DSA-2000 Document No. 00001

Document Recommendations

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Abstract

Recommendations for the format and storage locations for document related to the development phase of the DSA-2000 are presented. A distinction is made between fully self-contained documents that are also of wide interest outside the project (*memos*), and documents that contain critical project information that needs to be preserved and updated as necessary (*project documents*). Project documents are divided according to importance with *controlled documents* containing critical project-wide information, and *uncontrolled documents* that are more narrowly scoped. Repositories are identified for these various types of documents.

# Introduction

We describe the document classification and storage schemes for the development phase of DSA-2000. The aims are to make it easy to find documents, to be able to sort them according to different criteria, to encapsulate important information in a formalized way, and to make it as easy as possible to contribute. For the construction phase of DSA-2000 stricter control of documentation may be required and at that point a decision may be made on how much of the development documentation should be included.

# Document types

A general classification for documents is their public availability. In some cases, information to be easily available to the wider community, while in others it is preferable to have easier access for project members, or to restrict information that is confidential or proprietary. The first group of documents will be classified as memos, and the second as project documents.

## Memos

A DSA-2000 Memo Series will be maintained by the Caltech Library System (CLS). Memos are considered to be essentially self-contained in the sense that a journal publication is, for example. They can be on any area of DSA-2000 that is of general interest within and outside the DSA-2000 project. Memos will be numbered consecutively on receipt. They will be given a DOI by CLS, and for this reason are considered immutable. Errors, or new versions can be submitted as Errata, or new numbered memos.

Memos will not be subject to any formal review or editing process, but may be checked for proprietary or sensitive information. Templates will be supplied in Word or Overleaf formats.

The final document format will be portable document format (PDF). At some point, there may be more detailed guidelines if necessary. A member of the project will be assigned to submitting documents to the CLS.

A link will be provided in SharePoint to the Memo Series once it goes live.

## Project Documents

Some documents will encapsulate information that is critical for multiple parts of the project, and that information should not be changed without the agreement of all stakeholders. Such documents are designated as being controlled and must be signed off by the appropriate managers. Formal controlled and uncontrolled documents will be consecutively numbered in the same series.

### Index and numbering

An index of documents is maintained in the OVRO: Projects SharePoint subsite under **DSA-2000** > **DSA-2000 Documents** > **Project** > **Development WBS**, as an Excel workbook ([DSA-2000 document index.xlsx](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Project/Document%20Library/DSA-2000%20document%20index.xlsx?d=w9b932aaf4c8d450db7244d341698163e&csf=1&web=1&e=Cnd7B2)). Anyone can claim a document number by entering the next available number and bookmarking it with their name in the Author(s) field, for example. Once the details are known the remaining fields can be filled in. When the document is ready for distribution, it should be saved as a PDF and uploaded to the SharePoint folder [Document Repository](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDocument%20Library&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9).

Different versions of a given document must have file names that differs in the version number only. The filter and sort buttons on the Excel index make it easy to show all versions of a given document to be shown on consecutive lines.

### Format

A Word template is provided for convenience. It can be used directly by selecting **DSA-2000 Document** from, the **+ New** Ú menu item in the [Document Repository](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDocument%20Library&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9). This has a macro to set up some of the details of the document using drop-down options and form fields. Alternatively, it can be downloaded from the [Document Repository](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDocument%20Library&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9) into your Custom Office Templates folder. Typically this is C:\Users\*user*\Documents\Custom Office Templates, but you can find it in your settings by going to **File** > **Options** > **Advanced** and scrolling down to the **General** section to **File Locations**.

The Word format is a guide only and is not necessarily appropriate for all documents. Drawing sets can be collections of pages of 2D representations of CAD models, and schematics and PCB layouts can similarly be collections of graphics pages (preferably with a cover page, as is the custom with drawing sets).

While consistent formatting is very helpful for being able to find information quickly, it should not be an impediment to submitting documents.

### Controlled documents

This type of document may undergo many iterations before it being approved. The associated version numbers for the drafts will have a two-digit decimal part in the range 01—99 (e.g., v1.12) and signed-off versions will have only an integer part (e.g., v2.00). The first signed version will be v1.00, so initial drafts will be v0.01, v0.02, ….

Documents that must be controlled will be determined by Project Management, but the general rule is that any document containing information required by other parts of the project should be controlled. This includes, but is not limited to, changes to

* Specifications;
* Cost;
* Timeline;
* Interfaces between parts of the system under different responsible project members;
* User interfaces.

These documents will be important for ensuring that different parts of the project will mesh well together, as well as removing uncertainties about critical decisions.

It is possible that some features can be added to documents to allow programmatic extraction of information. A particular case is a tag for decisions that can be extracted into a decision register.

Controlled documents are stored in the [Document Repository](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDocument%20Library&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9) and indexed in the [DSA-2000 document index.xlsx](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Project/Document%20Library/DSA-2000%20document%20index.xlsx?d=w9b932aaf4c8d450db7244d341698163e&csf=1&web=1&e=Cnd7B2).

### Uncontrolled documents

Other documents can be included in the Document Repository to capture important information about various aspects of the project. Examples of these are test reports, design documents, drawings, and so forth. Documents in this category are important for ensuring availability of information for further development, production, maintenance, and tracking. They can cover all aspects, including engineering, management, operations, and logistics.

Unontrolled documents are stored in the [Document Repository](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDocument%20Library&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9) and indexed in the [DSA-2000 document index.xlsx](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Project/Document%20Library/DSA-2000%20document%20index.xlsx?d=w9b932aaf4c8d450db7244d341698163e&csf=1&web=1&e=Cnd7B2).

### Other documents

All documents germane to the project should be kept in a common area that is accessible to everyone. Maintaining all the information this way allows easy sharing information, and acts as a record of designs and decision, as well as ensuring availability when people leave the project. There are no restrictions on the types of documents that can be stored. CAD files for mechanical, schematic capture, PCB layout, and are all important, as are EM simulation models. Other formats, such as Excel workbooks, Mathcad worksheets, MATLAB files should be preserved in SharePoint.

These more general files should be placed under the relevant WBS Level 2 (subsystem) folder hierarchy in SharePoint ([Projects - Development WBS - All Documents (sharepoint.com)](https://caltech.sharepoint.com/sites/ovro/projects/dsa2000documents/Forms/AllItems.aspx?id=%2Fsites%2Fovro%2Fprojects%2Fdsa2000documents%2FProject%2FDevelopment%20WBS&viewid=8dcf5501%2Dba84%2D4e06%2Db1eb%2D7482aa303df9)). Subfolders should be created as necessary to organize the information in a logical way.

# Discussion

There may be changes to the details presented here based on experience following the guidelines. This will be recorded in a new version of this document, as needed.

Other paradigms for maintaining critical Project information will be deployed for specific types of development. For example, maintaining code is a specialized task that has well-established procedures for version control and issue tracking. Mechanical drawings will be incorporated in an Autodesk Vault storage system, with a defined part/drawing/file numbering system.