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Telescope Time Allocation Tools

Conceptual Design Review Plan

Project 688

PREPARED BY	**ORGANIZATION**
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APPROVALS	**ORGANIZATION**	**SIGNATURE**
Dale Frail	NRAO Assistant Director SSR TTA Tools Project Sponsor	
Jeffrey Kern	NRAO Program Director Science Ready Data Products	
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Change Record

VERSION	DATE	REASON
0.1	1/15/2020	Initial Draft
1.0	2/24/2020	Final Version
2.0	3/9/2020	Revised plan for F2F meeting to videocon, resulting from NRAO policy on travel restrictions in response to COVID-19

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1. Purpose

This document describes the complete process for the Conceptual Design Review (CoDR) of the Telescope Time Allocation Tools (TTAT) project beginning with the appointment of the Review Committee Chair through the completion of any outstanding actions identified to satisfy the objectives of the review.

The goal of the review is to provide validation to NRAO management as well as the NSF that the project has properly defined scope, a coherent conceptual description with supporting architecture and sufficient processes and organization in to deliver the capabilities to the observatory.

The structure of this review is somewhat unusual, in that the committee is requested to review both the project and the primary supplier to the project, NRAO's Data Management and Software Department. Because both groups are internal to NRAO and will be working closely throughout the project, reviewing the two groups' planning and processes separately would be inefficient and much less effective.

2. TTA Tools Background

The current set of proposal submission and handling tools dates to 2005, when the proposal process moved from paper to electronic submission. The suite of tools handles the proposal, review, and time allocation processes. Since 2005, the suite of tools has been modified to accommodate changes in the process, updates to telescope capabilities, and other new functionality. It is now reaching end of life in terms of maintainability and efficient expansion to include further capability. The TTA Tools project is an initiative to replace this tool suite. The TTA Tool design will carry forward all the capability of the previous tool set, with the addition of supporting the generation of SRDP products.

3. Executive Summary

3.1 Charge

This review is conducted to assess the conceptual level requirements and architectural design, as defined within the documents under review. The review committee is charged by the NRAO Assistant Director of Science Support and Research (SSR) to evaluate the readiness of TTA Tools to proceed from the Conceptual Design stage to detailed design and implementation. To carry out this charge the review committee should evaluate the project by responding to the following questions:

1. Is the defined system (through the system technical description and captured requirements) suitable to support the proposal, review, and allocation processes?
2. Does the proposed architecture deliver the capabilities as specified in the concept, specification and requirements documents?
3. Is the project plan (includes the project management plan, estimated budget and schedule, risk analysis) appropriate for this stage of the project? Are the plans and estimates reasonable to achieve the planned scope?
4. Does the project team demonstrate overall readiness to proceed to detailed design and implementation phases?

3.2 The Committee

The membership of the review committee is:

- Alan Bridger (chair)
- Craig Heinke (remote)
- Amy Mioduszewski
- Rachel Osten
- John Spitzak
- Joe Swiggum

3.3 Key Project Participants

The following individuals are considered key participants affiliated with the project:

- Jeff Kern (SRDP Program Director)
- Dana Basler (TATA Project Scientist
- Morgan Griffith (Software Group Lead)
- Bob Treacy (TTAT Project Manager)
- Dale Frail (Assistant Director Science Support and Research interim)
- Brian Glendenning (Assistant Director Data Management and Software)
- Mark Whitehead (NRAO Software Architect)

3.4 Schedule

- 2/14/2020 Finalize Committee member selection
- 3/20/2020 Complete document set available for review
- 4/15/2020 Conceptual Design Review Meeting
- 4/24/2020 Final report from Review Committee
- 5/1/2018 SSR Director response to Review Committee recommendations due

4. Review Materials

Reference Documents

- SRDP Program Plan
- TTA Tools Project Charter
- TTA Concept Document

Project Review Documents

- Project Management and Systems Engineering Plan
- System Description Document
- Project Execution Plan
- Risk Register
- QA Plan

