

# Using RSMACC version control system with AB Industrial programming Controllers and files.

RSMACC (Rockwell Software© Maintenance Automation Control Center) 2003.  
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The purpose of this document to describe how to maximum utilize the RSMACC version control system in practical operations with the PLC logic files and other production equipment related files.

Overview of the RSMACC version control system including different types of users (Fig.1):

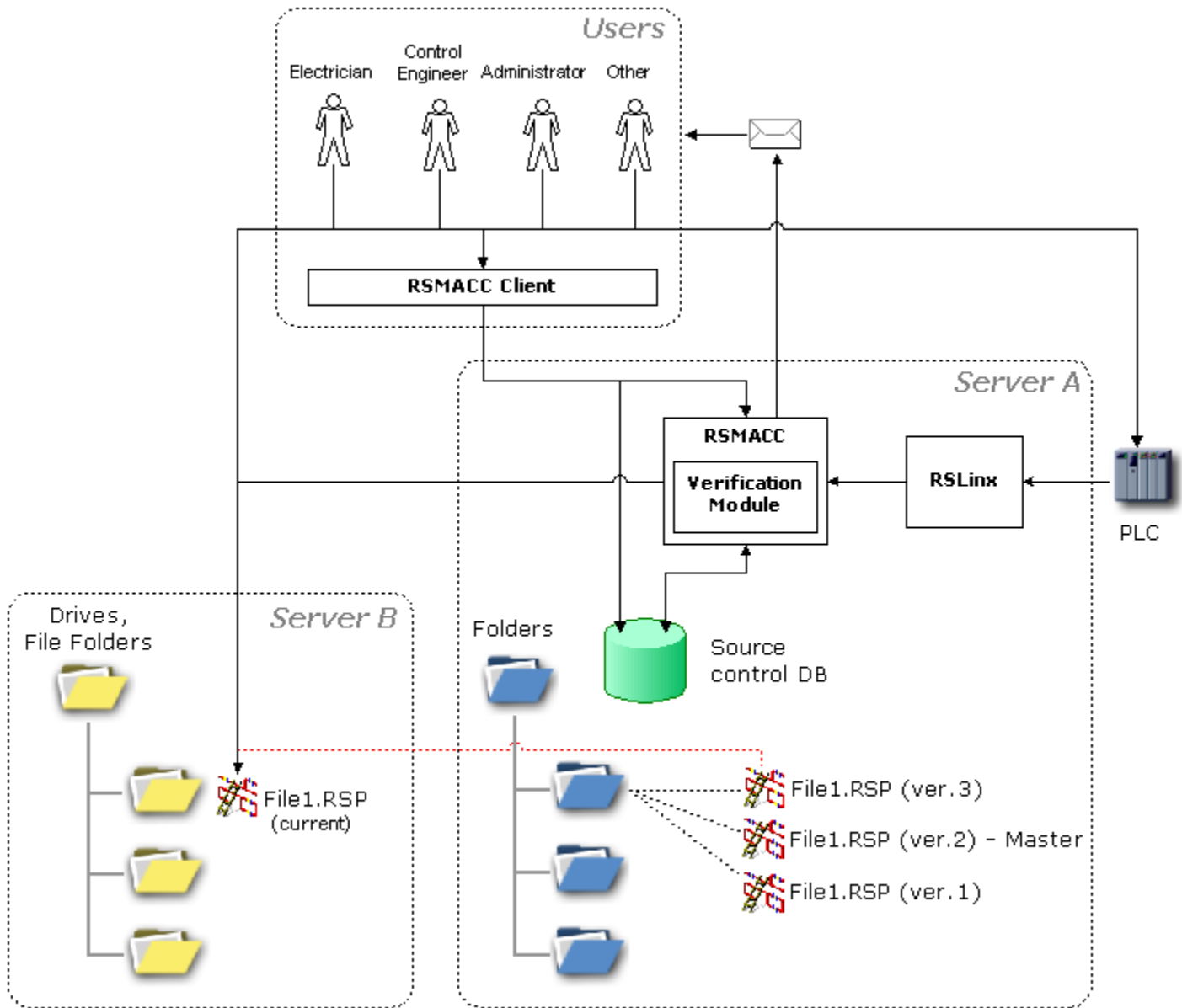




Fig. 1

In most cases activities that would be performed with the PLC logic files and industrial controllers are common. This document will describe these activities in the way of typical scenarios. Provided scenarios may not cover all possible variation of activities. The purpose of the scenarios is to show basic functions and how these functions can be used together in order to achieve desired results.

## List of typical scenarios.

- Scenario 1. Using Get function.
- Scenario 2. Using Check-Out function.
- Scenario 3. Using Check-In function.
- Scenario 4. Using Get and Check-In functions together.
- Scenario 5. Using direct file access approach. (not available in this document).
- Scenario 6. Using direct file access and Check-In function together. (not available in this document).

