

## Minutes of Plan meet of 2nd May 2012

(follow-up of some pending topics from different areas) :

### 1. Documentation related :

#### 1.1 discussion on first version of "detailed design doc" circulated by APK

==> basic docs look OK; ownership can be transferred to Sanjay Dongare; we should start using it, for units that are getting frozen in design; APK to start with getting his team to do it for L-band FE system. To follow-up after 2 weeks.

#### 1.2 first ver of new template for reports is due (DO and SSK) --

==> material content discussed one round and looks OK; format being done by Sanjay Dongare, will need one more week; can be mailed to all for comments and taken up for discussion next week (or week after).

### 2. FE & OF related :

#### 2.1 Status of testing of raw-dump procedure : SoP was to have been tested by independent member in the lab -- not clear why the person to be asked is being changed... (HRB to report on current status)

==> Digamber Jangade to try it out; can expect feedback by next week.

#### 2.2 Update on curve fitting algorithm for beam shapes (HRB/MJ/DO)

==> Sample result from Manisha's improved code (const + gaussian, outliers removed) : basic shape of curve looks OK, but maybe the actual values are off (comparison with manual results from HRB shows that too) -- looks like a  $\sqrt{2}$  error : TBC; to look at improvement in automation (MJ), and improvements in baseline fit (DO); to check after 2 weeks.

#### 2.3 Status update on 250-500 MHz feed :

##### (i) reports from any new tests : new beam-shape measurement etc (NK / HRB)

==> waiting for NK by next week or so. To check S2 behaviour and take appropriate action.

##### (ii) mass production plans : decision on the way forward (GSS/HSK) :

==> prototype unit of modified design to be made in workshop in 2 weeks and test on antenna for about 2 weeks and then release final order -- total quantity to be done outside or in-house to be decided later on.

#### 2.4 Cone-dipole for 500-1000 MHz :

##### (i) status of putting 1st feed + FE box on C11 -- it is due on 3rd (ANR/APK)

==> to go up on 4th (Fri) and NK to try some tests after that.

##### (ii) frequency coverage of 2nd feed -- discussion & status update (GSS)

==> now trying WiPLD simulations (HRB) -- first cut results giving unexpected behaviour; to look into in detail; to simulate exactly scaled version of 250-500 and compare and try to resolve how to move forward... : FE group to discuss and update next week.

### 2.5 Testing 250-500 MHz LNA with feed :

(i) update on repair of feed and tests with FE box and plans for putting on 3rd antenna (ANR/APK)  
==> yet to be repaired; can come back by next week, after one more round of phase centre measurement, and then go to antenna.

### 2.6 Testing of modified Common Box :

(i) status and results from putting back on W4 antenna -- pending (APK/ANR)  
==> still not showing unconditional stability : APK and SSK to look at it and to discuss again next week.

(ii) update on voltage level problem (APK/CPK/RBS)  
==> status quo

### 2.7 Status of 550-900 MHz sub-band filters (from one month ago) (APK/ANR)

==> chassis drawings from vendor look OK; chassis under fabrication; first units will come in about one month : 4 filters for 2 antenna system. To check 4 weeks later.

### 2.8 Follow-up on feedback from RRI about spare L-band feeds (APK)

==> response from RRI : feed sketches are available (including his thesis); LNA ckt : gerber being prepared; switched filter bank and broadband filter -- to find the details. To follow-up after 2-3 weeks.

Reminder : General discussion on choice of filters at different stages, need for equalisation and related items is due next week

## 3. RFI related matters :

### 3.1 Status of mobile tower survey & follow-up work (from 1 month ago) (PAR/SSK)

==> towers and freqs identified; pinpointing operator is proving somewhat difficult; also freq discrimination requires a better mobile phone unit. To follow-up after a few weeks.

### 3.2 Update on final report on Miltec PC testing (from 2 weeks ago) (SSK/PAR)

==> report is now available; looks better now; can be improved to make a better comparison with earlier measurements -- RFI team to take more time and make an improved version. To revisit after about 2 weeks.