DMS Review Documents:

- DMS Work Management Plan for SRDP
- DMS Software Development Processes
- TTA Conceptual Architecture
- Prototyping Plan
- L0 Requirements Document
- L1 Requirements Document

5. Review Logistics

5.1 Methodology

To best utilize the time and effort invested by the committee and the project personnel, prior to the Review Meeting, review item discrepancies (RID) are identified by the committee members based on the submitted review package. RIDs are approved by the committee chair and sent to the project team for comment. Approximately one week prior to the review meeting RIDs which have not reached resolution are identified by the review committee chair and placed on the agenda for the Review meeting.

This methodology facilitates iteration between the review panel and the project prior to the in-person meeting. During these interactions misunderstandings and non-controversial findings can be dealt with, allowing the valuable time of the Review Meeting to focus on discussion of critical issues or disagreements. The standard RID workflow adopted from (ECSSS-M-ST-10-01C –Organization and Conduct of Reviews; 15 November 2008) is shown in Figure 1.

The Review Meeting should focus on presentations and discussions designed to bring closure to open discrepancies (RID). We anticipate that this this meeting will be one and one-half days, time should be provided for discussion between the committee and the project members. Each working session (or day) shall end with a restricted meeting of the Review Committee during which each member shall debrief on the status of the problems identified.

For questions which cannot be answered prior to or during the meeting, 'Action Items' shall be defined including the due date and organization responsible for the performance of the action. Any Action Item shall be identified as critical or not. Action items and RIDs shall be reviewed prior to the end of the meeting.

