

6.3 Updates and plans for FPA system (JNC/YG)

==> no updates; follow-up after 2 weeks (9th Jan).

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Minutes of topics for Plan meet of 5 Dec 2012 (follow-up of some pending topics from different areas) -- mostly from email updates from different groups :

1. Documentation related :

1.1 Follow-up on level 3 (NTR) -- from 7 Nov & before (SSK/DO): To check status of report on design of OF system.

==> SSK reports no progress on this, due to lack of time; to check after 2 weeks to decide how to handle.

1.2 Detailed design doc -- from 7 Nov (SSK/BAK) : follow-up on subsystems to be converted : (i) OF Rx system completed? (ii) OF Tx to be started (iii) analog BE system to be completed.

==> for (i) & (ii) SSK reports no progress due to lack of time; same for (iii) from BAK; to check after 2 weeks and decide how to handle.

1.3 Update on RF dump tests for new feeds -- from 21 Nov & before (HRB/GSS/SSK)

(i) new data and results for 130-260, 250-500, 550-900 (HRB/SSK)

==> SSK reports : no updates -- to be followed up next week, if possible.

(ii) matlab procedure for ON/OFF and (ON-OFF)/OFF calculations (HRB)

==> SSK reports : work in progress; follow-up after 2 weeks.

(iii) scheme for (re)calculation of expected values across the broad bands to be finalised (and added to measured curves) -- (SSK and team).

==> SSK reports : no progress, due to lack of time; to follow-up after 2 weeks.

2. FE & OF related :

2.1 Directional coupler for 250-500 FE system -- from 27 Nov (ANR/SSK) : update on final performance (especially the insertion loss) and comparison with existing 325 system -- to be summarised in a note from FE group; note not yet circulated !

==> ANR is working on the modified design but note is not ready yet; to check again next week.

2.2 Signal flow analysis related items -- from 21 Nov (GP/ANR/SSK)

(i) cross-check of new analysis against previous one to match results (7 Nov)

==> work in progress; to check again 2 weeks later.

(ii) add effect of couplers for power monitoring and redo analysis (7 Nov)

==> work in progress; to check again 2 weeks later.

(iii) to try system with extra amplifier at antenna base & measure the performance for checking the 6 dB margin (from 23 Oct)

==> not done due to shortage of time; to check next week ?

(iv) plans for trying analysis of 250-500 system

==> not taken up yet as earlier items not completed; check after 2 weeks.

2.3 Fabrication of FE boxes -- from 21 Nov & 7 Nov (HSK/SSK) :

(i) to check if 5 new FE boxes are completed and with FE group (21 Nov).

==> HSK confirms all delivered to FE group; item can be closed.

(ii) to check if front plate for 550-900 is done and sample FE box is ready with FE group (21 Nov).

==> HSK confirms this is delivered to FE group; item can be closed.

(iii) to check if scheme for adding supporting strip (to prevent bulging of the boxes being reused for the new system) has been finalised (7 Nov).

==> HSK says all boxes manufactured and powder coated, and confirms that the scheme is working -- this can be closed.

2.4 Mass production of 250-500 feeds -- from 7 Nov (HSK) : to report progress on in-house and outsourced units and expected delivery schedules.

==> in-house fabrication : work is under progress, first 2 units expected by end of the month; outsourced units : first 2 units (out of 3 vendors) expected to be delivered by 3rd week of Dec; follow-up after 4 weeks.

2.5 Mass production of 250-500 FE system -- from 7 Nov (ANR/SSK) : see item (iv) from list of 7 Nov : to update status on how many FE systems are ready, and bottle-necks, if any.

==> work in progress; not clear if target of 3 antennas by Jan end can be met; to be reviewed next week, alongwith other associated items.

2.6 Calibration scheme with radiator at apex of antenna -- from 7 Nov (SSK/PAR/SRoy/DO/YG): follow-up from first round of tests and further plans. Current status to be provided.

==> a meeting has been held between 5 members last week; targets and follow-up action have been defined; to take up for discussion 2 weeks from now.

2.7 Fabrication of spare L-band feed -- from 7 Nov (SSK/HSK) : drawing to be completed and quotes to be obtained from vendors for fabrication.

==> HSK informs that drawing is completed and awaiting budgetary quote from party; to follow-up after 2 weeks.

2.8 Characterisation of new OF systems -- from 21 Nov (SSK/PAR) : plots for all antennas (at L-band) to be produced. This has not yet been done !

==> SSK update : no work done, as team is busy with 15m work !! This requires urgent follow-up -- next week.

3. RFI related matters :

3.1 Miltec PC RFI testing & improved report -- from 21 Nov & 7 Oct (SSK/PAR) :

(i) shielded serial port and ethernet tests need some more work : to try with Rabbit card as the terminating load and some other arrangement for serial port;
(ii) to give comparisons with March measurements -- TBD in new report;
(iii) follow-up with vendor on using shielded cables inside (can share with him present results).

