



MONITORING AND CONTROL CODR PLAN

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DOCUMENT HISTORY

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A	2011-08-31	-	First draft release for internal review
C	2011-09-22		Editorial
D	2011-09-24		Added expanded program with talks and names, and some additional logistics information – Y Gupta
0.1	2011-10-07		Draft released for final review
0.2	2011-10-24		Final version submitted to panel

DOCUMENT SOFTWARE

	Package	Version	Filename
Wordprocessor	MsWord	Word 2007	01_WP2-005.065.020-PLA-001_plan
Block diagrams			
Other			

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LIST OF ABBREVIATIONS

CDR	Critical Design Review
CoDR	Concept Design Review
DRM	.....	Design Reference Mission
HLD	.....	High Level Description
HMI	.....	Human Machine Interface
M&C	.....	Monitoring and Control
NCRA	.....	National Centre for Radio Astrophysics (India)
PEP	.....	Project Execution Plan
PSL	.....	Persistent Systems Limited
RFI	.....	Radio Frequency Interference
SEMP	.....	System Engineering Management Plan
SKA	.....	Square Kilometre Array
SKA1	.....	Square Kilometre Array Phase 1
SKA2	.....	Square Kilometre array Phase 2
SPDO	.....	SKA Program Development Office
SRR	.....	System Requirements Review
TBC	.....	To Be Confirmed
TBD	.....	To Be Determined
TRDDC	.....	Tata Research Design and Development Centre
UTC	.....	Universal Time Co-ordinated

1 Introduction

1.1 Purpose of the document

This document describes the plan and the charge to the panel for the Monitoring and Control Concept Design Review (CoDR) for the Square Kilometre Array (SKA) project.

1.2 Scope of the document

This document will describe all matters related to the review itself. It will include logistics surrounding the review as well as a preliminary agenda.

1.3 Date and Place

The SKA Monitoring and Control CoDR will be held between the 8th and 10th of November 2011, at the premises of the NCRA, in Pune, India.

2 CoDR definition and description

A CoDR is conducted at the end of the concept phase. The aim of the CoDR is to confirm that the 'problem' has been thoroughly explored and is well understood. Candidate technologies, technology trends, technology options, the status of work already done and still planned by precursors, design studies and work at other pathfinder arrays is reviewed at this point.

At SKA CoDR the concepts presented may include a range of options. The CoDR review will focus on whether first order solutions have been identified and are appropriate. Work in advancing fundamental technologies known to be critical to the element may also be reported if this is supportive of the concept and its feasibility. Concept Design Reviews are therefore the culmination of the Concept phase of development where the demonstration of feasibility is the objective. In subsequent phases of the project, technology options will be investigated and selections will be made. Figure 1 shows the design review stages of the project.

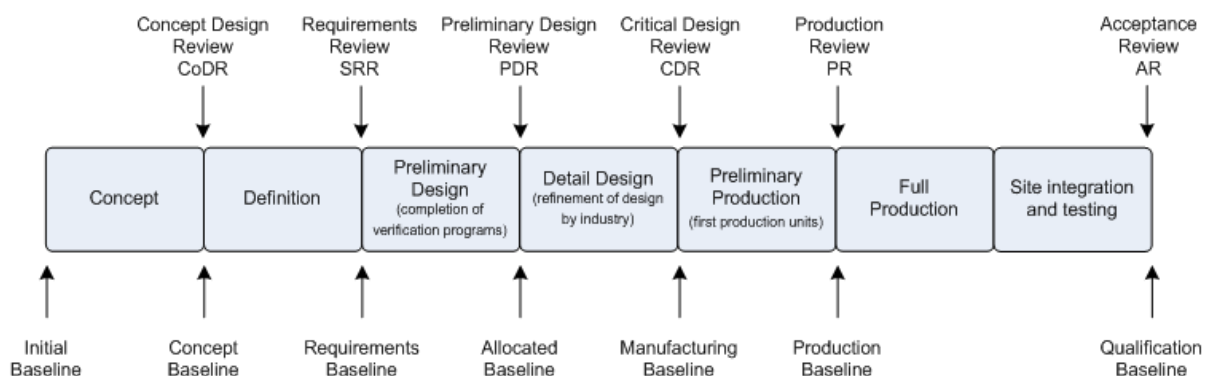


Figure 1: Design review stages of the project

The concepts presented at a SKA domain CoDR should therefore not be over-defined, nor should they contain any preliminary designs. This is because the requirements have not been fully captured and detailed studies are in danger of being done too early.

