

IBM Rational DOORS
Requirements Management Framework Add-On



IRDRMFAO INSTALL GUIDE

*IBM Rational DOORS Requirements
Management Framework Add-on
IRDRMFAO Install Guide
Release 6.0.0.3*

Before using this information, be sure to read the general information under the “Notices” chapter on page 35.

This edition applies to **VERSION 6.0.0.3, IBM Rational DOORS Requirements Management Framework Add-on** and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright IBM Corporation 2009-2011

US Government Users Restricted Rights—Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Table of Contents

<u>1 INTRODUCTION.....</u>	<u>6</u>
<u>2 CHECK THAT YOU MEET THE PREREQUISITE.....</u>	<u>7</u>
<u>3 INSTALL IRDRMFAO.....</u>	<u>8</u>
3.1 Select the language to be used by the installer.....	8
3.2 Warning.....	8
3.3 Accept Licence.....	9
3.4 Choose DOORS version.....	10
3.5 Select the installation Mode.....	11
3.6 Select the installation Directory.....	12
3.7 End of installation.....	13
<u>4 SILENT INSTALLATION.....</u>	<u>16</u>
4.1 Create the response file.....	16
4.2 How to run the installer in silent mode.....	17
<u>5 UNINSTALL IRDRMFAO.....</u>	<u>18</u>
5.1 Confirm uninstallation.....	18
5.2 Do uninstall.....	18
<u>6 MODIFICATIONS IN THE ENVIRONMENT.....</u>	<u>20</u>
<u>7 MENUS CONFIGURATION.....</u>	<u>24</u>
<u>8 TROUBLESHOOTING.....</u>	<u>26</u>
<u>9 UPGRADE OF IRDRMFAO PROJECTS.....</u>	<u>27</u>
<u>10 CLIENT CONFIGURATION.....</u>	<u>32</u>
<u>11 COMPLEMENTS.....</u>	<u>33</u>

<u>12 NOTICES</u>	<u>35</u>
--------------------------------	------------------

1 Introduction

This document describes the procedure to install **IBM® Rational® DOORS® Requirements Management Framework Add-on** on your computer. This software has been previously delivered by Telelogic as a Professional Service Asset named **DOORS T-REK**. **IBM® Rational® DOORS® Requirements Management Framework Add-on** is now an IBM Rational product in the continuity of **DOORS T-REK**. Depending on the context, customers installing **IBM® Rational® DOORS® Requirements Management Framework Add-on** may install the add-on on top of DOORS or they may upgrade an existing install of **DOORS T-REK**. The two cases are supported by the software.

The install Wizard will drive the installation for you but some restrictions are applied and will be specified in the next chapters.

In the body of this document IRDRMFAO or RMF means **IBM® Rational® DOORS® Requirements Management Framework Add-on**.

The Installation Wizard allows you to install IRDRMFAO in several ways:

- **Full installation** : it means that all the IRDRMFAO files will be installed on your computer, either :
 - In the directory where the DOORS client was installed (default mode)
 - In another directory (mode called “out of place” installation)
- **Workstation installation** : it means that your IRDRMFAO installation will depend on a full installation done on a file server. The main advantage of this installation mode is the ease of maintenance : when upgrading to a newer version of IRDRMFAO, you only need to perform one single installation, on the file server.

BEWARE !

To upgrade a workstation installation of DOORS T-REK 5.3p2 (or earlier) to IRDRMFAO 6.0.0.3 you have to (re)install IRDRMFAO on all the client computers because the client installation is not backward compatible with a client installation for T-REK

The Installation Wizard is available in three languages: English, French and German.

IRDRMFAO also supports **Silent installation**. In this mode the interactions with the user are replaced by a parameter file. See § 4 “Silent Installation” to learn how to setup and run a silent installation.

IRDRMFAO contains also a binary component, allowing using the graph layout capabilities of Graphviz. This binary component is the program GraphvizContainer.exe. It is executed when the **Explorer** is called, in order to generate the graph layouts.

2 Check that you meet the prerequisite

Before installing any version of IRDRMFAO , it is required to uninstall any previous version of IRDRMFAO or of DOORS T-REK.