### 1. Connecting to the Archive database.

**1.1** Prior to use the RSMACC version control system connection to the Archive database must be established. Start the RSMACC client program: **Start> Programs> Rockwell Software> RSMACC> RSMACC**. Click the "Toolbox" button , on the opened menu click the "Archive Module" button . The Archive Module interface will open. On the top menu click the "Database" item, then click the "Server registration" item. In "Manage Server Registration" window click the "Add New" button. In Server Location field type a name of the server where the Archive data base is located, for example "Server". In the Database Name field type a name of the Archive database, for example: "Archive" (Fig.2). Click the "Accept" button. In the "Registered Servers" window select newly created server and check the "Use this as the default server" box (Fig.3).

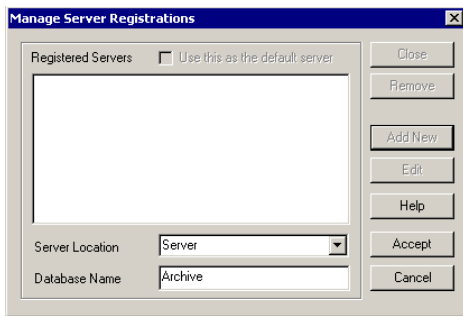


Fig.2

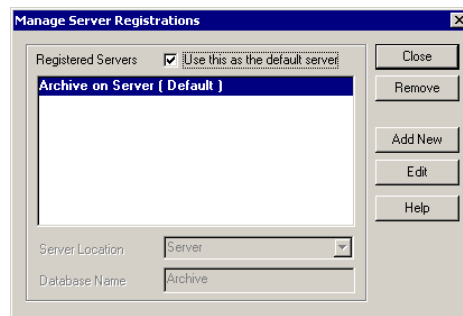


Fig.3

**Note!** Contact RSMACC system administrator to receive a valid server and database names.

Finalize registration process by clicking the "Close" button. In the RSMACC client window on the top menu click the "Database" item, then click the "Login" item. If connection and settings are correct a "File Repository" tree will be displayed in the right panel of the Archive Module window (Fig.4).

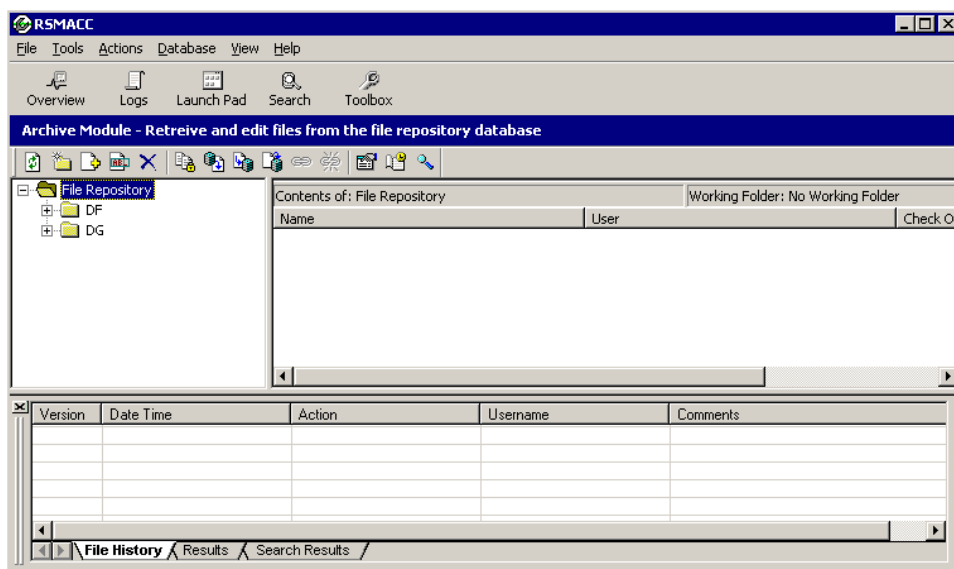


Fig.4

**Access rights notification!** Please note that the types of activities that can be performed by the user based upon the user rights. The list of rights is described below:

**(R) – Read** Gives the user read-only rights to the selected folder. This means a user can files, but cannot make any changes and return them to Archive.

**(C) – Check Out/Check In** Gives the user the right to check files from the selected folder in and out of Archive as well as to read files.

**(A) – Add/Rename/Delete** Gives the user the right to add, rename, and delete files and subfolders in the selected folder. This also gives the user Read and Check Out/Check In rights to the folder.

**(D) – Destroy** Gives the user the right to permanently destroy files in the selected folder. (Deleted files remain in the database although they don't appear in Archive. Destroying a file permanently removes it from the database.) This also gives the user all other rights: Read, Check Out/Check In, and Add/Rename/Delete.

(RSMACC Archive online help)

Further in this manual all functions or scenarios will have there access rights indicator displayed in the following format **(R,C,A,D)**. When a particular function or scenario required a limited access this will be reflected in there access rights indicator. For example **(\_,\_,A,D)** – indicates a function with limited access to it and only the users who has (A) – Add/Rename/Delete and/or (D) – Destroy rights enabled can perform this function or scenario.

