

# **NOAA NESDIS CENTER for SATELLITE APPLICATIONS and RESEARCH**

## **DOCUMENT GUIDELINE**

### **DG-11.1 INTERNAL USERS MANUAL GUIDELINE Version 3.0**

# NOAA NESDIS STAR

DOCUMENT GUIDELINE  
DG-11.1  
Version: 3.0  
Date: October 1, 2009

TITLE: Internal Users Manual Guideline

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TITLE: DG-11.1: INTERNAL USERS MANUAL DOCUMENT GUIDELINE VERSION 3.0

AUTHORS:

Ken Jensen (Raytheon Information Solutions)

## INTERNAL USERS MANUAL GUIDELINE VERSION HISTORY SUMMARY

<b>Version</b>	<b>Description</b>	<b>Revised Sections</b>	<b>Date</b>
1.0	No version 1	N/A	N/A
2.0	No version 1	N/A	N/A
3.0	New Document Guideline (DG-11.1) adapted from SPSRB draft guidelines by Ken Jensen (Raytheon Information Solutions)	New Document	10/1/2009

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## LIST OF ACRONYMS

ATBD	Algorithm Theoretical Basis Document
CDR	Critical Design Review
CDRR	Critical Design Review Report
CICS	Cooperative Institute for Climate Studies
CIMSS	Cooperative Institute for Meteorological Satellite Studies
CIOSS	Cooperative Institute for Oceanographic Satellite Studies
CIRA	Cooperative Institute for Research in the Atmosphere
CL	Check List
CLI	Check List Item
CREST	Cooperative Remote Sensing and Technology Center
CTR	Code Test Review
CTRR	Code Test Review Report
DDD	Detailed Design Document
DG	Document Guideline
DPP	Development Project Plan
EPL	Enterprise Product Lifecycle
GUI	Graphical User Interface
IUM	Internal Users Manual
MDD	Metadata Document
NESDIS	National Environmental Satellite, Data, and Information Service
NOAA	National Oceanic and Atmospheric Administration
NRT	Near Real Time
OCD	Operations Concept Document
OEL	Operations Events Log
OSDPD	Office of Satellite Data Processing and Distribution
PAR	Process Asset Repository
PDR	Preliminary Design Review
PDRR	Preliminary Design Review Report
PG	Process Guideline

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PRG	Peer Review Guideline
PRR	Project Requirements Review
PRRR	Project Requirements Review Report
RAD	Requirements Allocation Document
SAB	Satellite Analysis Branch
SDD	System Description Document
SG	Stakeholder Guideline
SMM	System Maintenance Manual
SPSRB	Satellite Products and Services Review Board
SRR	System Readiness Review
SRRR	System Readiness Review Report
STAR	Center for Satellite Applications and Research
STP	System Test Plan
SWA	Software Architecture Document
TG	Task Guideline
TRR	Test Readiness Review
TRRR	Test Readiness Review Report
UM	Users Manual
UTP	Unit Test Plan
UTR	Unit Test Report
VVP	Verification and Validation Plan
VVR	Verification and Validation Report

## 1. INTRODUCTION

The NOAA/NESDIS Center for Satellite Applications and Research (STAR) develops a diverse spectrum of complex, often interrelated, environmental algorithms and software systems. These systems are developed through extensive research programs, and transitioned from research to operations when a sufficient level of maturity and end-user acceptance is achieved. Progress is often iterative, with subsequent deliveries providing additional robustness and functionality. Development and deployment is distributed, involving STAR, the Cooperative Institutes (CICS, CIMSS, CIOSS, CIRA, CREST) distributed throughout the US, multiple support contractors, and NESDIS Operations.

NESDIS/STAR is implementing an increased level of process maturity to support the exchange of these software systems from one location or platform to another. The Internal Users Manual (IUM) is one component of this process.

### 1.1. Objective

The objective of this Document Guideline (DG) is to provide the STAR standard for the IUM. The intended users of this DG are the personnel assigned by the Development Lead to the task of creating a product IUM.

### 1.2. The Internal Users Manual

The purpose of the IUM is to provide internal product users (i.e., analysts from the Office of Satellite Data Processing and Distribution (OSDPD) Satellite Analysis Branch (SAB) with information on the product processing system (PPS) that will enable them to effectively and reliably operate interactive tools such as Graphical User Interfaces (GUI). A separate IUM is produced for each distinct product in the STAR Enterprise during the Development phase of the STAR Enterprise Product Lifecycle (EPL)<sup>1</sup>. The intended target audiences are the OSDPD/SAB analysts.