- To install IRDRMFAO, you must have Administrator rights.
- Your computer must have at least 43 MB of free disk space for a full installation, or only 1 MB for an installation in workstation mode.
- IRDRMFAO 6.0.0.3 is restricted to Windows platforms and compatible with DOORS versions :
 - DOORS 9.1
 - DOORS 9.2
 - DOORS 9.3
- The WEXP and the irdrmfao.dot modules of IRDRMFAO are compliant only with all versions of Word starting from Word 2000 up to Word 2010.
- Check that you have rights to create files into the DOORS Home directory (directory where DOORS has been installed) and to modify the Windows Registry.
- Only one version of IRDRMFAO may be installed with the Wizard. This install is not compatible with the existence of a previous version of IRDRMFAO or of DOORS-TREK, whatever the version, except in the case where the two installations are for two different versions of DOORS.

3 Install IRDRMFAO

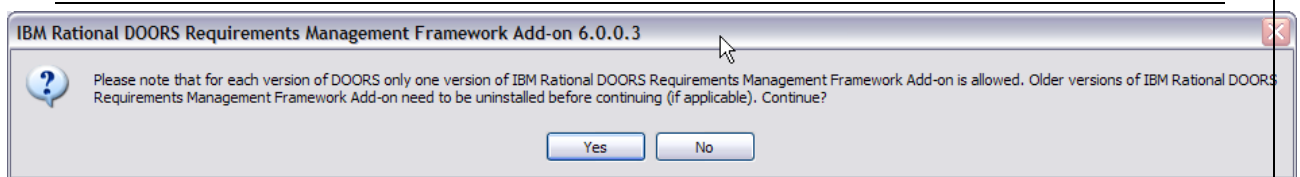
Installing IRDRMFAO with its Installation Wizard is an easy action. Just follow the screenshots, don't forget the prerequisite and everything will be fine.

3.1 Select the language to be used by the installer



This choice only define the language used by the installer. This has no effect on the language for IRDRMFAO (always in english).