**1.2** Creating "Working Folder": A "Working Folder" describes a local (located on the local disk) file folder where files from the Archive database would be retrieved to. In the right panel of the Archive Module window right click the root of a "File Repository" tree. In the opened menu click the "Set Working Folder" item (Fig.5).

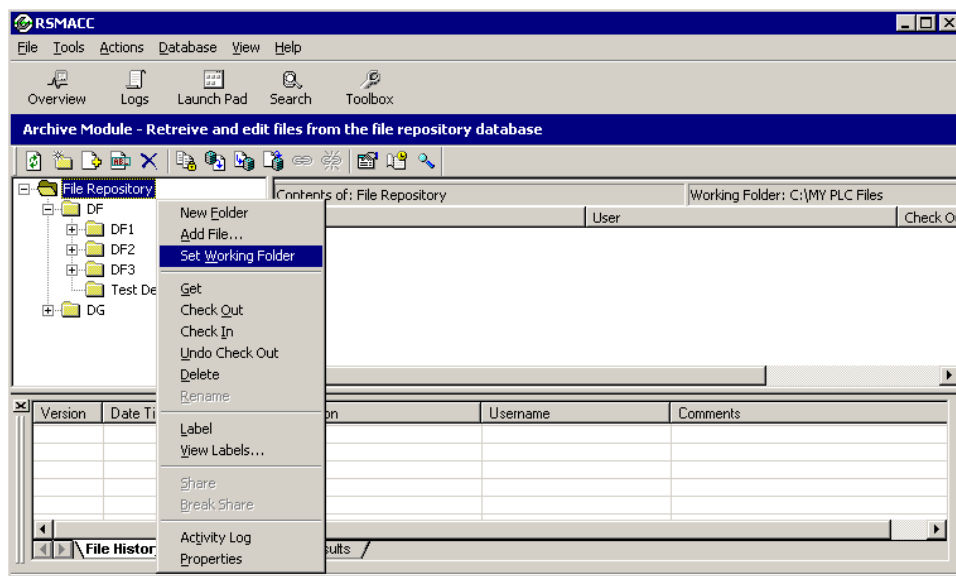


Fig.5

In open window in the "Folder" field type the name of the folder path where "Working folder" would be assigned to. For example "C:\My PLC Files". Check the "Recursive" box to allow reuse of the folder for all files from this Archive database (Fig.6). Click the "Create Folder" and then the "OK" button.

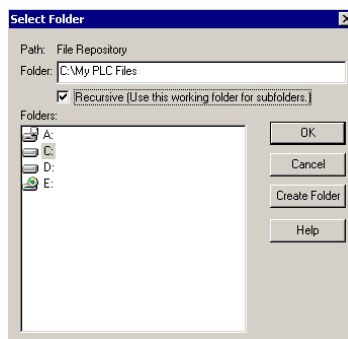


Fig.6

## 2. Scenario 1. Using Get function. (R,C,A,D).

**Get** function will allow retrieving of read or read/write copy of a file version to a local directory from the archive database. This function is very similar by its nature to well known "Copy" function that is used to copy files from one location to another.

When to use: Use the Get function to retrieve a copy of a file to a working folder. This will allow reusing a part or parts of the logic from that file in other files. For example: In the files that in development.

**2.1** Getting the latest(current) version of a file: If not opened open the RSMACC client: **Start>Programs>Rockwell Software>RSMACC>RSMACC**. Click the "Toolbox" button, on the opened menu click the "Archive Module" button. The Archive Module interface will open. Using a File Repository tree navigate to the desired device folder (Fig.7).

