



FIGIS/2002/19b

## FIGIS FiMES and XML Source/Version Control Guidelines

Management Summary	

Author	Yves Jaques
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# Contents

Introduction .....	1
1. Workflow diagram .....	2
2. Storage locations .....	2
2.1 Source control repository .....	2
2.2 Local work directory .....	2
2.3 Master area .....	3
3. Roles .....	3
3.1 Administrator .....	3
3.2 Editors .....	3
4. FiMES version control .....	3
4.1 Directory structure .....	3
5. XML version control .....	4
5.1 Directory structure .....	4
5.2 Update of the master directory .....	4

## Introduction

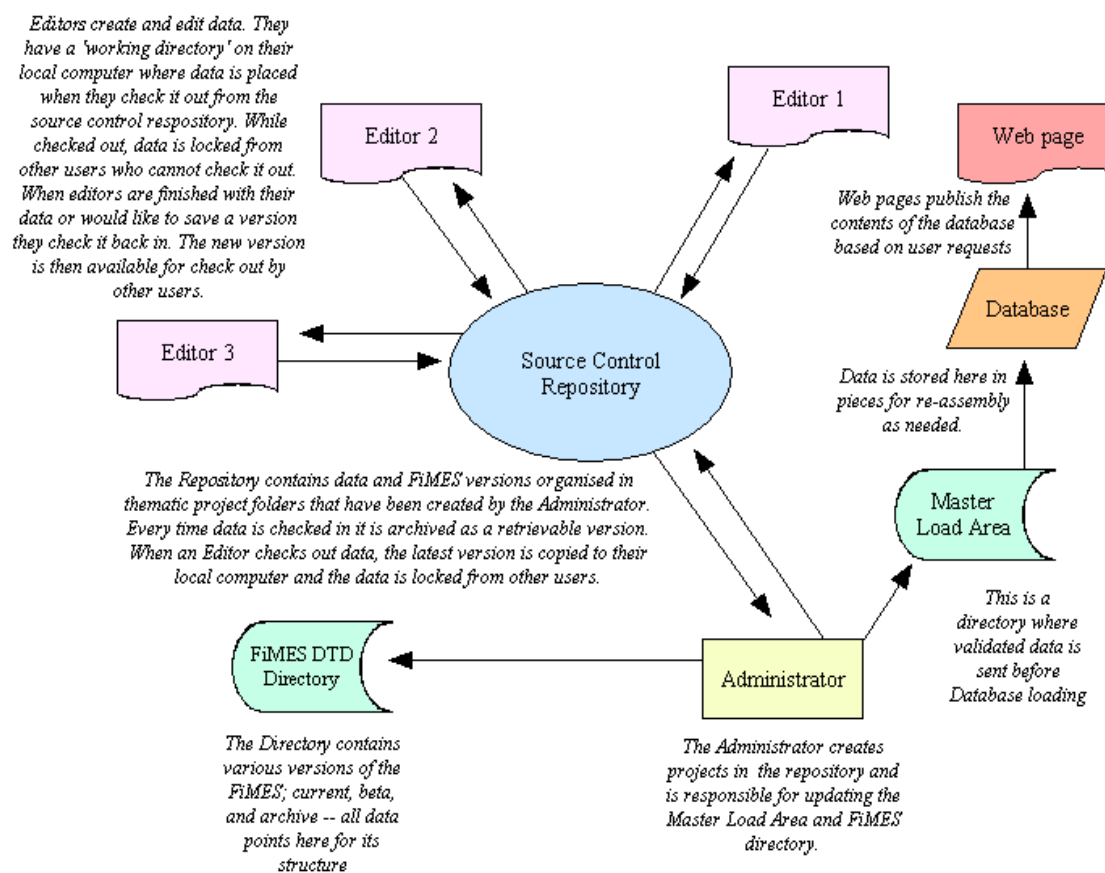
This guide covers the guidelines implemented for FIGIS staff to maintain source and version control of XML data and the FiMES.