3 Charge to the SKA M&CCoDR panel

The Review Panel is requested to consider the following questions:

1. Are the requirements complete, and sufficiently defined for this stage of the project?
2. At the concept level, is the element/subsystem presented capable of meeting the requirements?
3. Have interfaces to other aspects of the system been adequately identified and defined at this stage of the program?
4. Are the options proposed to be carried forward credible and are the presented data and information in support of each option credible?
5. Have all the necessary aspects of the specific element/subsystem been considered and addressed during the review or are there gaps and/or shortcomings?
6. Does the risk profile appear reasonably detailed and assessed for this stage of the program?
7. Do the stated risk controls and proposed mitigations appear reasonable and executable?
8. Is the overall plan (including the identification of the tasks, effort, resources, costs, schedule and risk mitigation needed) to complete the subsequent project phases credible?

4 List of Documents for the M&CCoDR

The final deadline for publication of documents is 24th October 2011. Review presentations will be published on the SKA Indico site at: <http://www2.skatelescope.org/indico/index.py>.

CoDR documentation can also be accessed from the following link:

<http://wiki.skatelescope.org/bin/view/MonitoringControl/MandCCoDR>

The documentation under review at the M&CCoDR represents not just technical descriptions, but project management and initial reference documents for the domain. This record set draws on other project and system documents that have already been reviewed and documents from other domains which are under development.

Comments and questions directed towards CoDR documentation should be recorded in the Consolidated Observations and Action Register (COAR) sheet supplied in the same link as the documents and sent to Yogesh Wadadekar (yogesh@ncra.tifr.res.in) at the NCRA. The NCRA is responsible for the collection of comments and co-ordination of responses.

Table 1 provides a reference of the document numbers for the review documentation and what aspects of the System Engineering Management Plan (SEMP) they cover.

CoDR Document	SEMP scope	Document Number
Monitoring and Control CoDR Review Plan	List of documents in support of the CoDR. Review panel members list Dates, Venue and other logistics of CoDR	WP2-005.065.020-PLA-001 (this document)
Monitoring and Control High Level Description	System Context and Scope Integration and interfaces First draft block diagram of the relevant system	WP2-005.065.020-TD-001
Monitoring and Control Element Level	First draft requirement specification First draft requirements traceability	WP2-005.065.020-SRS-001

Requirements	matrix/database	
Monitoring and Control Design Concepts Description	Description of domain concerns and concepts, ideas and standard practices to address these concerns	WP2-005.065.020-TD-002
Monitoring and Control Design Concepts Summary	Description of main architectural options and other variation points	WP2-005.065.020-TD-003
Monitoring and Control Element Level Risk Register	First risk register and related mitigation strategies for each of the candidate architectures	WP2-005.065.020-RE-001
Monitoring and Control Strategy to Proceed to the Next Phase	Strategy and plans for proceeding to the next phase	WP2-005.065.020-PLA-002

Table 1 : Document Numbers for the M&CCoDR documentation set.