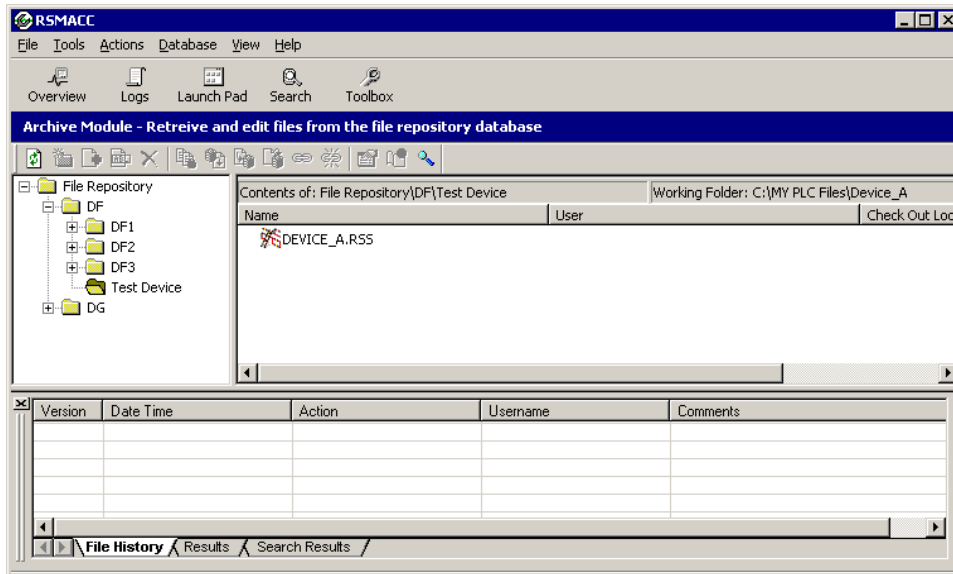


Fig.7

By default **Get** function will retrieve the latest version of a file or pinned version from the archive database. (The pinned version of a file would be described later in this manual.) Get function can be used to retrieve a specific version of the file as well. To retrieve the latest version use right click on a file name. In opened menu click the Get item (Fig.8).

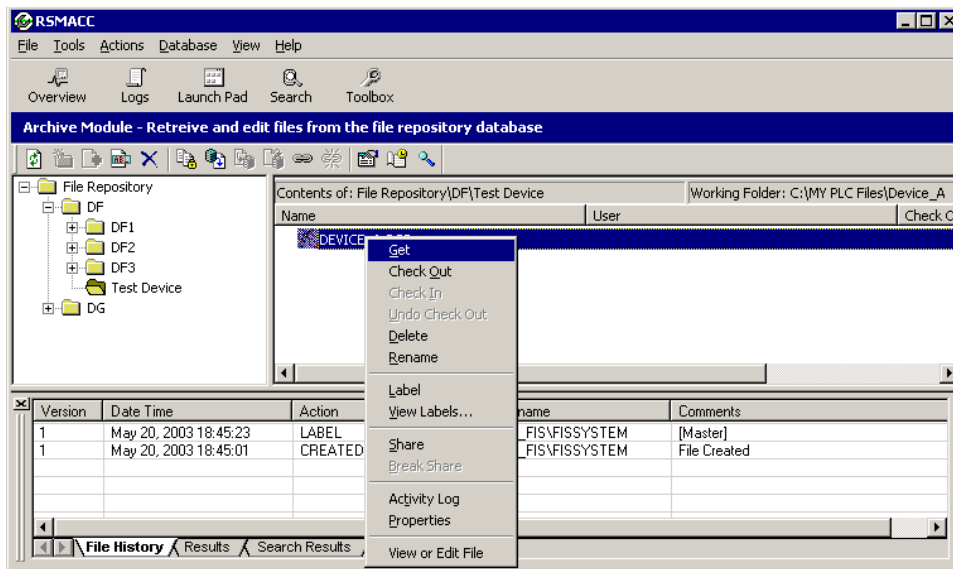


Fig.8

In opened window check that the version of a file would be retrieved to the local "Working Folder". If the "Make Writable" box is checked the retrieved version will have read only flag turned to "off" (Fig.9).

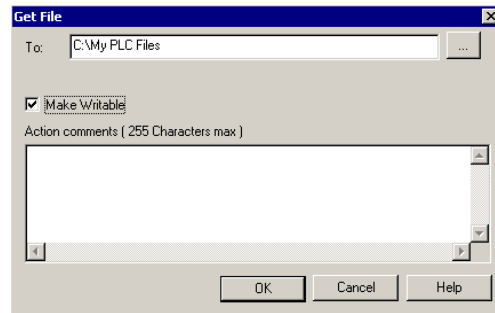


Fig.9

Click the "OK" button. The version of a file would be retrieved to the local "Working Folder". Now the file can be opened and viewed using the RSLogix.

**2.2** Retrieving a specific version of a file: In some cases access to a previous versions of a file may be needed. To Retrieve a specific version of the file use right click on the file name in the right panel of the Archive module window. In opened menu click the "Activity Log" item. Click the "OK" button to view all activities associated with this file name. Select the previous version of the file and click the "Get" button (Fig.10). Check the "Make Writable" box if needed. Click the "OK" button. Version #1 of the file would be retrieved to Working Folder.

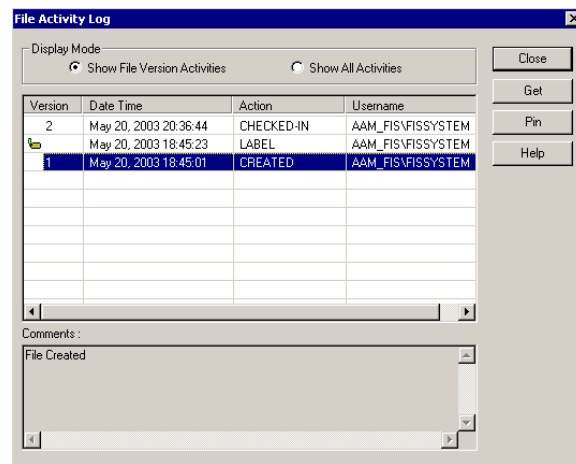


Fig.10

**2.3** Getting the latest or pinned version of a file and launching associated application. This is probably the most efficient way of getting the file for immediate use. In the right panel of the Archive module window double click the file name. In opened dialog window check the "Get a local copy of file and launch associated application" radio button (Fig.11). The copy of a file would be retrieved to a local directory and associated application will opened the retrieved file automatically.