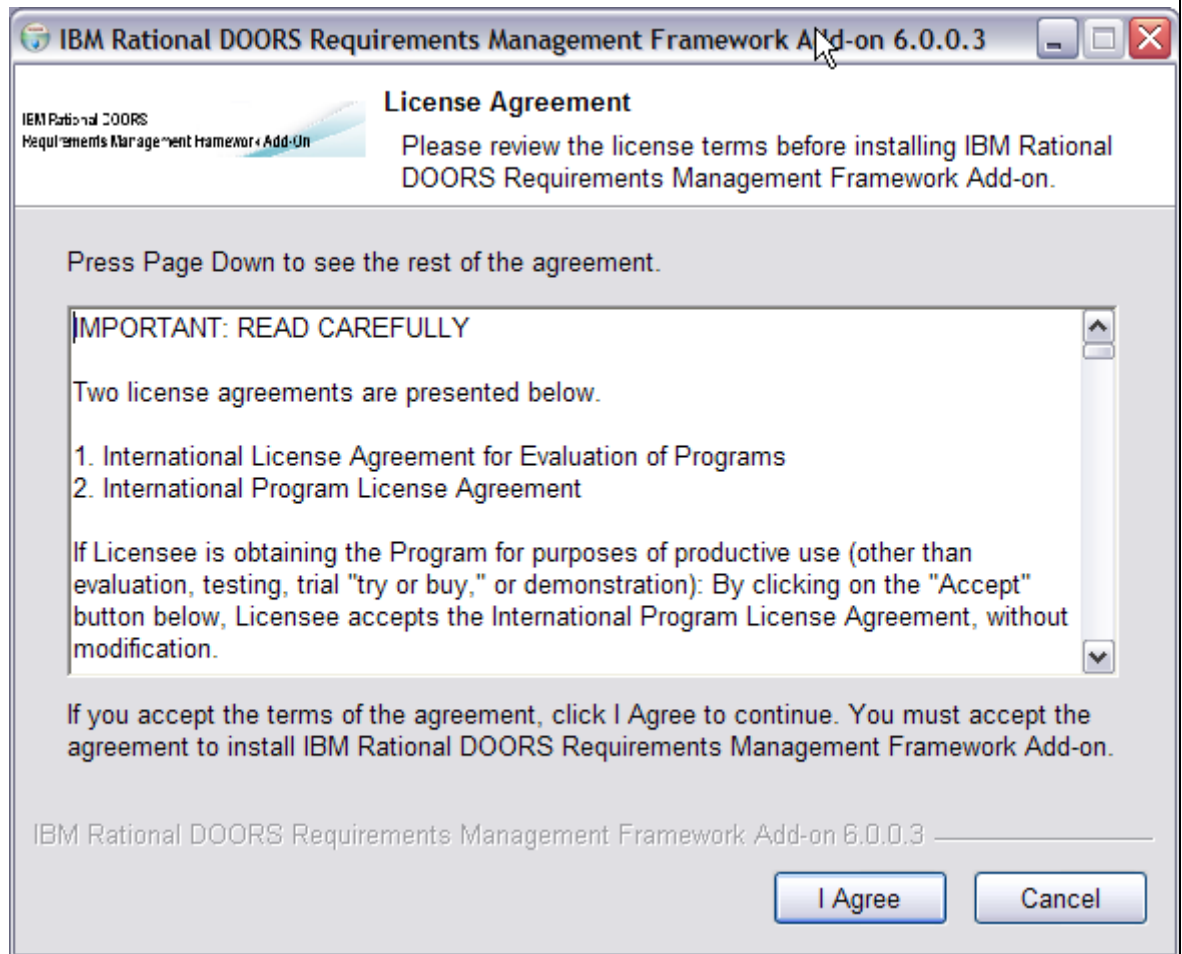
3.2 Warning



The installation wizard can successfully install IRDRMFAO 6.0.0.3 only if no previous version of IRDRMFAO (whatever the version) was installed for the same version of DOORS. Whenever another version of IRDRMFAO has been installed for another version of DOORS, the installation will be successfully performed.

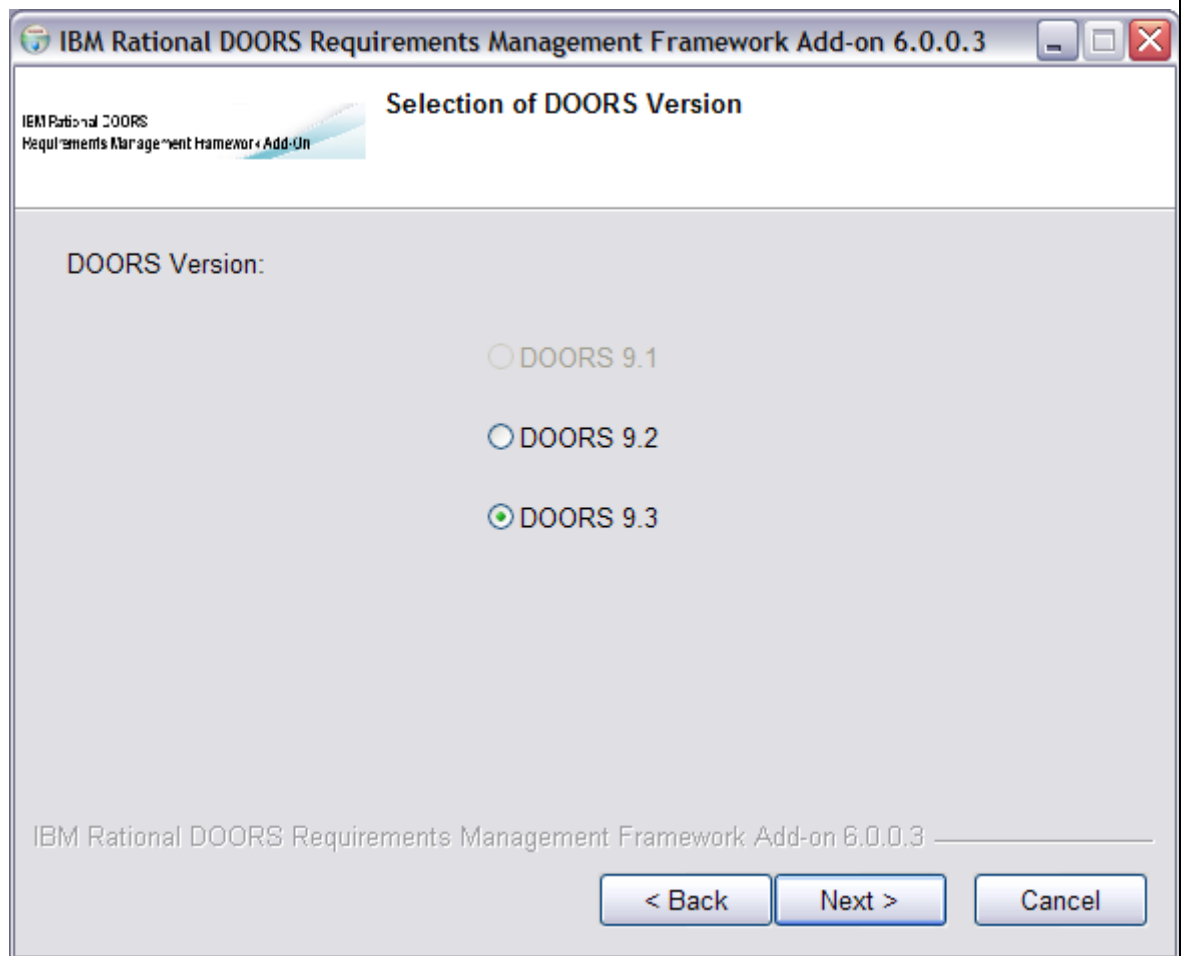
Click “Yes” after checking that IRDRMFAO is not already installed for the version of DOORS that you plan to install IRDRMFAO 6.0.0.3 against. Otherwise, click « No » and then uninstall IRDRMFAO before running the installed again.