5 Participants

5.1 External Review Panel

The External Review Panel Chairman shall

- Organise and lead the External Review Panel;
- Review the documentation;
- Raise questions, comments and queries before and during the review related to any part or aspect of the project;
- Prepare and issue the External Review Panel Report, together with a list of the agreed Actions;

The External Review Panel Members shall

- Review the documentation;
- Raise questions, comments and queries before and during the review related to any part or aspect of the project;
- Support the Chairman in the preparation of the External Review Panel Report;

5.1.1 Panel Members

The list of Panel members is as follows :

1. Jo Lister EPFL (Chair)
2. Peter Dewdney SPDO
3. Andreas Wicenec ICRAR
4. Gianni Raffi ESO
5. VinayVaidya KPIT Cummins
6. Sonja Vrcic NRC-CNRC

5.2 Contributors

The NCRAs shall

- Distribute the documentation to the External Reviewers no later than two weeks before the review date;
- Record all questions, comments and queries raised before and during the review;
- Respond to questions, comments and queries before, during and after the review;
- Co-ordinate the responses to the questions, comments and queries;
- Organise and support the review meeting;
- Provide the necessary facilities for the meeting;
- Respond to agreed Actions within the agreed due dates;
- Compile an overview report to the SSEC and PrepSKA Board after the review.

Presenters and contributors shall

- Attend and participate in the review;
- Provide written feedback with regards to any of the aspect of the review (including the documentation) necessary;
- Provide contributions to allow the distribution of the documentation to the External Reviewers no later than two weeks before the review date;
- Respond to questions, comments and queries before, during and after the review;
- Respond to agreed Actions within the agreed due dates.

5.2.1 Presenter List

Name	Initials& email	Organisation
AmritL. Ahuja	ALA amrit.ahuja@tcs.com	TRDDC
R. Balasubramaniam	RBS rbalu@ncra.tifr.res.in	NCRA
JayaramN. Chengalur	JNC chengalu@ncra.tifr.res.in	NCRA
Sunu Engineer	SE sunu@embeddedmachines.com	ECM
Yashwant Gupta	YG yogupta@ncra.tifr.res.in	NCRA
Jitendra P.Kodilkar	JPK jitendra@gmrt.ncra.tifr.res.in	NCRA
VivekMohile	VM vivek_mohile@persistent.co.in	PSL
Niruj MohanRamanujam	NMR mohan@ncra.tifr.res.in	NCRA
Subhrojyoti Roy Chaudhuri	SRC subhrojyoti.c@tcs.com	TRDDC
N. Swaminathan	NS swami.n@tcs.com	TRDDC
YogeshWadadekar	YW yogesh@ncra.tifr.res.in	NCRA
T.J. Stevenson	TJS stevenson@skatelescope.org	SPDO
Lize van denHeever	LvdH Lvdheever@gmail.com	SKA-SA
Ruud Overeem	RO overeem@astron.nl	ASTRON
Juan Carlos Guzman	JCG Juan.Guzman@csiro.au	CSIRO

5.3 Observers

The Observers are invited to

- Attend the review
- Provide written feedback with regards to any of the aspect (including the documentation) of the review after the review.

5.3.1 Invited Observers

SKA Liaison Engineers, IEAC panel Members, SSEC members, SPDO staff and M&C Domain participating organisations will all receive invitations to the M&CCoDR.

6 Review Agenda

8 th November 2011		
08:00 – 09:00	Breakfast available	
09:00 – 09:30	Panel members internal briefing	Closed Session
09:30 -- 09:45	Welcome, House Keeping & Meeting Logistics	S. K. Ghosh, YW
09:45 – 10:30	Introduction : <ul style="list-style-type: none"> - Welcome and Intro to the SKA project - CodR Scope definition, Objectives & Agenda - M&C in the context of PrepSKA WP2 	TJS
10:30 – 11:00	Coffee Break	
11:00 – 11:45	M&C for the SKA : High Level Description <ul style="list-style-type: none"> - M&C in the System Context - Relationship to other systems - Integration interfaces - Gap Analysis 	YW
11:45 – 12:30	M&C for the SKA : Requirements Specifications <ul style="list-style-type: none"> - Overview of requirements - How reqs were derived from sys reqs (with examples) - Orphan requirements 	SE
12:30 – 13:00	M&C for the SKA : Design Overview - I <ul style="list-style-type: none"> - Core functionality - Related design concerns 	ALA
13:00 – 14:00	Lunch	
14:00 – 14:45	M&C for the SKA : Design Overview - II <ul style="list-style-type: none"> - Design approach - Design concept 1 - Design concept 2 - Comparison of design concepts 	NS
14:45 – 15:30	Existing project M&C, lessons from the precursors – ASKAP	JCG
15:30 – 16:00	Coffee Break	
16:00 – 16:45	Existing project M&C, lessons from the precursors – MeerKAT	LvdH
16:45 – 17:30	Existing project M&C, lessons from the precursors – LOFAR	RO