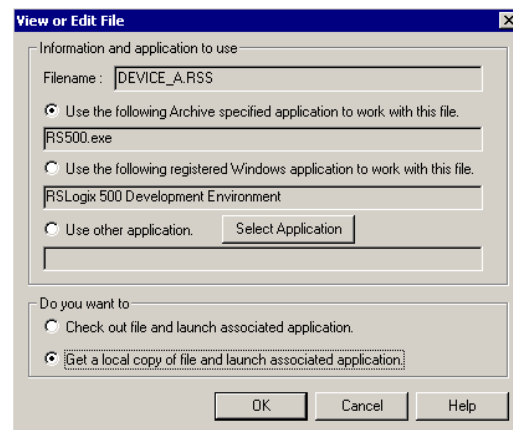


Fig.11

*Note! Get function can be used not only at the file level it can be performed with folders as well.*

*Any changes saved to the file that has been retrieved using Get function cannot be sent back to the version of a file that is stored in the Archive database. Other methods will allow saving a changed version of that file back to the database.*

### 3. Scenario 2. Using Check-Out function. (L,C,A,D).

**Check-Out** function will allow retrieving of a copy of a file version to a local directory from the archive database.

*Note! Unlike the Get function the Check-Out function always retrieve the latest version of a file from the Archive database.*

When to use: Use the Check-Out functions when planning to apply a new changes to the controller logic. By checking out the file you prevent other users from checking out the same file. User who checked out the file reserve exclusive rights to make a changes to this file.

- Scenario example:
1. File checked out.
  2. New changes applied to the logic.
  3. File downloaded to the controller.
  4. File checked in.

*Note! While file is checked out and new changes already downloaded to the controller the upload and verification process will keep failing until a new version will be checked in back to the Archive database.*

**3.1** Checking out the file: There are several methods for checking out the file.

3.1.1 Quick check out. Use right click on the file name. In opened menu click the Check Out item (Fig 12).

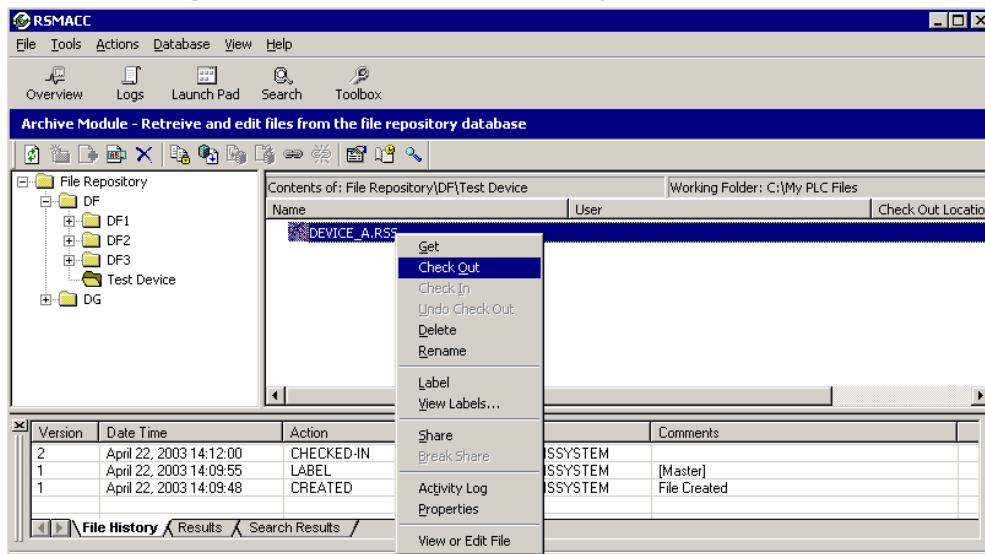


Fig.12

In opened window check that the "To:" field is set to a local "Working Directory" (Other directory can be used as well). The "Don't get local copy" box must be unchecked. Click the "OK" button (Fig.13). The latest version of a file would be placed to a local "Working Directory".

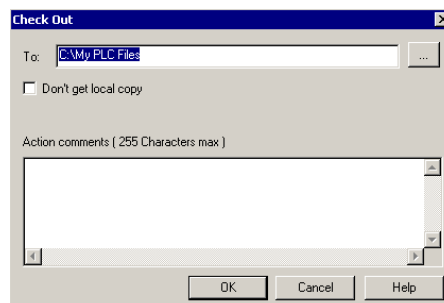



Fig.13

The  indicator will be displayed next to a file icon, representing that the file has been checked out (locked) (Fig.14). Information about the user who checked out the file and the destination where it has been checked out will be displayed in the right panel of the Archive module window. Retrieved file now can be opened for editing.