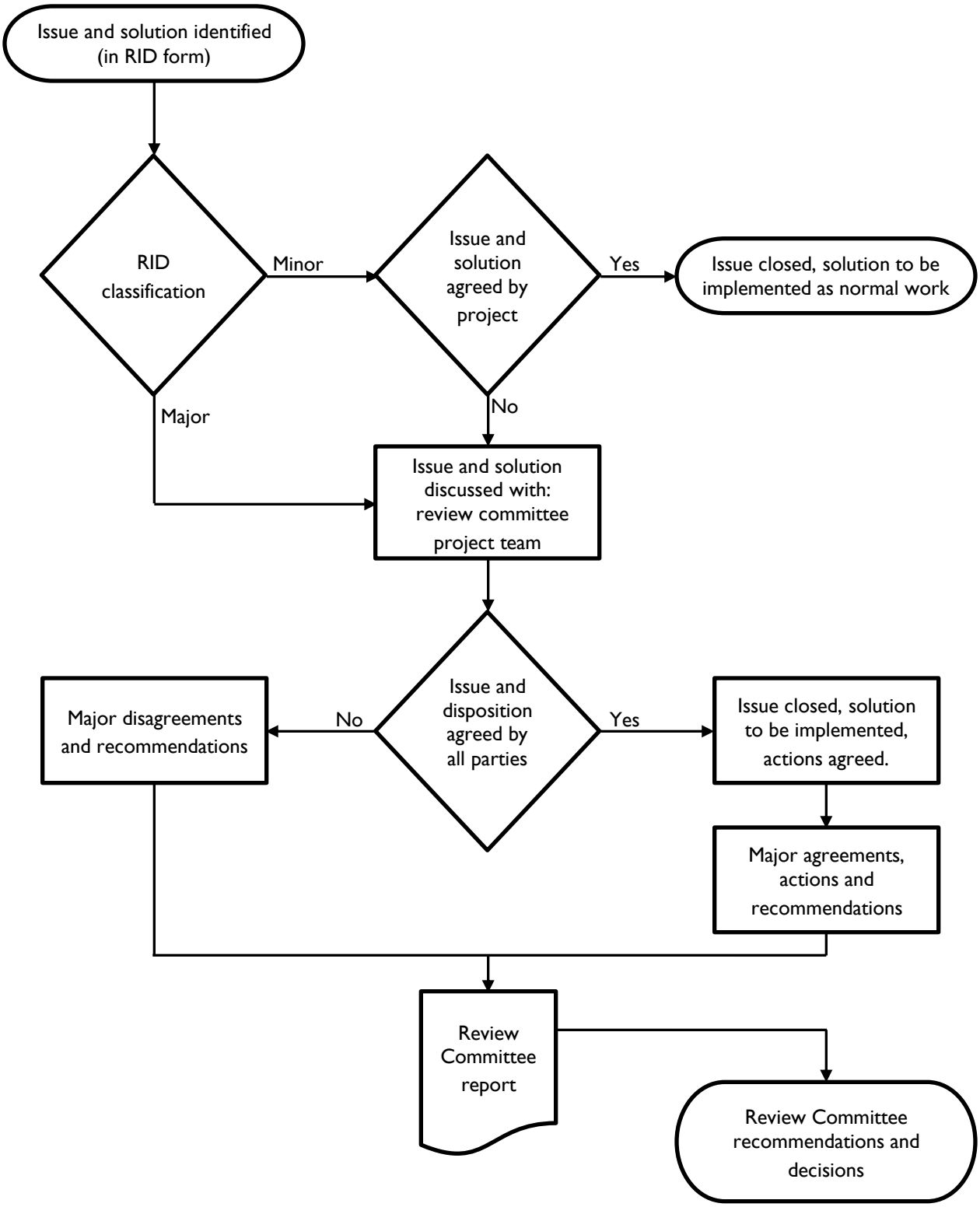

Figure 1: The standard RID workflow.

5.1.1 Responsibilities of the Committee

The Review Committee Chair shall:

- Chair the review meeting;
- Propose an agenda for the review meeting;
- Manage the activities of the Review Committee;
- Verify that the submitted documentation corresponds to the objectives of the review;
- Review Project Team responses to RIDs.

The Review Committee members shall, under the authority of the Review Committee Chair:

- Review the submitted documentation;
- Identify problems or request explanations by means of RIDs;
- Participate in RID close-out activities, including classification of unresolved problems as being major or minor;
- Prepare recommendations when the Project Team response to RID is not considered satisfactory; and
- Prepare the final review report, including recommendations.

5.2 Implementation

The RID process described above is implemented using the NRAO instance of the Atlassian Jira package (open-jira.nrao.edu). The package is used to track and mediate communication on the review items prior to the Review Meeting, as well as after-review actions recommended by the committee.

Figure 2 shows the Jira workflow for review items. Members of the review committee open discrepancies, supplying the description of the discrepancy, and suggested solution. Discrepancies can be judged as major or minor, as differentiated by the workflow in Figure 1 by the reporter. The TTAT Project Manager will review the RIDs for duplication and assign each RID to the appropriate party, transitioning the issue to the "In Progress" state.

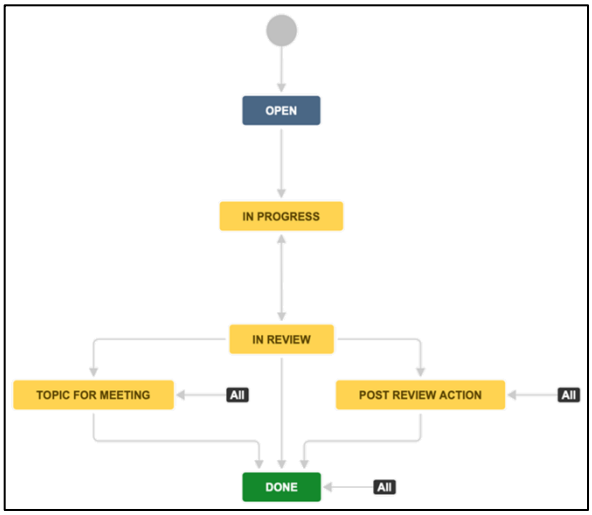

Figure 2: Jira implementation of the RID workflow.

Once the project has prepared a suitable response the ticket is transitioned to the "In Review" state and returned to the original reporter.

