

# Minutes of Meeting

of the Review of the upgraded Software Science Requirements, held on:  
Tuesday Sept.24 at 15.00 UT ( 9.00 MDT, 17.00 CET)

by Gianni Raffi, review chairman

Reviewers who participated in the dial-in telecon review meeting:

Tim Cornwell , Ray Plante , Preben Grosbol , Joseph Schwarz

The authors of the updated sections also took part in the review:

Ken Tatematsu, Peter Schilke, Frederic Gueth together with Robert Lucas.

Brian Glendenning and Koh-Ichiro Morita attended as well.

**Summary of the review: The upgraded SSR document has satisfactorily passed this review and a final version should be prepared taking into account the comments/replies prior to the review meeting and these minutes.**

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The name in brackets is the one of the reviewer who introduced the discussion on the comments/replies indicated. It is assumed that the replies given to comments are OK, when no further discussion is reported below.

## 1.Pipeline general requirements (Joseph Schwarz)

### 1.Relation to the rest of alma software: 012 030 062

012 and 062 dynamic scheduler

The document should be checked in all other sections where this is mentioned and the terminology used should be changed (dynamic scheduling system rather than dynamic scheduler).

One should separate out what is Real Time (On-line) and what is not Real Time clearly in the requirements; the section headings are still confusing in this regard..

030 Pipeline general requirements

It is agreed on the comment, but this seems more a relevant requirement for the PDR rather than an extra science requirement.

### 2.Process all data? 034

Quality measure inserted in Pipeline requirements.

### 3.Occasionally base line based calibration: 46 and oth.

### 4.User access to software: 005

### 5.Relation to offline package: 009

Science calibration and Imaging as a sub-set of off-line data reduction package.

After some discussion the reply of Robert is accepted, namely that it is not required that the Pipeline can be rerun at every Institute, but it rerunning must be possible at the Regional Support Centres. This requirement is already in the Off-line data reduction requirements, so there is no need to repeat it here.

## 2.Calibration pipeline (Joseph Schwarz)

### Real Time / not Real Time: 016 60 064 074 075

All these comments are covered already under the second item of the first reply (to comment 012), where a separation between Real Time and non RT requirements is required.

### Handles all data: 039

Reply is OK, question seems based on a misunderstanding.

### **3.Quick look (Tim Cornwell)**

**1.Scope: 083 085 087 088-090**

**2.Time interpolation: 020 024**

The text should be rephrased to mean the “simplest method that works”, e.g. “ most effective simple method”.

**3.Relation to PI/observer: 080 082**

Internet. In 6.4.1\_R2 it is not written for how long data should be available. Quick look data should be available for 1 week and made available via Internet, compatibly with bandwidth available.

### **4.Science pipeline (Tim Cornwell)**

**1.When to deconvolve: 018 021 036**

018 It does not seem logical to ask that there be data processing at end of sessions (on PI request), as sessions are not defined by the PI, but by the run-time observing system. He can ask for data processing after breakpoints, after observation/project completion but he should not be able to do so at session end. The concept of Monitoring Point introduced in Granada is understood, but still the PI does neither define sessions nor have any control on their length or when they will occur, so there is no value in reducing data at the end of a session. **(To be confirmed by Robert)**

**2.Algorithms: 105 106 107 110**

106 Meaning of standard products and other observer’s products, to go both into the archive. To have this possibility on top of standard products seems reasonable, leaving though the data rate unchanged, so that this does not result in extra unpredictable requirements on bandwidths. It is assumed that standard choices can “normally” be made starting from initial specifications. This is indeed covered by the concept of standard observing modes.

The exact content of the standard products seems more an issue of priority, as they will be important for VO, but they are not well-enough defined yet. This might change with time. Robert will try to formulate this in the requirements.

107 Need for deconvolution?

This requirement should be rephrased and be less prescriptive, as a deconvolution might not be needed in all cases.

**3.Use historical observations: 095 108**

095 Agreed

108 Non-proprietary data included ?

Priority should be lowered on this.

**4.Access to results: 100 105**

It is agreed that data should be accessible via consultation of the archive.

**5.Merge calibration and imaging operations: 008 014**

### **5.Archive (Joseph Schwarz, Tim Cornwell, Ray Plante)**

**1.general: 007 118 155**

155 inclusive list of requirements. Better to categorize data by how they are expected to be used, so that there is not too much data in the archive.

**2.archive contents: 117 119 122 155 156 121 133 145**

**3.access to data: 120 129 134 141 158 176**

129 all information accessed through the header .. Take out “through the header” and possibly use “data descriptor” instead. The requirements should be checked all over for the use of this term, which is too implementation-specific and dated.

In this case it would be better to say: based on experience search criteria should be optimised.

176. Not answered. How should these Archive Tools work? Download data via single Ids. Searching should be via pointers as well as descriptors.

On 7.3-R15 a reformulation of this requirement is suggested or even its suppression. The Archive Search should return pointers to be used by the Data Extractor (this is how the web-based search could be rephrased).

**4.VO issues: 185 186 188**

185 Images are Priority 1 for the VO (this is a known VO requirement).

## **6.Simulator (Preben Grosbol)**

### **1.relation with offline package S013 S014**

S013 One needs to be able to reduce simulated data. The ExpTime calculator is the simulator that one can have on the laptop. Fully simulated data should be reduced somewhere else, not necessarily on laptop.

S014 It should be required that the Simulator be validated, in order to ensure that it produces data one can trust.

### **7. Any other comments/replies**

RFI requirement. 6.4.1-R5 must be extended to cover On-line and OT needs, as users need to have data that are clean from RFI. Robert proposes to expand this as follows:

“There should be provision to be able to introduce interference mitigation software at a later stage, if needed”. We should also explicitly add RFI as one possible cause of blanking and flagging. It is suggested to put this requirement at priority 3.

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