

# Atacama Large Millimeter Array

ALMA-SW-0008

Revision: 4

2001-02-21

*Software  
Standard*

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## The ALMA Software Documentation Standard

*Software Standard*

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<b>Keywords:</b> ALMA, template	
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Institute: ESO, NRAO	Date:
Released by:	Signature:
Institute:	Date:



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## 1 Summary

This document outlines the Atacama Large Millimetre Array's software documentation template standard. The contents of this document have been approved by the Computing and Software Group following a formal review process.

## 2 Introduction

In addition to describing the ALMA Software Document Standard this document also serves as an example use of that standard. The following sections describe and explain the parts of the standard.

### 2.1 Scope

This standard does not attempt to address the detailed structure of the document. This structure needs to be derived from the formal processes in use. In addition not setting out those standards here allows this template to be used for the less formal "memo" style of documents.

### 2.2 Glossary

As a general rule a Project Glossary will exist on the ALMA web site and documents do not need to replicate all of the acronyms and items described there. Documents should reference the project glossary, which may be found at <http://www.alma.nrao.edu/development/computing/docs/joint/draft/Glossary.htm>

However, it may be sensible in some documents to include a short list of acronyms/glossary definitions of particular relevance to that document, or for newly introduced items. The *glossary* style may be used for this list, *e.g.*

ALMA	Attacama Large Millimeter Array
ATC	Astronomy Technology Centre

### 2.3 References

The reference list is a numbered list created using the *reference* style.

Only cited references should be listed. If it is desired to reference an applicable text then an explicit reference to it should be made in the body text of the document at an appropriate point. Similarly pages in a cited reference should be mentioned in the body text, and not in the reference. References should appear at the end of the document. This document is used as an example at the end.

The reference style to be used is as follows:

1. Document number, revision, date (optional), title, author.

or

2. Book title, author, publisher, year

### 3 Front Page

The front pages acts as the banner page for the document. The contents of the page are constrained in text boxes and tables.

#### 3.1 Front Page Header

On the front page header there is the normal artist's impression of ALMA. The other component is a table containing the document number, the revision number, the creation date of the document (at latest revision), the document type and the main author.

#### 3.2 Institutes

The only institute recognition is by authorship.

#### 3.3 Document Title and Type

The title of the document, using the *title* style. It should also be entered into the Properties of the file (File/Properties/Summary) so that it will be available as a Word Document Field.

The document type is where the type of document should be entered. The *document type* style should be used. The use of a document type is mandatory - though "Memo" may still be used for the more informal documents. However, at this time there is no standard list - it is still to be determined. The software group is in the process of proposing a list.

#### 3.4 Author(s) and Institute(s)

The *author* style is used for each author, with the *institute* style used for their institute on a different line. Authors from the same institute may be put on to the same author line.

One, and only one, of the authors must provide an email address to act as a default contact point for the document.

An author (usually the contact point) must normally sign the document in the appropriate box. For an informal document ("memo") this is not necessary.

#### 3.5 Document Label and Revision

Many people seem to prefer a simple document labelling system (I use the word "label" to refer to the complete string, to avoid confusion with the numeric part which is the actual "number") and that is what has been chosen. Each document shall have a label of the form ALMA-SW-NNNN, where "NNNN" is a zero-filled number (i.e. number 1 is 00001) so that alphabetic and numeric lists are the same. The "SW" refers to the fact that this system is currently for software documents only.

In addition to the document label there is a revision number to indicate the revision level of the document.

The document type mentioned above may be used to catagorise the document.

It should be noted that this scheme is a temporary scheme adopted by the ALMA Software Group pending a wider project decision on document numbering. If a project wide decision is made then this document will be revised to meet it.

### 3.6 Document Release

The "Released By" box is to be used as a signing off box for use by the "releaser" of the document. Who is the "releaser" is determined by the document approval process which is yet to be documented, but is likely to be part of the management structure. The releaser will need to sign this box and enter their institute. For an informal document ("memo") this is not necessary.

### 3.7 Keywords

In this box should be entered a list of keywords appropriate to the document. Authors should re-use existing project keywords wherever possible and attempt to be consistent with existing documents. A list of project keywords will be kept on the project web-site and should be regarded as the standard list. It will be extensible when necessary.

### 3.8 Approval

The "Approved By" box is to be used as a signing off box for use by the "approver" of the document. Who is the "approver" is determined by the document approval process which is yet to be documented, but is likely to be the head of the group that produced the document, or part of the management structure. The approver will need to sign this box and enter their institute. For an informal document ("memo") this is not necessary.

## 4 Change Record Page

The change record page has a table of changes and should be updated with every new revision. Each row is identified by the revision, with the rest of the row being split to provide space for the other details. The "remarks" area will expand to accommodate what is entered. For this reason the default length of the change record is less than the whole page. Should the table need to be expanded the copy/paste facilities of Word should be used on a row.