3.3 Accept Licence



After reading this agreement, accept it to continue the installation or deny it to quit the installation.

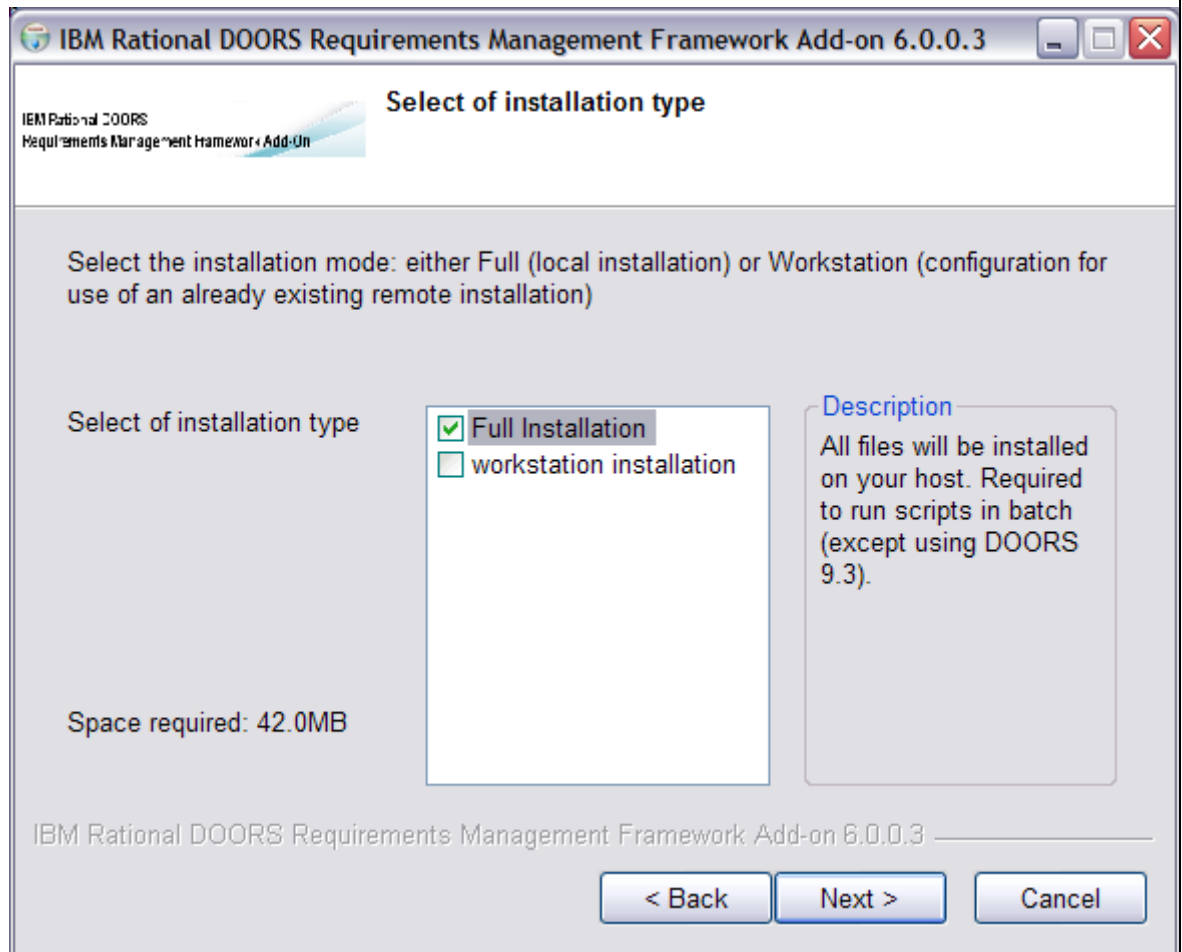
3.4 Choose DOORS version



In this page, simply choose for which version of DOORS, IRDRMFAO will be installed. To install IRDRMFAO on several DOORS versions, you have to execute the Installation Wizard several times.

The installer automatically detects which version of DOORS is installed so that the choice of a version that is not installed, is disabled (greyed out).

3.5 Select the installation Mode