3.3 New update on military satellite RFI in 243 band (from SSK) : it may be possible to localise / characterise the position and strength -- RFI group to come up with detailed plan after few weeks -- to revisit beginning of June.

#### 4. Operations :

4.1 Status update on users requirements to Ops Group -- discussion (ALL)

==> FE input in appropriate format still pending -- APK to involve one younger person in completing the job. To revisit next week.

#### 5. Back-ends :

5.1 Updates on PoCo and packetised design debugging (SCC/MM/BAK/DVL)

(i) PoCo problem : (a) summary of tests done and follow-up (MM/DVL/BAK)

(b) conclusion from noise source tests (from last week) (MM/BAK)

==> tests done with 32 MHz signals with 130 and 175 pols going to GSB and PoCo. Results show fairly good agreement. Small phase glitches to be understood; maybe small fringe errors on long baselines -- to be checked; to try and run 2 PoCo boards : one with 32 MHz signals and one with broadband signal. Check after 2 weeks.

(ii) Packetised corr : updates on testing of new system in corr room (SCC/BAK)

==> working in new set-up in corr room; glitch problem has some improvement smaller, more frequent glitches are gone by better power level adjustment of input to ADC; bigger steps still there -- some ideas to try variation of clock etc. To follow-up after 2 weeks.

5.2 Update on online control of new back-ends (from 3 weeks) (SSK/JPK/YG)

Python script via msg queue vs shm needs to be addressed; SCC, JPK and SSK to sit together and report back in 2 weeks.

5.3 follow-up on plans for next gen time-freq standards (NDS/BAK) -- item not discussed due to shortage of time.

#### 6. Other items :

6.1 Production of units in TIFR Mumbai Workshop : raw items being bought by

NCRA and supplier to delivery directly at TIFR; no further financial transactions required between two campuses. First lot of items (for BAK and SSK) will come by the end of this month. To follow-up after 3 weeks.

6.2 Environmental Chamber : (i) latest on follow-up with old party (ANR/SSK)

6.3 Follow-up on status of 15-m works (JNC) : any specific items needing urgent discussion

## Minutes of the Plan Meeting held on 9 May 2012

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Members Present:

APK (Chair), SKG, YG, GSS, HRB, SSK, DVL, AKB, VBB, JPK, SHR, MVM, SG, KDB, CPK, RRU, NDS.

1. Documentation related :

1.1 first ver of new template for reports is due for circulation (DO and SSK)

The template has been uploaded in the Plan webpage.

2. FE & OF related :

2.1 Status of testing of raw-dump procedure : feedback from test run done by Digamber Jangade (HRB).

Digambar is busy with GCC duty this week. Feedback expected next week.

2.2 Status update on 250-500 MHz feed :

Update on whether S2 system shows signs of oscillations or not (APK/ANR)

From the GTAC Observations at 90 cm band it was found that the S2 system is not oscillating.

2.3 Cone-dipole for 500-1000 MHz :

(i) status of putting 1st feed + FE box on C11 (ANR/APK)

Feed & FE Box are installed on C 11 antenna. Cone-dipole feed was put on the 610/233 MHz feed location.

Deflection not found when the antenna was pointed to CASA at the antenna base. The antenna is not fringing at 610 MHz band.

Phase centre misalignment could be the likely cause. FE group to perform few tests to isolate the problem.

(ii) frequency coverage of 2nd feed -- update from FE group's meeting of last week (GSS)

HRB to circulate the minutes of the meeting held on 3 May 2012.

2.4 Testing 250-500 MHz LNA with feed :

Update on repair of feed and tests with FE box and plans for putting on 3rd antenna -- follow-up on last week's status (ANR/APK)

Feed is getting repaired at Pune workshop. FE Box is ready. After the integrated testing, the system will be installed on W-02 antenna.

#### 2.5 Testing of modified Common Box : follow-up discussion on stability problem of the system (APK/ANR)

To stabilise the three stage ECG 008 broadband amplifier, incorporation of a 3 dB attenuator at the input has been proposed. The PCB for this modified amplifier is ready. It will be populated during next week.