IUM v1r0, an artifact for the System Readiness Review (SRR), should be produced by the development team. Sections 1, 2, and 3 of the IUM should be completed for IUM v1r0.

Following the completion of the System Readiness Review Report (SRRR), the development team should finalize Section 2.2 for IUM v1r1.

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<sup>1</sup> For a description of the STAR EPL, refer to the STAR EPL Process Guideline (PG-1 and PG-1.A).

Following Gate 5 approval, IUM v1r1 should be delivered to operations. Operations should add operations information to Section 4 for IUM v1r2, the first version to be delivered to the users. Operations may release additional revisions of the IUM, adding operations and maintenance information to Section 4 as warranted.

The IUM should be developed as a Microsoft Word document. Upon approval, the approved version of the IUM may be converted to an Adobe pdf file for storage in the project artifact repository.

### 1.3. Background

This DG defines guidelines for producing a IUM. This DG has been adapted from the draft Satellite Products and Services Review Board (SPSRB) standard document guidelines. It has been tailored to fit the STAR EPL process.

### 1.4. Benefits

An IUM developed in accordance with the standards in this DG assists the product users by providing a document that contains all the information they need in a format that will be familiar to them. It is therefore a requirement that an IUM be developed in accordance with the guidelines in this document before pre-operational code is approved for transition to operations. The IUM will be reviewed at the System Readiness Review (SRR)<sup>2</sup> to help determine whether a project is ready for operations.

### 1.5. Overview

This DG contains the following sections:

Section 1.0 -	Introduction
Section 2.0 -	References
Section 3.0 -	Standard Table of Contents
Section 4.0 -	Section Guidelines
Appendix A -	Examples
Appendix B -	Templates

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<sup>2</sup> Refer to the STAR EPL Process Guidelines (PG-1 and PG-1.A) for a description of the STAR EPL gates and reviews

## 2. REFERENCE DOCUMENTS

**DPP: Development Project Plan** is a project artifact that is produced by the Project Team for the Gate 3 Review. Revisions are customarily made for each subsequent review. The IUM developer can use this to prepare the Product Team and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**RAD: Requirements Allocation Document** is a project artifact that is produced by the Project Team for the Project Requirements Review (PRR). Revisions are customarily made for Preliminary Design Review (PDR) and Critical Design Review (CDR). The IUM developer can use this to prepare the Product Requirements section of the IUM. This document will be available to approved users in the project artifact repository.

**OCD: Operations Concept Document** is a project artifact that is produced by the Project Team for the PRR. The IUM developer can use this to prepare the Product Development History section of the IUM. This document will be available to approved users in the project artifact repository.

**ATBD: Algorithm Theoretical Basis Document** is a project artifact produced by the algorithm developer. The IUM developer can use this to prepare the Algorithm and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**SWA: Software Architecture Document** is a project artifact produced by the algorithm developer. The IUM developer can use this to prepare the Product Description section of the IUM. This document will be available to approved users in the project artifact repository.

**DDD: Detailed Design Document** is a project artifact produced by the algorithm developer. The IUM developer can use this to prepare the Product Description section of the IUM. This document will be available to approved users in the project artifact repository.

**MDD: Metadata Document** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Product Description and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**VVP: Verification and Validation Plan** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Test Documentation and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**UTP: Unit Test Plan** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Test Documentation and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**UTR: Unit Test Report** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Test Documentation and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**STP: System Test Plan** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Test Documentation and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**VVR: Verification and Validation Report** is a project artifact produced by the product development team. The IUM developer can use this to prepare the Test Documentation and Product Development History sections of the IUM. This document will be available to approved users in the project artifact repository.

**SMM: System Maintenance Manual** is a project artifact that is produced by a collaboration of the Development team and the O&M team. The IUM developers need this to complete the Operations History and Maintenance History subsections of the IUM. This report will be available to approved users in the project artifact repository.