In this page, you are asked to choose either to fully install IRDRMFAO on your computer, or rely on a remote installation of IRDRMFAO.

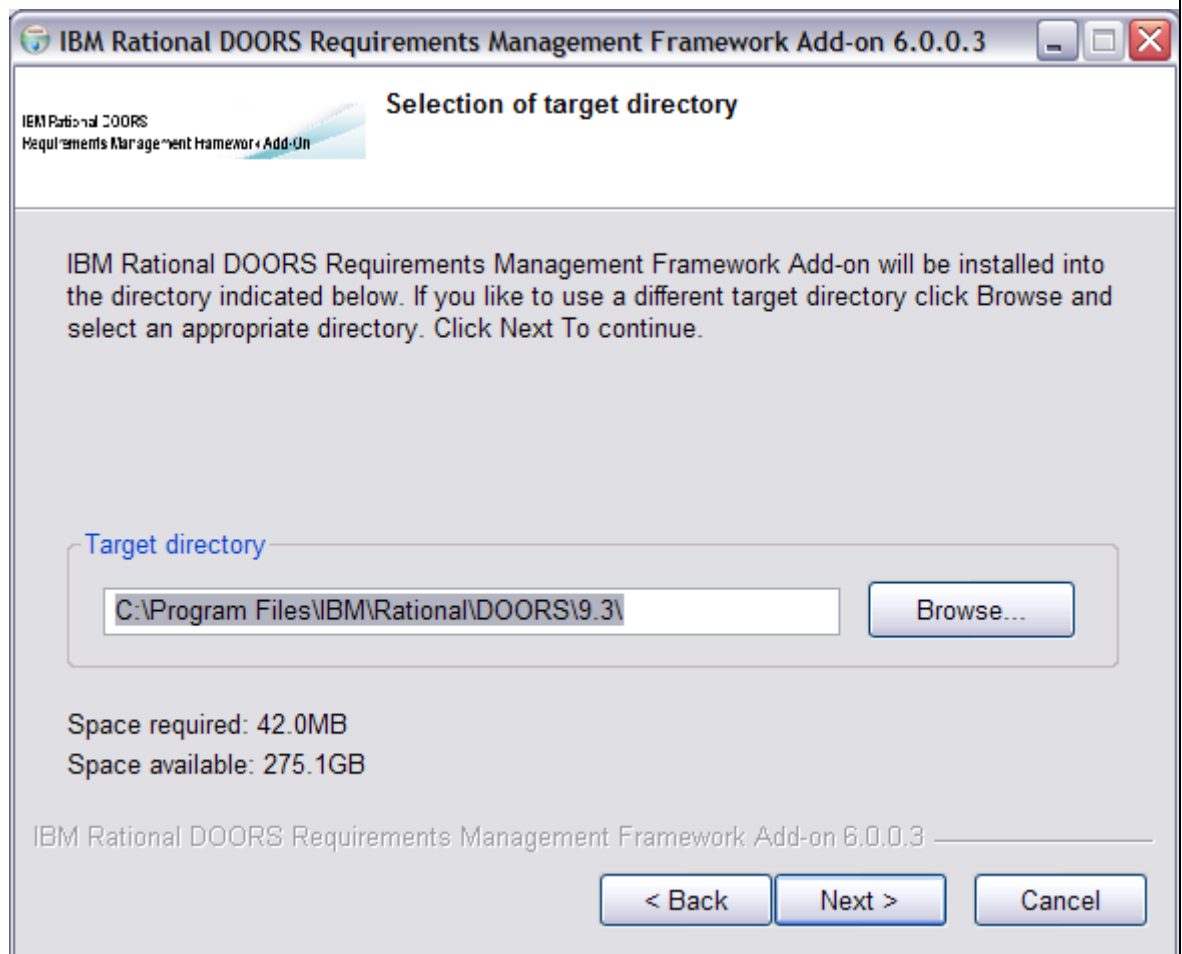
This second possibility called "workstation installation" consists in configuring the selected version of DOORS to use a remote installation. The advantage of this workstation installation is the simplicity to upgrade to a newer version of IRDRMFAO later on. There is no need to upgrade IRDRMFAO on each DOORS client computer: only the shared installation of IRDRMFAO shall be changed.