#### 2.6 Follow-up on feedback from RRI about spare L-band feeds (APK)

The photofilms for the broadband filter and switched filter-bank are yet traced. For making the AutoCAD drawings of the feed, sketches are available. They will be given to Rajesh Lolap for making AutoCAD drawing.

Reminder : General discussion on choice of filters at different stages, need for equalisation and related items is due next week

### 3. RFI related matters :

No specific new items for this week.

### 4. Operations :

#### 4.1 Status update on users requirements to Ops Group -- discussion (ALL)

Status is the same as last weeks' status.

#### 4.2 Specific requirements from M&C and online for upgraded systems (ALL)

Backend system requires different commands. AKB, JPK & CPK to meet and sort out the matter.

#### 4.3 Status check on new MCM card testing (from 2 weeks ago) (CPK/RBS)

Cards are tested and they are working.

Backend group requires SPI Port for which redesigning work started.

Reminder : update on joint activity with servo on ideas for new MCM for FPS system is due next week

### 5. Back-ends :

#### 5.1 Follow-up on summary of signal level measurements by back-end group that were reported by BAK last week (ALL)

The measurement details were discussed. There are many issues to be resolved. Resolution requires discussion among FE, OF & BE groups.

## 5.2 Updates on PoCo and packetised design debugging (SCC/MM/BAK/DVL)

(i) PoCo design : any fresh updates (MM/DVL/BAK)

Tests with C 09 - W 04 & C 09 - E 06 baselines are showing results matching with GSB. However, other baselines are showing steeper phase ramps in PoCo design compared to GSB. Mekhala and Sanjay Kudale to discuss and understand the problem.

(ii) Packetised corr : any fresh updates (SCC/BAK)

Problem in 1 PPS distribution is corrected.

The low level ripples in cross amplitude have been corrected by adjusting the input power levels. The repetitive large ripples occurring at identical intervals is still present. Sandeep is working on design modifications to localise the problem.

## 5.3 Current status of GPU based design (SHR/SSK/BAK)

Four-node system is now working with 200 MHz bandwidth. We need to migrate to Infiniband connectivity for increased bandwidth.

## 5.4 follow-up on plans for next gen time-freq standards (NDS/BAK)

No progress made so far.

Reminder : update on online control of new backends is due next week.

## 6. Other items :

6.1 Environmental Chamber : (i) latest on follow-up with old party (ANR/SSK)

SSK, ANR, PAR, DAJ visiting the old party Aditi Associates for final acceptance tests on 10 May 2012.

6.2 Follow-up on status of 15-m works (JNC) : any specific items needing urgent discussion

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A. Praveen Kumar.

11/05/2012

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# Minutes of Plan meet of 16th May 2012

(follow-up of some pending topics from different areas) :

## 1. Documentation related :

1.1 comments and discussion on new template for reports; can we take a couple of sample test reports and port to the new format (DO & SSK)

==> range & scope of the reports to be considered was discussed, including email comments from GSS & BAK; SSK & DO gave their comments about what they had in mind; division between 2 kinds of reports was suggested, based on level of content and level of screening & clearance; final, general consensus was for 3 levels of reports :

(i) Level 1 : very informal, for quick things, intra-group & local information sharing. Need not have a formal structure or template

(ii) Level 2 : Internal Technical Report (ITR) : meant for internal record keeping of relevant matters e.g. detailed studies, detailed test reports etc which can be referenced in the future for internal work and decision making; detailed content will get fine tuned based on needs and discussions in fora such as Plan meet and others; report will be available for one iteration of comments from all about final form and content, and a response will be provided by the author(s) to these; final document will be available within NCRA on the Plan webpage; will follow a well-defined format (which is to be finalised), but need not be as formal as present document.

(iii) Level 3 : NCRA Technical Report (NTR) : for dissemination of material to the outside world; will go through a more formal chain for clearance and final signing off; the present format is more closer to this level of report.