## 5 Document Body

### 5.1 Overall Structure

This standard does not attempt to define the internal structure of a document - the main structure and headings will vary according to discipline and type of document. This is left to the Software Process team.

However, one issue is covered here: For large documents the use of multiple files may be essential, rather than creating one document from the base style. However, this choice may be left up to the author(s). If multiple files are used then use of Microsoft Binder should then allow the construction of the complete document. (Apparently in Word2000 the binder is not necessary).

### 5.2 Main Body

Body text in a document should normally be written using the *Body Text* style. Other styles are permitted where required for emphasis/clarity etc., but no others have been specifically defined. Some other styles are defined and available for use: e.g. *Source Code* for including code fragments.

### 5.3 Contents List

This is generated from Word's insert table of contents function. It is begun on the page following the Change Record and should finish with a page break.

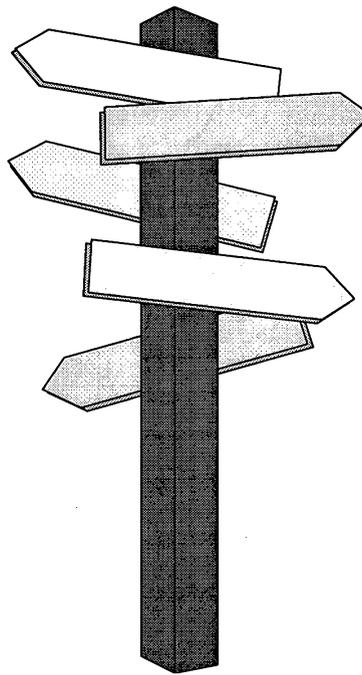
### 5.4 Headings

The *Heading n* styles should be used for headings and sub-headings in the document. These are currently defined from *Heading 1* down to *Heading 5*. More heading levels will make a document hard to read and should not be used.

### 5.5 Diagrams and Tables

The only style or restriction specified for diagrams and tables is that captions and titles should be placed below the diagram or table, numbered and not boxed. Some documents might also wish to include a list of diagrams and/or tables: such lists should be based on the contents list style specified here and included immediately after the contents list.

Here is an example diagram, using the *Caption* style for the figure caption:



*Figure 1: The Road Ahead*

### 5.6 Lists

No particular provision is made for lists. Standard styles for bullet lists and numbered lists are available, and may be modified.

### 5.7 Appendices

Titles for appendices use the *appendix* style. This similar to the *Heading 1* style but numbered separately.

## 6 Headers and Footers

Regular pages have identical left and right footers and headers.

### 6.1 The header

Contains the static text “ALMA” and the title of the document (from the document properties).

### 6.2 The footer

Contains the revision number of the document, and the page count.

## 7 References

1. ALMA-SW-0008, revision 4, 2001-02-21, The ALMA Software Documentation Standard, Alan Bridger

## Appendix A. Appendix: Web documents

As well as serving as an example appendix this section also highlights the fact that, although MS Word may be the standard documentation tool, most or all documents should be available on the WWW. The publishing of documents on the WWW is not addressed completely here but to cover some obvious questions:

1. Documents should be published as PDF. Any other format, including Word source, should be only published in rare, exceptional, cases where good reason exists.
2. Document originals will be kept under configuration control. Until a project configuration management tool for documents is in place this will need to be done by individuals.
3. Document originals will be available only with more effort - e.g. extraction from a configuration management repository.
4. This template style, in particular its accompanying .dot style file, is only for documents originating in Word. However, it does represent the ALMA Software Group standard style and if it is necessary or desirable to create documents using another tool then meeting the style is not the responsibility of this author.
5. Given that Word 2000 apparently makes a better job of creating HTML then if necessary the HTML files should be generated simply using “Save as HTML”.

## Appendix B. Using the Document Template

Brief instructions are given here on the use of the Word template ".dot" file that accompanies this document.

To install the ".dot" file:

1. Download the file from the ALMA site. If using a web browser to download there is evidence that some browser versions may "corrupt" the file. If you have difficulty in using the template following download then try again with a different browser or with dedicated ftp software (set to "binary" or "image" mode).
2. Copy the template into the templates directory of Microsoft Office. For Office97 this is "C:\Program Files\Microsoft Office\Templates". This directory may be divided into various subdirectories to help your classification, this is up to you. Similarly the name of the template file may be changed if this will help you (but retain the ".dot").
3. It should now be available for use.

To use the style file:

1. For new files open a new Word document with "File/New" or select "New Office Document" from the "Start" menu.
2. To apply to existing files use the "Format/Style Gallery" menu and choose the ALMA style, then click on "OK". This method will often not work 100%, and a surer way to update a document is to create a new one and then paste the substance of the old document into it.