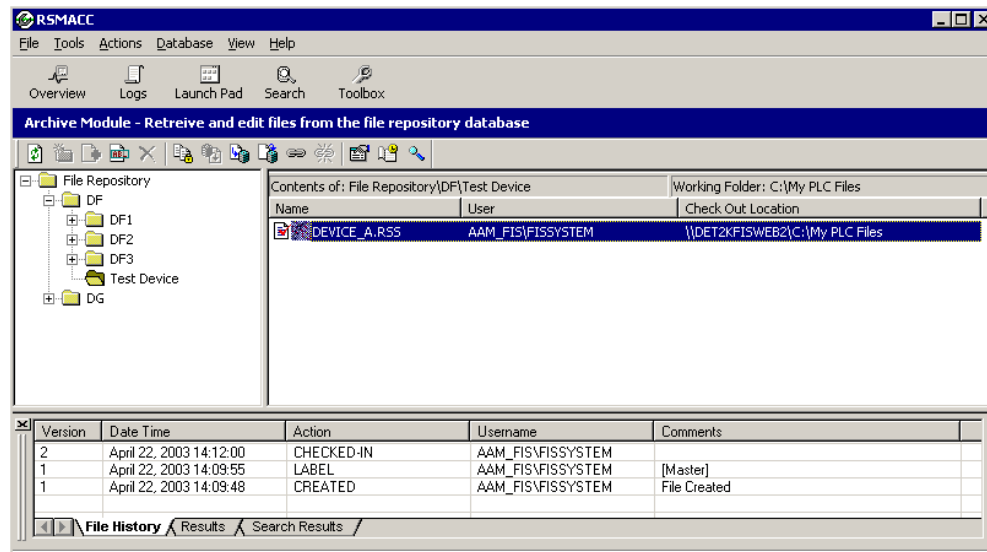


Fig.14

3.1.2 Check Out file and launch associated application. In the right panel of the Archive module window double click the file name. In opened dialog window check the "Check out file and launch associated application" radio button. The file would be checked out to a local directory and associated application will be opened the checked out file automatically.

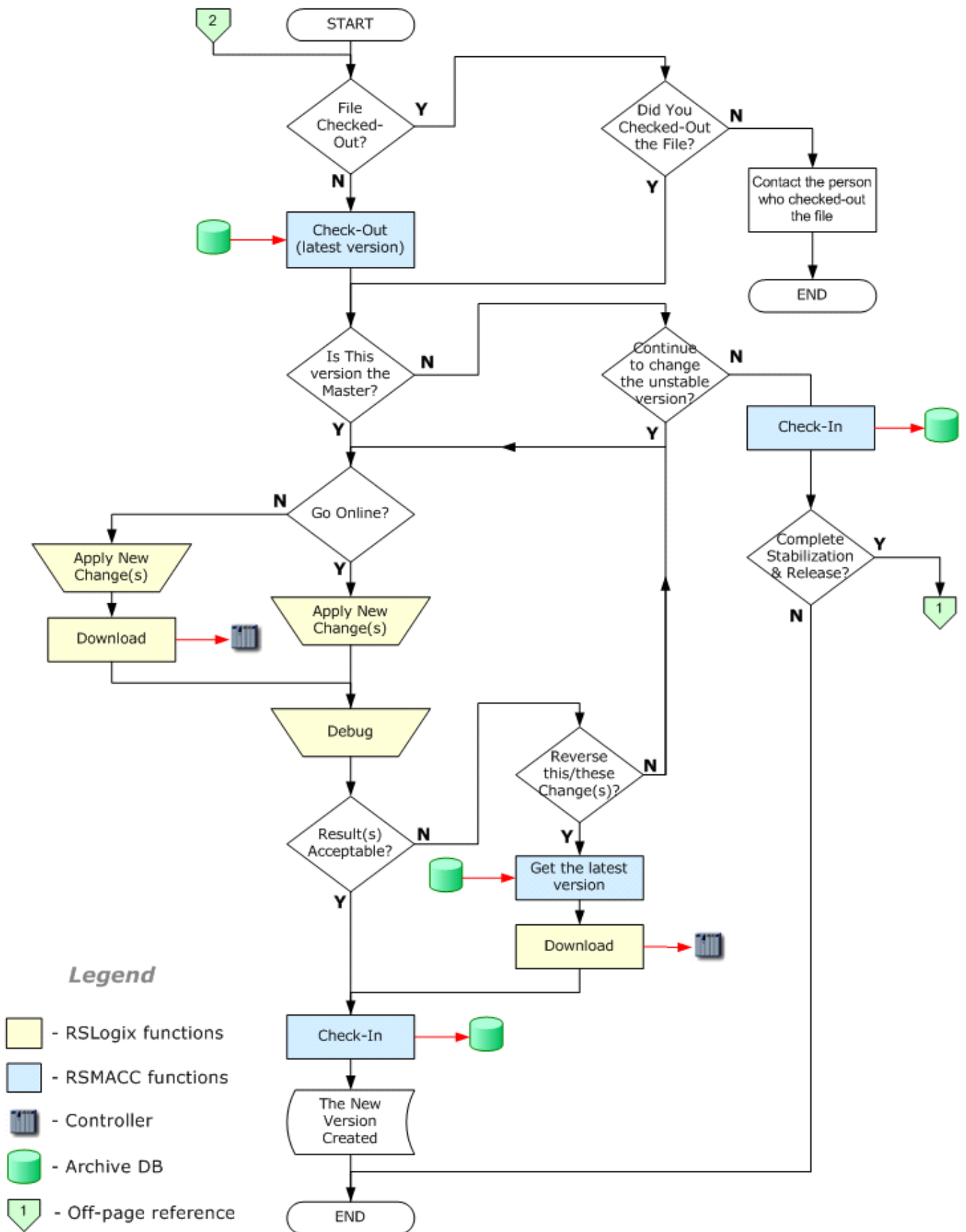
#### 4. Scenario 3. Using Check-In function. (\_\_,C,A,D).