Action items : SSK and DO to modify the present document to produce templates for level 2 (ITR) and level 3 (NTR) reports, and circulate for final clearance, along with an example report put in level (ii) format. TBD within 2 weeks.

1.2 detailed design doc : ownership to Sanjay Dongare & first implementation by FE group for L-band system (APK)

==> sample doc filled in the template by FE group was discussed in detail; there were still a few suggestions for further improvements of the format and layout; agreed that the document will be available for one more week for comments and suggestions and then frozen. Follow-up next week.

## 2. FE & OF related :

2.1 Status of testing of raw-dump procedure : feedback from test run done by Digamber Jangade -- pending from last week (HRB)

==> still no action (due to GCC duty week); should happen by next week.

2.2 Follow-up on curve fitting algorithm for feed beamshapes (DO/MJ/HRB)

==> update by DO : automation of analysis procedure (by MJ) has progressed reasonably, and needs only a bit more work; interpretation of the results needs some more work -- being looked into by DO. To follow-up after two weeks.

2.3 Follow-up on w'shop fabrication of new prototype of 250-500 feed (HSK/GSS)

==> material procurement underway, 2 weeks needed for item to be ready.

2.4 Cone-dipole for 500-1000 MHz :

(i) status of putting 1st feed + FE box on C11 (HRB/ANR/APK)

==> after putting on a spare stool, feed is now showing deflection (!); but is about 2 dB less than expected : can be combination of cable loss and some remaining focus offset; loss is expected to be about 0.7 dB (needs SMA to be replaced by type-N and FE box may need to be shifted closer to the feed); HRB thinks that stool height needs further increase by 90 mm or so; FE group to discuss in detail and report back. Check next week

(ii) frequency coverage of 2nd feed -- plans for the future attempts (GSS)

==> to go back to simulations and check ; to use scaled version of 250-500

cone-dipole as a starting point or something else -- FE group to discuss in detail and report back. Check next week.

2.5 Update on 130-260 MHz system design : feed + FE box (HRB/GSS/APK)

==> 2 designs of modified Kildal ring feed being considered : (i) reduced gnd plane with single ring tuned to 150 MHz and (ii) regular gnd plane with 2 rings tuned for 130 and 230 MHz -- simulation studies show improved edge taper match of E and H plane patterns; after some discussion, agreed to try 2nd option with reduced gnd plane and bigger ring tuned to 150 MHz; FE group to ask workshop for fabrication of following items : (a) 2 nos of dipoles (b) 2 nos of reduced gnd planes (c) 2 nos of rings for 150 MHz and (d) 1 no of ring for 230 MHz -- from these, both versions of feed can be fabricated and tested. Check after 2 weeks.

2.6 Testing of modified Common Box :

(i) Checking the modified ECG design with 3 dB attenuation (ANR/APK)

==> this is ready and working quite stable in the lab; to be put on W04 for checking signal levels etc. Follow-up after 2 weeks.

(ii) Other options for making a multi-stage design (SSK/ANR/APK)

==> agreed to try for separate 3 stage design, using PCB and boxes used in Sirenza version for 15 m receiver. To follow-up after 2 weeks.

2.7 OF system : updates on delivery of lasers and mux-demux order (SSK)

==> no updates; to follow-up after 2 weeks.

3. RFI related matters :

==> most of these could not be discussed in detail due to shortage of time

3.1 Improved version of Miltec PC RFI report is due - from 2 weeks ago (SSK/PAR)

3.2 Updates on testing RFI in servo shed (SSK)

3.3 Servo rack testing by RFI group (SSK/PAR)



==> work has been completed and first version of report is available

#### 4. Operations :

==> not discussed due to shortage of time

4.1 Status update on users requirements to Ops Group -- discussion (ALL)

4.2 Update on joint activity with servo on ideas for new MCM for FPS system

#### 5. Back-ends : (limited discussion due to shortage of time)

5.1 Updates on PoCo testing : outcome of discussions on existing problems (MM/SSK/DVL/BAK)

==> new test with narrow-band (32 MHz) and wide-band signals to PoCo, along with GSB -- good agreement between c9 and w4; e6 and w4 baseline shows clear difference in stopping of the fringe (slowly varying diffnl fringe); some more tests are needed.