**PRRR: Project Requirements Review Report** is a project artifact that is produced by the PRR reviewers. The IUM developer can use this to prepare the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

**PDRR: Preliminary Design Review Report** is a project artifact that is produced by the PDR reviewers. The IUM developer can use this to prepare the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

**CDRR: Critical Design Review Report** is a project artifact that is produced by the CDR reviewers. The IUM developer can use this to prepare the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

**TRRR: Test Readiness Review Report** is a project artifact that is produced by the Test Readiness Review (TRR) reviewers. The IUM developer can use this to prepare the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

**CTRR: Code Test Review Report** is a project artifact that is produced by the Code Test Review (CTR) reviewers. The IUM developer can use this to prepare the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

**SRRR: System Readiness Review Report** is a project artifact that is produced by the System Readiness Review (SRR) reviewers. The IUM developer can use this to complete the Product Development History section of the IUM. This report will be available to approved users in the project artifact repository.

All of the following references are STAR EPL process assets that are accessible in a STAR EPL Process Asset Repository (PAR) on the STAR web site:

[http://www.star.nesdis.noaa.gov/star/EPL\\_index.php](http://www.star.nesdis.noaa.gov/star/EPL_index.php).

**PG-1: STAR EPL Process Guideline** provides the definitive description of the standard set of processes of the STAR EPL.

**PG-1.A: STAR EPL Process Guideline Appendix**, an appendix to PG-1, is a Microsoft Excel file that contains the STAR EPL process matrix (Stakeholder/Process Step matrix), listings of the process assets and standard artifacts, descriptions of process gates and reviews, and descriptions of stakeholder roles and functions.

**PRG-11.1: System Readiness Review Guidelines** are the guidelines for the SRR. It is useful for the developer of the IUM to understand what the reviewers will expect when reviewing the IUM.

**CL-11.1: System Readiness Review Check List** is the check list for the SRR. It is useful for the developer of the IUM to understand the specific Check List items (CLI) that the reviewers of the IUM will be required to approve.

**DG-0.1: STAR Document Style Guideline** is a STAR EPL Document Guideline (DG) that provides STAR standards for the style and appearance of STAR documents developed as Microsoft Word files

**SG-14: STAR EPL Development Scientist Guidelines** provides a description of standard tasks for Development Scientists, including development of the IUM.

**SG-15: STAR EPL Development Tester Guidelines** provides a description of standard tasks for Development Testers, including development of the IUM.

**SG-16: STAR EPL Development Programmer Guidelines** provides a description of standard tasks for Development Programmers, including development of the IUM.

**TG-11: STAR EPL System Integration and Test Task Guidelines** provides a description of standard tasks for process step 11, during which the IUM is developed.

## 3. STANDARD TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

### 1.0 INTRODUCTION

- 1.1 Purpose of This Manual
- 1.2 Who Should Use This Manual
- 1.3 Inside Each Section

### 2.0 PRODUCT OVERVIEW

- 2.1 Product Team
- 2.2 Product Development History
- 2.3 Interfaces
- 2.4 Algorithm
- 2.5 Satellite Instrument
- 2.6 Satellite Data Preprocessing

### 3.0 PRODUCT DESCRIPTION

- 3.1 Product Archive Description
- 3.2 Product File Descriptions
  - 3.2.1 Ancillary Data
  - 3.2.2 Output Data
- 3.3 Product Quality
  - 3.3.1 Product Accuracy
  - 3.3.2 Quality Flags

### 4.0 PRODUCT USE

- 4.1 Operational Scenario

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- 4.2 Operations Procedures
  - 4.3 Data Flow
  - 4.4 Error Correction
  - 4.5 Data Preparation
  - 4.6 Access Procedures
  - 4.7 Menus and Navigation
  - 4.8 Product Tools
  - 4.9 Training
  - 4.10 Maintenance History
- 5.0 LIST OF REFERENCES

## 4. SECTION GUIDELINES

This section contains the STAR guidelines for each section of the IUM.

The IUM should follow the STAR standard for style and appearance, as stated in DG-0.1.

### 4.1. Table of Contents

The Table of Contents can be inserted by using Word's Insert → Reference → Index and Tables → Table of Contents function or by pasting the Table of Contents from this DG into your document and updating it for the section headers you make for your document. Use a page break if necessary to ensure that the Table of Contents appears at the top of a page.

### 4.2. List of Figures

A List of Figures should be provided after the Table of Contents. A page break should be used if necessary to ensure that the List of Figures appears at the top of a page. To create a List of Figures, use Word's Insert → Reference → Index and Tables → Table of Figures function, selecting the "Table of Figures" Style. Alternatively, the List of Figures can be created by pasting the List of Figures for this DG into your document.