**Check-In** function is function reversal to Check-Out. It will move a checked out version of a file back to the Archive database. As an option a copy of a checked out version of a file can be kept in Working folder.

Note: If changes (file was saved) were made to the checked out version of a file a new version of a file will be created in the Archive database when modified version is checked in. A lock would be released from a file.

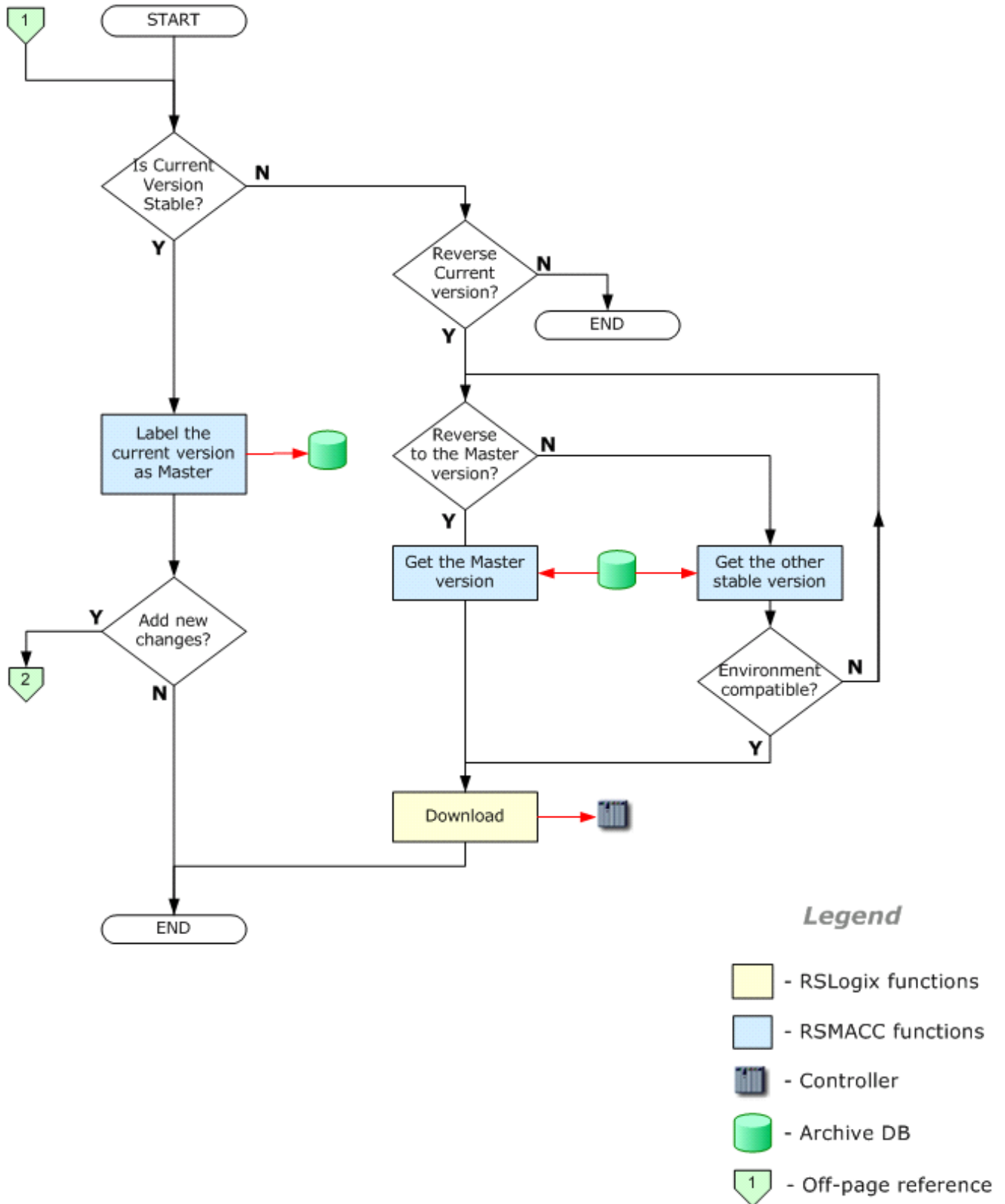
When to use: Use the Check-In function when new changes added to the checked out version of a file and new version downloaded to the controller. If new changes are acceptable and successfully tested in production.