At this point one of four actions may be taken:

- If the reviewer is satisfied with the project response and no further action is required the ticket should be placed in the "Done" state.
- If further feedback from the project is required, the state may be returned to the "In Progress" state.
- If an action is to be completed after the review meeting, the ticket may be set to "Post Review Action" with a clear description of the action to be completed and a due date for the action to be completed.

- If further discussion is warranted the reviewer may transition the ticket to the "Topic For Meeting" state, flagging it for consideration during the face-to-face review meeting.

The completion of the review is defined as resolution of all major RIDs and critical action items as listed in Appendix A of the review report.

5.3 Detailed Review Schedule

The following is the activity timeline for this review. T0 is the date for the meeting of the Review Committee.

Time	Activity	Responsible
Jan. 30, 2020	Appointment of review committee chair.	NRAO Director
	Definition of a global review schedule and the location where the review will take place.	Committee chair
Feb. 7, 2020	Definition of review data package	Project Director
Feb. 14, 2020	Selection of the Review Committee Members	NRAO Director / Committee chair
March 20, 2020	Collection and distribution of review data package to Review Committee Members and briefing of the Committee Members on the current status.	Project Manager / Project Director
March 20, 2020	Review of data package, preparation, and submittal to the committee chair of queries (RID) on areas requiring further clarification.	Committee Members
	Response to submitted queries (RID) provided to the Committee members.	Project Team
April 2, 2020	Review of unresolved queries (RID) and preparation of Review Meeting agenda.	Committee chair
April 15, 16 2020	Preparation of presentation material	Project Team
	Review Meeting	Committee chair
April 20, 2020	Completion of Appendix A and B of report document,	Project Manager
April 24, 2020	Completion of the Review Report\ and distribution to meeting stakeholders.	Committee chair

5.4 Review Meeting

5.4.1 Meeting Logistics

This meeting will be hosted by NRAO through a Cisco Polycom video conferencing system. The conference hub supports browser based clients for audio/video connections using Windows or Mac. Instructions for installing the web client and connecting to the conference hub are provided below. Connections can also be made through other Polycom clients. The conference hub used for this review is in Edgemont Road Room 230.
(Note: Not sure if the web based Polycom connections for Win & Mac are constrained to specific browsers, we certainly want to test connections before the meeting).

Videoconference Connections

Client: URL to install the web client video-meetme.nrao.edu/226516
Video: URL for Web Based Video Conference Hub video.nrao.edu
Internal NRAO and Polycom clients ##226516 (IP address 10.5.0.16)
Audio: 434-817-6468, then 226516# (Note this is audio only, audio/video are both provided if connecting through the video hub
Room: 434-244-6861 (note: call this number if having trouble with the hub connection)

Date and Place

Venue: Room 230 (Location of Conference Hub)
National Radio Astronomy Observatory Headquarters
520 Edgemont Road
Charlottesville VA 22903

Room 280
National Radio Astronomy Observatory Domenici Science Operations Center (DSSOC)
1003 Lopezville Road
Socorro, NM 87801

Date: April 15th and 16th 2020
Time: 9:00-14:10 (EDT) April 15
9:00-13:45 (EDT) April 16

5.4.2 Agenda

A preliminary agenda for the face-to-face meeting is below. This will be adjusted based on input from the committee and chair, all times are EDT

Day 1	
9:00-9:30	Executive Session
9:30-9:45	Welcome
9:45-11:00	Context of SRDP / TTA Tools within NRAO
11:00-11:10	Coffee
11:10-12:25	Project Management and Systems Engineering Methodology
12:25-12:55	Lunch
12:55-14:10	Concept and Requirements
Day 2	
9:00-9:30	Committee Executive Session
9:30-10:45	Architecture
10:45-11:45	Topics from the Committee
11:45-12:45	Committee Executive Session
12:45-13:45	Initial Findings from Committee

5.5 Contact Details

For questions or support please contact the SRDP Project Office:

SRDP Project Manager

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