Figures should be created by using Word's Insert → Picture → From File function or Word's Insert → Object function. Figures should be numbered X.Y, where X is the main section number where the figure resides and Y = 1,N is the ordered number of the figure in the section. Figure captions should have Arial bold 12 point font, should be center justified, and should have a "Table of Figures" Style. A Figure Caption template is provided in Appendix B of this DG.

### 4.3. List of Tables

A List of Tables should be provided after the List of Figures. The List of Tables can appear on the same page as the List of Figures, with three blank lines separating them, provided both lists can fit on the same page. If both lists cannot fit on the same page, a page break should be used to ensure that the List of Tables appears at the top of a page.

To create a List of Tables, use Word's Insert → Reference → Index and Tables → Table of Figures function, selecting the "Table - Header" Style. Alternatively, the List of Tables can be created by pasting the List of Tables for this DG into your document.

Tables should be created with the Table → Insert → Table function. Tables should be numbered X.Y, where X is the main section number where the table resides and Y = 1,N is the ordered number of the table in the section. Table titles should have Arial bold 12 point font, should be center justified, and should have a “Table - Header” Style. A Table Title template is provided in Appendix B of this DG. Table text should have Arial regular 10 point font.

#### **4.4. List of Acronyms**

The use of acronyms is encouraged. A two word or longer name for an item (e.g., Internal Users Manual) should be given an acronym (e.g., IUM) if the name is used more than once in the document. A List of Acronyms should be provided after the List of Tables. The List of Acronyms should be in alphanumeric order. Use the List of Acronyms in this DG as a template. A page break should be used if necessary to ensure that the List of Acronyms appears at the top of a page.

#### **4.5. Section 1 – Introduction**

The UM shall include an Introduction Section. This section shall include

- A well-defined purpose and function for the document
- Specific intended user(s)
- How the intended user(s) should use the document
- A responsible entity for generating the document
- A responsible entity for review/approval of the document
- A responsible entity for storage, accessibility, and dissemination
- A brief overview of the contents of each main section

#### **4.6. Section 2 – Product Overview**

Include a product overview with sufficient detail so that the analyst understands how this product came to be created. The product includes all project artifacts (documentation, code, test data and reports) that are intended for product testers and end users. There should be subsections for:

- Product Team

- Product Development History
- Interfaces
- Algorithm
- Satellite Instrument
- Satellite Data Preprocessing.

The subsection for Product Team should list the product team members (Development Lead, Product Area Lead, Help Desk Manager), their roles, and their contact information.

The subsection for Product Development History should include the product development steps, with links to the following product development artifacts: OCD, RAD, ATBD, MDD, VVP, UTP, UTR, STP, VVR, PRRR, PDRR, CDRR, TRRR, CTRR, and SRRR.

The subsection for Interfaces should provide a list of external data suppliers and end users.

The subsection for Algorithm should give a high level description of the algorithm, including a reference to the ATBD. A link to the ATBD should be included.

The subsection for Satellite Instrument should provide a high-level description of the satellite and instrument that provides the input data, including spectral (range, channels/bands), spatial (scan pattern, footprint), and other features (e.g., instrument noise). This information should be obtained from the ATBD.

The subsection for Satellite Data Preprocessing should provide a high-level description of the steps performed to produce input sensor data (e.g., L1, SDR).

#### **4.7. Section 3 – Product Description**

Include a product description with sufficient detail so that the analyst understands how to locate and use the product files. There should be subsections for:

- Product Archive Description
- Product File Descriptions
- Product Quality

The subsection on Product Archive Description should contain the information that each user needs to obtain the data products intended for them. This includes the location of the data products, procedures for obtaining them, and contact information for personnel who maintain the archives and access procedures. This information should be available from the SMM.

The subsection on Product File Descriptions should contain subsections on Ancillary Data and Output Data. List the ancillary data sets needed for processing, with access information. For each output data file, provide details on data format/type, range of values and special error values. Include data volume and file size. All information needed to verify that all expected data sets are produced in the expected format. This information should be available from the DDD and SMM.

The subsection on Product Quality should contain subsections on Product Accuracy and Quality Flags. Estimate the accuracy of products, as measured by V&V testing, and compare to accuracy requirements. This information should be available from the VVR and RAD. Describe all quality flags in the product files. This information should be available from the DDD.