## Appendix A Implementing a new change with RSMACC.

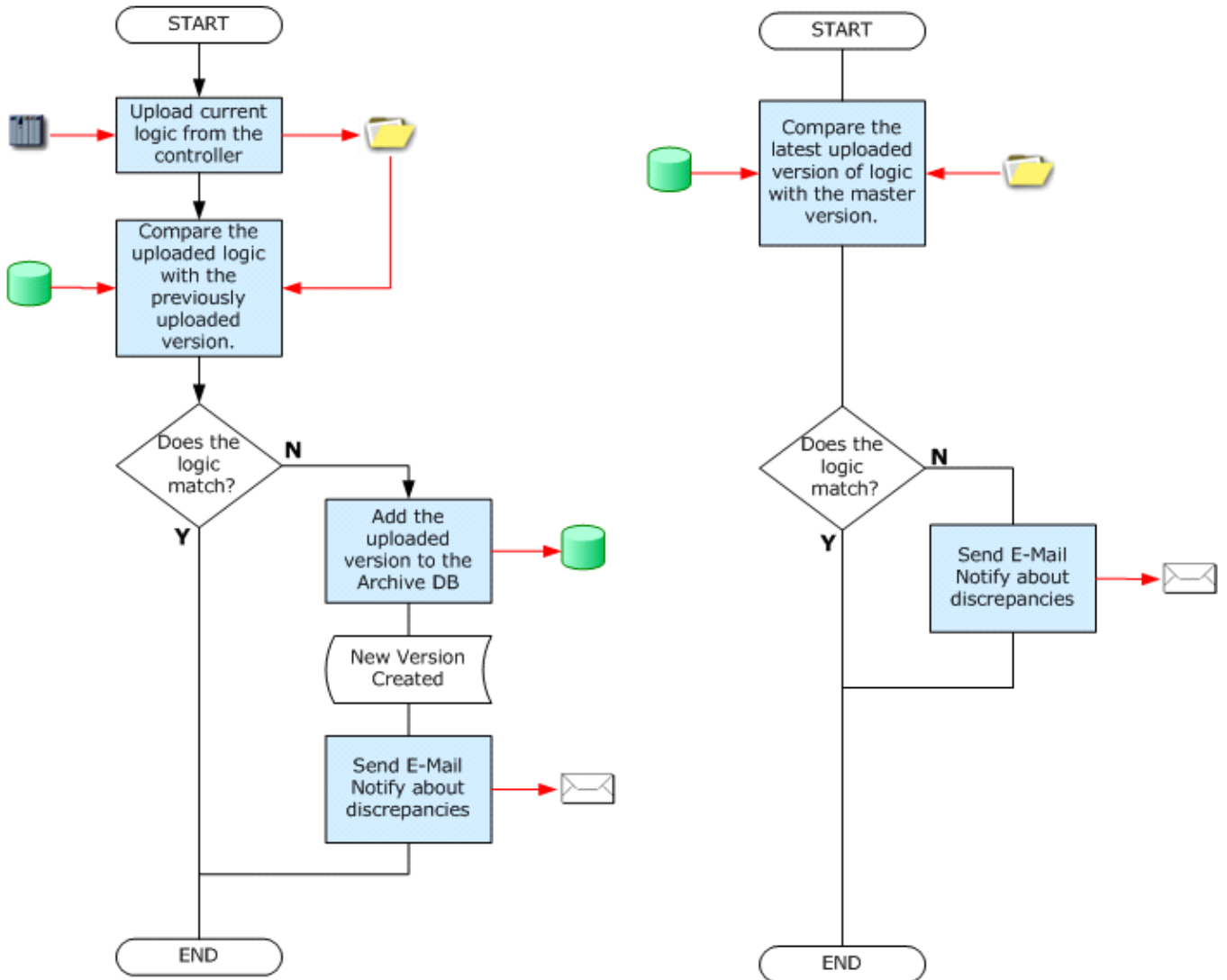








## Appendix B Stabilization and Release Scenario with RSMACC



**Appendix C and D** RSMACC Automatic Change Detection and Master Compare Schedules.



**Legend**

-  - RSMACC functions
-  - Controller
-  - Production File folder
-  - Archive DB
-  - E-Mail

**Appendix E** Evolution of Versions and Changes (Abstract). This is Version(Logic) centric view, in comparison to device centric.