November 9 th 2011		
08:00 – 09:00	Breakfast available	
09:00 – 09:30	Panel members internal discussion	Closed Session
09:30 – 10:15	Interface with science data stream	JNC + NMR
10:15 – 11:00	Fault & performance management	NMR + VM
11:00 – 11:30	Coffee Break	
11:30 – 12:15	Security & safety issues	SE
12:15 – 13:00	Continuous commissioning & evolution	JPK
13:00 – 14:00	Lunch	
14:00 – 14:45	Realisation technologies – h'ware and s'ware aspects : standards and emerging standards	SRC + RBS
14:45 – 15:30	Risk, Cost& Timelines	TJS
15:30 – 16:00	Way forward	YG
	END OF FORMAL PRESENTATIONS	
16:00 – 16:30	Coffee	
16:30 – 17:30	Free time – can be used for special requests by Panel or for their internal deliberations.	
November 10 th 2011		
08:00 – 09:00	Breakfast Available	
09:00 – 11:00	Closed Panel Meeting	Closed Session
11:00 – 11:30	Coffee Break	
11:30 – 12:30	Wrap up & debrief with observers	Open parallel session
12:30 – 13:00	Panel Report & Feedback	Panel Chair
13:00 -- 13:10	Wrap up and close of meeting	
13:15 – 14:00	Lunch	

7 Logistics

7.1 Reaching NCRA

The National Centre for Radio Astrophysics (NCRA) is located within the University of Pune campus in Pune, India. The city of Pune is located 170 km south-east of the city of Mumbai in western India.

The main international airport hub serving Pune is Mumbai. Mumbai is well connected with direct flights from most large airports abroad. The quickest way to get to Pune from Mumbai airport is by taxi. We can arrange taxis to transport meeting participants from Mumbai airport to NCRA.

Pune is well connected to other international airports in India via domestic flights. If you are arriving at other airports in India (e.g. Delhi), you should opt for connecting flights to Pune. We will arrange pickups from Pune airport.

7.2 Weather

The weather in Pune in November is mild. It is usually clear with a maximum temperature of 30 deg. C and a minimum temperature of 15 deg. C.

7.3 Accommodation

We have reserved a few rooms at the YASHADA (YASHwantraochavan Academy of Development Administration), located about 3 km from NCRA. Transportation will be arranged from YASHADA to NCRA and back.

8 Contact Numbers

NCRA main numbers : +91-20-2571-9241, +91-20-2569-7107

Secretarial Support : +91-20-2571-9239 (ReenaShrikumar),

Transportation coordinator: +91-20-2571-9222 (D.V. Pawar)

YogeshWadadekar : +91-20-2571-9238 (Work), +91-20-2569-1252 (Home), +91-9823338400

YashwantGupta : +91-20-2571-9242 (Work), +91-20-2569-0293 (Home), +91-9881061930

8.1 Taxi Services

NCRA will help with making bookings for Mumbai-Pune taxis for pickup and drop-off at Mumbai international airport. Contact ReenaShrikumar (reena@ncra.tifr.res.in) for assistance in this regard.

9 Food & Catering

NCRA will arrange all meals for meeting participants for the duration of the meeting. If you have any special diet restrictions, please inform ReenaShrikumar(reena@ncra.tifr.res.in)

10 References

- [1] T.J Stevenson, "System Engineering Management Plan", SKA project document WP2-005.010.030-MP-001(F)
- [2] KCloete et al, "PrepSKA FP7 Work Package 2 Project Plan", SKA project Document MGT-040.030.002-PLA-001(I), Appendix F.