#### **4.8. Section 4 – Product Use**

This section should include the information needed for internal analysts to perform standard product analyses. There should be subsections for

- Operational Scenario
- Operations Procedures
- Data Flow
- Error Correction
- Product Tools
- Data Preparation
- Access Procedures
- Menus and Navigation
- Training

- Maintenance History

The subsection on Operational Scenario should describe the frequency of job runs (i.e. orbital basis, daily, hourly), and describe how runs are initiated (e.g. cron job, OPUS). Provide production rules and detailed operational sequences.

The subsection on Operations Procedures should contain the standard procedure for producing the operational products.

The subsection on Data Flow should describe the system flow and program flow. A full data flow description may be in the developer's Software Architecture Document (SWA). If so, data flow diagrams may be copied from the SWA. Refer to the developer's SWA in the project artifact repository, if available.

The subsection on Error Correction should list and describe warnings that operators could encounter, error codes that the operators could encounter, and procedures for fixing the problems. Include criteria for when operators should call maintenance personnel.

The subsection on Product Tools should describe each program and/or application that is supplied for display and analysis of the product output files, including the purpose and function of the tool and how to operate it. Provide instructions in the use of any GUIs designed for internal users, including shutdown and restart. Note any limitations, such as modes of operation that a tool does not support.

The subsection on Data Preparation should describe any formatting that should be performed on data to allow it to be used by the internal product tools.

The subsection on Access Procedures should state the procedures that should be followed for obtaining near real time (NRT) and archived product data files.

The subsection on Menus and Navigation should state the criteria for interactive operation and provide a description of all interactive menus and steps.

The subsection on Training should list the training needs for internal analysts that are specific to the access and use of this product.

The subsection on Maintenance History should include the record of any reactive maintenance and science maintenance activity deemed of interest to the product user.

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Include excerpts and/or references to maintenance documentation deemed of value to internal analysts (e.g., relevant sections of maintenance reports).

#### **4.9. Section 5 – List of References**

This section should consist of a List of References that includes all references cited in the document. References that begin with an author list should begin with the last name of the lead author. A template is provided in Appendix B.

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## **APPENDIX A - EXAMPLES**

An example of an IUM that follows the STAR standards and guidelines will be developed and placed in the STAR EPL PAR.

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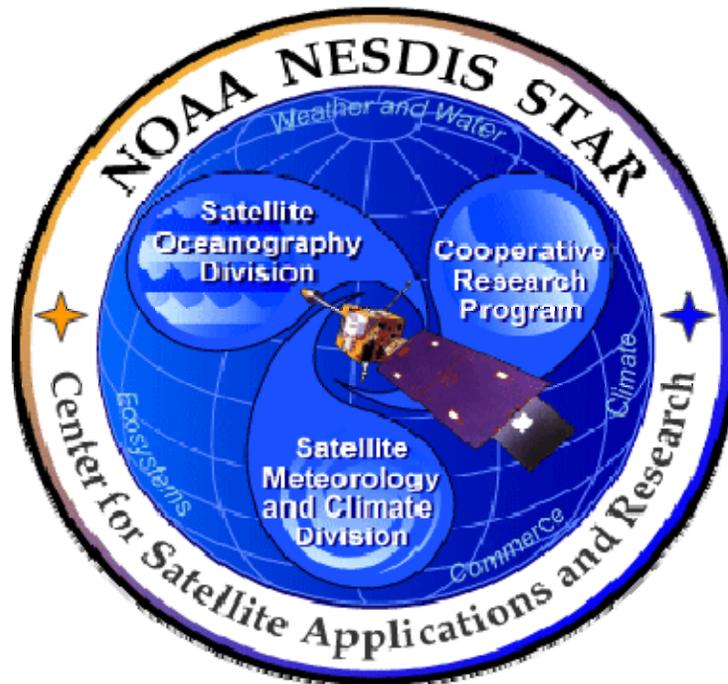
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## **APPENDIX B - TEMPLATES**

This appendix contains templates for specific pages and sections of the IUM.

## B.1 Cover Page Template:

In this template, <X> = 1.0 for version 1, <X> = 1.1 for version 1 revision 1, <X> = 2.0 for version 2 etc. <Project Name> should be the actual approved name of the Project.



