**27 April 2011**

**WP2.2 Dish Array CoDR – outline of PAF System section ONLY**

**FOR DISCUSSION**

0900 – 0940 PAF system overview

 Major components/system architecture

 Drivers (specification, requirements); PAFs as a SKA receiver (Science case summary)

 Technology roadmapping and the major SKA pathfinders in context (APERTIF, ASKAP, ? etc)

 Interfaces to rest of the SKA system (e.g. dish designs, correlator, imaging)

0940 – 1010 PAF Feed Array

 Concept of operation (bandwidth, scale, mass etc)

 Element options, e.g. front feed types & LNAs

 Chequerboard – CSIRO – Hay/Gough

 Vivaldi – DRAO? ASTRON?

 Dipole – BYU/NRAO?

 Any other?

1010 – 1030 break

1030 – 1110 PAF receivers & backends – overview of options

 Receiver architectures

 Direct conversion with switched RF filters &RFoF

 IQ mixer receiver

 Ddirect sampled system

 Technology options , components – COTs & bespoke

PAF beamforming - single concept SKA\_1 (Bunton/Hampson FPGA architecture)

PAF data transport/signals/system integration

Interfaces, flexibility, options

Include general comments on proposed monitoring & control – applicable to any of the proposed systems

1110 – 1140 Q&A

1140 – 1200 PAF SKA systems: Risks and risk mitigation strategies

 Presenter(s)?

Key issues: Cost summary for PAF system (where this is now, how it will evolve)

 Identification of viable targets

 Design for mass manufacture (how, who, when)

 Summarise all lessons from ASKAP, ASTRON/APERTIF, DRAO etc

1200 – 1300 Lunch

1300 – 1320 PAF SKA systems: Strategy to proceed to next phase

 Current developments underway already overviewed at start of this section

 e.g. ASKAP, APERTIF, DRAO, etc, so here we just show the developments required from hereon – draw on international R&D; direct particular aspects etc

1320 – 1340 PAF SKA systems: logistics planning

 Presenter(s)?

1340 – 1400 PAF SKA systems: Software & related systems (not sure this is needed here; do once for WP2.2 only)

1400 – 1420 PAF SKA systems: Technology roadmap

 Presenter(s)?

1420 – 1430 Q&A & wrap up