5.2 Packetised corr : any fresh updates (SCC/BAK)

==> no new updates, tests ongoing, can check next week

5.3 Status update on SFP+ work (KDB/BAK)

==> schematic done; packaging being looked at.

5.4 Update on plans for online control and DAS chain of new backends -- from 2 May (JPK/SSK)

==> one round of discussion with SCC done (for pkt corr design) & SSK is now looking at the python scripts; for GPU corr : data acq and corr routines now merged into one common MPI routine and working ok -- final test getting done; agreed to go ahead with getcmd scheme for GPU as first target, and then full online control for GPU, and then do the same for other back-ends. Check again after 2 weeks for update on GPU corr.

Reminder (next week) : follow-up on plans for next gen time-freq standards

#### 6. Other items :

==> not discussed due to shortage of time

6.1 Environmental Chamber : feedback from visit to party last week (ANR/SSK)

6.2 Follow-up on status of 15-m works (JNC) : any specific items needing urgent discussion

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Minutes of weekly Plan meet of 23rd May 2012 (follow-up of some pending topics from different areas) :

1. Documentation related :

1.1 detailed design doc : to finalise the last set of changes and transfer ownership to Sanjay Dongare to make available to all (APK/BAK/others) ==> to make last changes and release to Dongare (APK); to complete the L-band system description and release (APK+VBB).

Reminder : follow-up on level 2 (ITR) and level 3 (NTR) report formats is due next week (SSK/DO)

2. FE & OF related :

2.1 Status of testing of raw-dump procedure : feedback from test run done by Digamber Jangade -- pending from last 2 weeks (HRB)  
==> test run done by Digambar -- generally OK, there are some suggestions for improvements, which need to be incorporated; problem about getting matching values between Divya's effort and expected beam shapes (which are obtained by NK's tests); agreed to try a control experiment.

2.2 Cone-dipole for 250-500 MHz : new results from NK and their implications ==> new results exploring full BW range, from 250 to 516 MHz, for C6, C8, S2; fairly good results from 500 MHz down to almost 250 MHz except for a bit of discrepancy of beam widths between the 2 pols for low freqs (250-300 MHz) range, which is less than 10% at most; sensitivity measurements show some evidence of C6 being slightly better than S2 in the 400 to 500 MHz range; however both tend to show somewhat poorer sensitivity around 300 MHz range; to see if we can get the best sensitivity performance combination and stable reproduction of the same; to try and get 3rd feed on antenna, so that cross-correlation studies can be done.

2.3 Cone-dipole for 500-1000 MHz :

(i) summary of test results from C11 (HRB/NK/others)  
==> results from NK's tests : beam shape results, look ok to first order; sensitivity measurements : ~ factor of 2 down at 600 MHz; drops off linearly above 780 MHz.

(ii) latest on plans for the C11 feed (HRB/GSS/SSK/APK)  
==> to get modified cables ready, to plan for moving the FE box on the new stool; check for options to put the feed back with modified stool. Follow-up next week.

(iii) plans for the improved version of the feed (HRB/GSS/SSK/APK)  
==> to complete the simulation of the dipole with 2 different options; follow-up 2 weeks later.

2.4 Testing 250-500 MHz LNA with feed -- from 9 May :

update on repair of feed and tests with FE box and plans for putting on 3rd antenna (ANR/GSS/APK)

==> modified, upgraded FE box is ready, feed is at Pune campus for completing phase centre measurements -- to check that it will be back by end of this week or early next week; to aim for putting on W01 (broadband link connection), by end of next week.

2.5 Follow-up with RRI on L-band feed -- from 2 May :

Waiting for conclusion on switched filter bank and broadband filter (APK)

==> all information on L-band electronics is now available; can now make some spare PCBs; to give feed drawings to mech group for conversion to autocad; to check if OH version drawings available or not. Follow-up next week.