There are a number of obvious advantages to using a cohesive and centralised system of document control:

- Multiple staff members working on the same document are sure to have the latest version.
- A checked out file is locked from other Users so that incompatible versions are not produced.
- The data are automatically backed up.
- All versions once checked in are saved as distinct and retrievable files.
- Versions can be compared against one another.
- Comments can be added at check-in time.

## 1. Workflow diagram

The diagram below illustrates data and FiMES flows, and the centralised nature of the source control repository:



## 2. Storage locations

### 2.1 Source control repository

This is the designated location in which source-controlled data are stored. It is located on a network drive to insure regular backup. The **Administrator** is the only **User** authorised to add/remove other Users and create new source control **projects**. A project is defined as a group of data belonging to the same information domain, e.g. *Stocks* or *Species*. The repository archives a version every time data is **checked-in** and found to be different from the previous checked-in version.

### 2.2 Local work directory

This is the designated location on a User's computer in which source-controlled data from a specific project are placed when **checked-out** for use. This means that each project has one **repository** and multiple **local work directories** (one for each User.) When a document is checked-out from the repository by a User it is **locked** meaning that other Users can read it but not write to it. When a document is checked-in it is available to any User to be checked-out and locked for their exclusive use.

### 2.3 *Master area*

This is the designated location on the network for the placement of valid data prior to their loading in the database. The Administrator is responsible for placing the correct data in this area when needed.

## 3. Roles

### 3.1 *Administrator*

The Administrator administers the following source control functions:

- The creation and definition of new source control projects.
- The location of a project's source control repository.
- The addition and removal of source control Users.

In addition, the Administrator is responsible for the following:

- The updating of the **Master directories** used for loading the database.
- The maintenance of the **FiMES directories**
  - ❖ ensuring that obsolete FiMES versions are **archived**
  - ❖ making available a working **current version** of the FiMES
  - ❖ making available a **beta version** that incorporates the latest changes and requests for new or edited document structures.

### 3.2 *Editors*

An **Editor** is a User who checks out a document from the repository for editing.

Editors can:

- Put new data under source control within an existing project.
- Check-out and lock data from the repository for their exclusive use.
- Check-in data to the repository, adding **comments**.

Editors have the responsibility of checking-in shared or potentially shared data that they are not using in order to make those data available to others.

## 4. FiMES version control

### 4.1 *Directory structure*

The Administrator administers the placement of the FiMES into the correct directories:

- **Archive:** this directory contains the obsolete versions of the FiMES. Every version found here was once a current FiMES. Each version is in its own folder and can be validated.
- **Current:** this directory contains the current, valid version of the FiMES. Any XML that will be loaded into the database must conform to this version or the Administrator will not move it into the master area for database upload.
- **Beta:** this directory contains the newest, experimental version of the FiMES containing the latest change requests. It is a valid, working FiMES that is nevertheless not official and cannot be used for XML that will be uploaded to the database.

The directory will be on a network server and should be mapped from any XML document using the HTTP protocol as in this example:

<http://193.43.36.85/Dtd/beta/3.0c/Figisdoc3.0.dtd>

## **5. XML version control**

### **5.1 *Directory structure***

The Administrator administers the creation of the repository directories for all new projects.

Individual Users may place their local working directory wherever they like, either on their own computers or on their network space. Note that there are slight performance enhancements if the local working directory is on the User's hard drive.

### **5.2 *Update of the master directory***

The Master directory for a domain will be updated as required and as authorised by the project leader.

Editors' will be responsible for insuring that any of their XML due to be loaded into the Master directory is valid against the Current FiMES and checked into the source control repository.

In the case that an XML document conforms to a FiMES that is substantially different from the Current FiMES, either due to the passage of time or to radical changes in the FiMES, the Administrator may update the XML with the assistance of the Editor as needed.

The Administrator will copy the XML from the source control repository to the master directory, annotating the source control as to the date and the action performed.