==> consolidated response from SSK : shielded cables already provided by the vendor inside the PC (TBC); sample units of shielded serial port connectors have been provided by the vendor for testing -- to be tried, and based on the results, final decision about having one each of shielded eth and serial link connector to be taken; test with Rabbit card as terminating load on eth port to be tried out and then a final, updated report to be produced; follow-up after 2 weeks.

3.2 Ethernet switches for antenna base -- from 21 Nov (SN/BAK/SSK) : RFI tests on integrated system with OF transceiver + switch + Miltech PC + MCM cards to be done.

==> tests completed; report to be made ready and circulated; to check after 2 weeks.

4. Operations :

4.1 PCs in antennas for testing M&C softwares -- from 27 Nov and before (JPK/SN/RVS): Ops group to check overlap of antennas with eth and UPS and report back with plans for installation of the PCs. Need update on this matter.
==> no update available; to check again next week.

4.2 Using new MCM card on ethernet of PC for upgraded analog backend -- from 27 Nov and before (JPK/CPK/BAK) :

(i) if all issues in test set-up are resolved or not

==> basic test set-up using web based program is working ok and 4 ant system has been released using this; control of new analog backend through ONLINE tested successfully on one Rabbit card in telemetry lab.; also multiple client connectivity required for multiple Rabbit cards tested with simulation s'ware; next, will check SPI and 32bit config commands. To check status next week.

(ii) status of completion of 8 antenna system

==> web based version can be released once a few more MCM cards are made ready for use; full online version will take a bit more time; to check status next week.

4.3 Miltec PC purchase related -- from 7 Nov (CPK/JPK/SN) : follow-up on ordering 2 nos of i7 model from vendor, with improved RFI characteristics.

==> not clear if the units have arrived or not -- to check again after 2 weeks.

4.4 Monitoring of 3-phase power at each antenna -- from 7 Nov (SN/RVS) : Ops group to report on progress of home made design.

==> work in progress, circuit will be ready for lab test in first week of Jan 2013; follow-up one month later.

5. Back-ends :

5.1 Finalisation of design for temperature detectors for BE system -- from 21 Nov (BAK) : report from BE group pending.

==> first version of report, along with test results (which look like working OK), has been done by Atul Ganla; will be finalised and released by 11th Dec; can follow-up after 2 weeks.

5.2 Release of analog FE mass production for 8 ants, dual pol -- from 27 Nov (BAK) : check if 8 ant system with basic control set-up can be released.

==> 4 ant, dual pol system completely ready, tested and connected to broadband signals; remaining systems + new MCM cards should be available and installed by 11 Dec; web-based program for control is working; final online version is under development; to check status next week.

5.3 GPU corr -- from 21 Nov & before (SHR/BAK) : status updates on following items :

(i) choosing host m/c for next generation system : follow-up with supermicro

==> sample unit being obtained for tests this week; will know better by next week.

(ii) feeding one PC with 4 inputs to check if I/O can be sustained -- conclusions from present round of tests.

==> initial tests on Dell T7500 units with 2075 Tesla GPU yield sustainable BW of 195 MHz. Further results from tests with new Supermicro m/c are awaited; follow-up after 2 weeks.

5.4 Packetised corr -- from 21 Nov & earlier (SCC/BAK) :

(i) updates on recent improvements like full test of 2K and first test of 4K pt FFTs (with full delay).

==> 2K and 4K designs tested in the lab; antenna tests yet to be done; also tests with all 3 back-ends running are also planned; check status after 2 weeks.

(ii) putting 10 Gbe link in pkt design (to allow integration with GPU design) -- to check if design with half the max delay is built and tested.

==> Work under progress; two desings to be tried out : (i) full BW with half of full delay and (ii) 200 MHz BW with full delay; follow-up after 2 weeks.

5.5 Power and cooling requirements for projected back-end systems -- from 21 Nov (BAK/RVS/YG) : RVS to circulate a note based on discussions between BAK, RVS & YG, and meeting with Voltas personnel.

==> Note has been circulated by RVS; some preliminary tests are planned in the next two weeks, using additional 10 to 20 kW load; to check status after 2 weeks.

5.6 User SoPs for new back-end systems -- from 27 Nov (IMH/DVL/BAK) : updates on testing of multi-node version -- has this been tested and can be finalised now?

==> This has been tested by DVL and final inputs / comments are awaited; to check 2 weeks from now and see if matter can be resolved.

5.7 Update on SFP+ work & future plans -- from 31 Oct (KDB/BAK).

==> Work still ongoing and joint tests with MTE planned for this week; can check status after 2 weeks.

6. Other items :

6.1 Plans for jobs at TIFR -- from 21 Nov (HSK?SKG) : (i) retrieval of jobs completed on the repaired m/c (ii) status of pending jobs in the queue.

==> (i) m/c has had a hardware failure; status of retrieval of jobs not clear (ii) not clear what to do about pending jobs.

6.2 Equipment requirement for the FE & BE group -- from 21 Nov (SSK/BAK) : FE, BE and Ops Groups to meet and discuss specs of two Agilent units and come up with final recommendations -- BAK to send the update.

==> BAK to send inputs by this week; follow-up 2 weeks later.

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