3. RFI related matters : (not discussed due to shortage of time)

3.1 Improved version of Miltec PC RFI report is due - from 2 weeks ago (SSK/PAR)

3.2 Updates on testing RFI in servo shed (SSK/SS)

3.3 Discussion on report of Miltec servo rack RFI tests (ALL)

4. Operations :

4.1 Status update on users requirements to Ops Group -- completed OK ? (ALL)

==> all systems have given; can follow-up next week.

4.2 Update on joint activity with servo on ideas for new MCM for FPS system (RBS/SS)

==> no updates on higher level; to check and coordinate the activity (YG/RBS/SS)

4.3 Status on Miltec PC delivery and first tests -- from 4 Apr (RBS/SSK)

==> no updates; to check again next week.

4.4 Plans for using new MCM card on serial port of PC for upgraded analog back-end system -- from 9 May (CPK/JPB/BAK)

==> not happened yet; to do once BAK returns. To check after two weeks.

5. Back-ends : (not discussed due to shortage of time)

5.1 Updates on PoCo testing : any new updates ? (MM/DVL/BAK)

5.2 Packetised corr : results from recent tests (SCC/BAK)

5.3 Update on GPU corr : -- from 9 May (HR/SSK/BAK)

(i) 4-node system with antenna inputs

(ii) choice of components for bigger system

6. Other items :

6.1 Environmental Chamber : feedback from visit to party 2 weeks ago (ANR/SSK)

==> one unit for FO (10 to 60 deg) is cleared; 0 to 60 deg version for FE, needs some more improvement -- waiting for new measurement results from vendor check next week.

6.2 Follow-up on status of 15-m works (JNC) : any specific items needing urgent

discussion

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Minutes of Plan meet of 30th May 2012 (follow-up of some pending topics from different areas) :

1. Documentation related :

1.1 detailed design doc : final ver release to Sanjay Dongare; Lband design doc to be completed and released (APK/others)

==> APK to complete both items within this week and release. To initiate others for using this. Follow-up in one or two weeks.

1.2 follow-up on finalisation of level 2 (ITR) & level 3 (NTR) report formats (SSK/DO)

==> Draft version of ITR discussed, which has now free format except for the first title page; agreed to add some amount of recommended format, wait for one round of feedback from colleagues and then finalise; to check status next week. NTR to be taken up after a couple of weeks.

2. FE & OF related :

2.1 Testing and release of raw-dump procedure :

(i) SoP for procedure to be released (HRB)

==> not yet finalised with the small changes/feedback that came from tests done; to be done in 2 weeks and released.

(ii) Finalisation of scheme for beam-shape calculations (DO/NK/HRB)

==> final set of differences traced to (i) Gaussian + DC offset and (ii) the RF data being in dB scale. Results are now proper ! To get the final, working version : to take Manisha's script version and update it for all the changes and release this to FE group (DO/MS/HRB). To review after 2 weeks.

(iii) plans to incorporate on-off sensitivity measurements & analysis (DO/NK/HRB)

==> to see if the back-end fitting algorithm can be used for the broadband feeds including features like source spectral index and sky background variation etc. DO and NK to look into it. HRB to provide sample data. To review after 2 weeks.

2.2 Cone-dipole feed and FE system for 250-500 MHz :

(i) Completion of 3rd feed with LNA and putting it up on W01 -- status update (GSS/ANR/SSK/APK)

==> ph centre measurements not completed; feed will be available next week. Meanwhile FE box is ready and waiting.

(ii) Completion of new prototype in Pune workshop -- from 16 May (GSS/HSK)

==> should be ready by next week.

(iii) FE boxes for new 250-500 MHz system :

==> Agreed that existing 325 boxes can be reused; will need a few boxes as

spares for doing this (to add about 15 new FE boxes to the pool for use at all frequencies -- FE group to put in the request to mech group); problem of directional coupler : FE group to study the matter and come back with a final reco (couple of options with 0.05 dB loss are possible). Meanwhile, to assemble one more FE box and make ready. To review the matter after two weeks.