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<PROJECT NAME>  
INTERNAL USERS MANUAL  
Version <X>

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## B.2 Document Header Template:

In this template, <X> = 1.0 for version 1, <X> = 1.1 for version 1 revision 1, <X> = 2.0 for version 2 etc.

In this template, <Project Name> should be the actual approved name of the Project.

In this template, <Y> = the actual page number.

In this template, <Z> = the actual total number of pages

# NOAA/NESDIS/STAR

INTERNAL USERS MANUAL  
Version: <X>

Date: <Date of Latest Signature Approval>

<Project Name>  
Internal Users Manual

Page <Y> of <Z>

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## B.3 Document Cover Page Footer Template:

Hardcopy Uncontrolled

## B.4 Document Footer Template:

Hardcopy Uncontrolled

Hardcopy Uncontrolled

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## B.5 Approval Page Template:

In this template, <X> = 1.0 for version 1, <X> = 1.1 for version 1 revision 1, <X> = 2.0 for version 2 etc. <Project Name> should be the actual approved name of the Project.

TITLE: <PROJECT NAME> INTERNAL USERS MANUAL VERSION <X>

AUTHORS:

<Lead Author>  
<Co-Author 1>  
<Co-Author 2>  
<etc.>

APPROVAL SIGNATURES:

_____	<u>&lt;Actual Signature Date&gt;</u>
<Name of Development Lead> Development Lead	Date

_____	<u>&lt;Actual Signature Date&gt;</u>
<Name of Product Area Lead> Product Area Lead	Date

_____	<u>&lt;Actual Signature Date&gt;</u>
<Name of Agency Approver> Agency	Date

## B.6 Version History Page Template:

In this template, <Project Name> should be the actual approved name of the Project.

<PROJECT NAME>  
INTERNAL USERS MANUAL  
VERSION HISTORY SUMMARY

Version	Description	Revised Sections	Date
1.0	Created by <Name of Developer(s)> of <Name of Developers' Agency/Company> to describe pre-operational algorithm for users.	New Document	<Actual date of Latest approval signature>
1.1	Revised by <Name of Developer(s)> of <Name of Developers' Agency/Company> to describe complete Development history	<applicable sections>	<Actual date of Latest approval signature>
1.2	Revised by <Name of Operators> of <Name of Operations Agency/Company> to describe Operations and Maintenance history	Ditto	Ditto
1.3	Revised by <Name of Operators> of <Name of Operations Agency/Company> to update Operations and Maintenance history	Ditto	Ditto
etc.			

## **B.7 Figure Caption Template:**

**Figure 2.3** - <Figure caption in Arial regular 12 point font>

## **B.8 Table Title Template:**

**Table 4.5** - <Table title in Arial regular 12 point font>

## B.9 List of References Template:

- Ackerman, S. *et al.* (1997). Discriminating clear-sky from cloud with MODIS: Algorithm Theoretical Basis Document, Version 3.2.
- Asrar, G., M. Fuchs, E. T. Kanemasu, and J. L. Hatfield (1984). Estimating absorbed photosynthetically active radiation and leaf area index from spectral reflectance in wheat. *Agron. J.*, 76:300-306.
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- Bonan, G.B. (1995). Land-atmosphere interactions for climate system models: Coupling biophysical, biogeochemical, and ecosystem dynamical processes. *Remote Sens. Environ.*, 51:57-73.
- Food and Agriculture Organization of the United Nations, *Digital Soil Map of the World and Derived Soil Properties-Version 3.5*, FAO/UNESCO, Rome, 1995.
- Friedl, M. A., and C.E. Brodley (1997). Decision tree classification of land cover from remotely sensed data. *Remote Sens. Environ.*, 61:399-409.
- Scepan, J. (1999), Thematic validation of high-resolution global land-cover data sets. *Photogramm. Eng. Remote Sens.*, 65:1051-1060.
- Shukla, J., C. Nobre, and P. Sellers (1990). Amazon deforestation and climate change. *Science*, 247:1322-1325.
- Wilson, M.F., and A. Henderson-Sellers (1985). A global archive of land cover and soils data for use in general circulation models. *J. Clim.*, 5:119-143.
- Wu, A., Z. Li, and J. Cihlar (1995). Effects of land cover type and greenness on advanced very high resolution radiometer bidirectional reflectances: analysis and removal. *J. Geophys. Res.*, 100: 9179-9192.

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END OF DOCUMENT