### 2.3 Cone-dipole for 500-1000 MHz :

(i) updates from latest tests on C11 & plans (HRB/GSS/SSK/APK)  
==> increased stool height gave slightly worse results; HRB to circulate the note about this and then see if modified stool can be made ready; meanwhile feed can be sent for phase centre measurements to test range. To discuss again next week.

(ii) plans for the improved version of the feed (HRB/GSS/SSK/APK)  
==> first results from optimised simulation look promising in terms of RL behaviour : below -10 for 510 to 900 MHz; to confirm pattern and taper (in both E & H) are acceptable and then give for fabrication. Can review next week.

### 2.4 Updates on 130-260 MHz system (feed + FE box) -- from 16 May (HRB/GSS/APK)

==> right now we don't have the final polariser : 3 options : local unit, wire line (0.3 dB loss); wirepack (0.2 dB, \$70); TEM lin (0.1 dB, \$1200 in bulk); to make 1st unit with local version of polarizer and make the comparison chart for a bigger discussion at NCRA. To review after 2 weeks.

### 2.5 Testing of modified Common Box :

(i) 3dB attn unit on W04 -- from 16 May (ANR/APK)  
==> still in final stage of testing... to check again next week.

(ii) new, multistage unit -- from 16 May (SSK/ANR/APK)  
==> not yet done. To be looked at in detail and reported by next week.

### 2.6 Status update on work of refurbishing 235/610 feeds -- 28 Mar (GSS)

==> no progress has happened ! GSS to request for a formal update from mech group. To recheck next week.

### 2.7 Follow-up with RRI on L-band feed -- new updates during last week (APK)

==> all information is now available from RRI (including OH feed drawings); action items : to get the drawings into autocad and to make spare PCBs. Check status after 2 weeks and identify who will take over after APK.

## 3. RFI related matters :

### 3.1 Improved version of Miltec PC RFI report is due - from 2 weeks ago (SSK/PAR)

==> no updates; to take up again 2 weeks from now (SSK/PAR)

### 3.2 Status update on mobile phone tower RFI survey -- from 2 May (SSK/PAR)

==> iPhone has an app that can help localise; to try with available unit and then decide for buying; follow-up after 2 weeks.

#### 4. Operations :

4.1 Users requirements to Ops Group completed by all : to discuss next step (RBS)

==> item not taken up for discussion

4.2 Update on joint activity with servo on ideas for new MCM for FPS system (RBS/SS)

==> item not taken up for discussion

4.3 Status on Miltec PC delivery and first tests -- from 4 Apr and last week (RBS/SSK)

==> email update from RBS stating that item is in last stages of assembling and testing and will be shipped by early next week. To check status next week.

#### 5. Back-ends :

5.1 Updates on PoCo testing : any new updates ? (MM/DVL/BAK)

==> not much new to report

5.2 Packetised corr : results from recent tests (SCC/BAK)

==> X-engine changed to local PoCo version on F-board -- no glitches seen !

Further debugging needed. Check 2 weeks later.

5.3 Update on GPU corr : -- from 9 May (HR/SSK/BAK)

(i) 4-node system with antenna inputs :

==> Test results : 4.5 hrs and 8 ants at 32 MHz shows good agreement with GSB; buffer loss problem on node that is collating and writing also solved.

Rudimentary PA beam-former also working; GPU corr now working on 1 PPS; HR/SSK to circulate the latest results; next step : to complete one more set of tests and look at next version of the system. To revisit after 3 weeks.

(ii) choice of components for bigger system :

==> not discussed; to revisit after 3 weeks.

5.4 Update on online control of GPU corr -- from 16 May (SSK/JPK)

==> no new updates, wait for 2 weeks from now.

#### 6. Other items :

6.1 Environmental Chamber : update from discussions of last week (ANR/SSK)

==> both versions are almost ready and measurements are satisfactory; recording software to be made compatible to Win 7 and then vendor to ship the product. To check status after one month.

6.2 Status of jobs in TIFR workshop -- from 4 May (HSK)

==> material has been sent to TIFR, to check first delivery schedule. Recheck status next week.

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