BEWARE !

To run scripts in batch mode, RMF must be installed in "full installation" mode and in the default directory (the HOME of DOORS)

This limitation does not apply if you are using DOORS 9.3

3.6 Select the installation Directory



Depending on the installation mode that has been chosen, you are asked to enter in this page :

- in the “full installation” mode : the directory where IRDRMFAO should be installed
- in the “workstation installation” mode : the path to a remote installation of IRDRMFAO.

This path to be entered is the directory where IRDRMFAO has been installed (in the “full installation” mode), i.e the following sub-directories should exist in that directory: “lib” and “IRDRMFAO”.

Important: To make it easier to install IRDRMFAO in workstation mode, the right path can be automatically provided to the user.

To achieve that, you have to create a file called “IRDRMFAO.INI” containing this path, and run the installer in a directory containing this “IRDRMFAO.INI” file.

The “IRDRMFAO.INI” file shall have the following content:

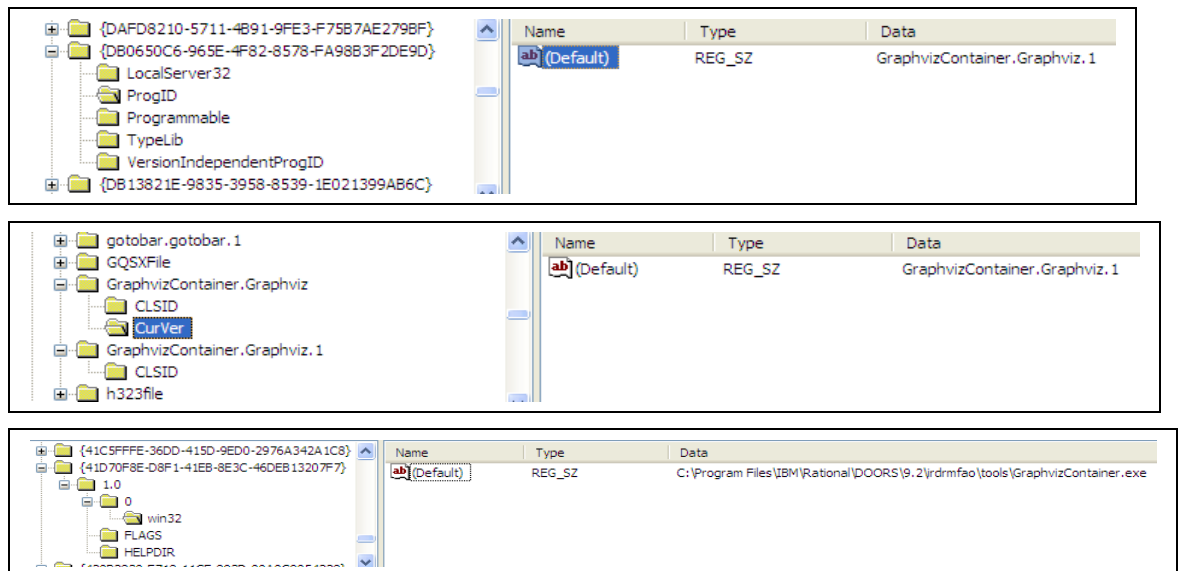
```
[Server]
IrdrmfaoDir=<directory of the remote installation of IRDRMFAO>
```

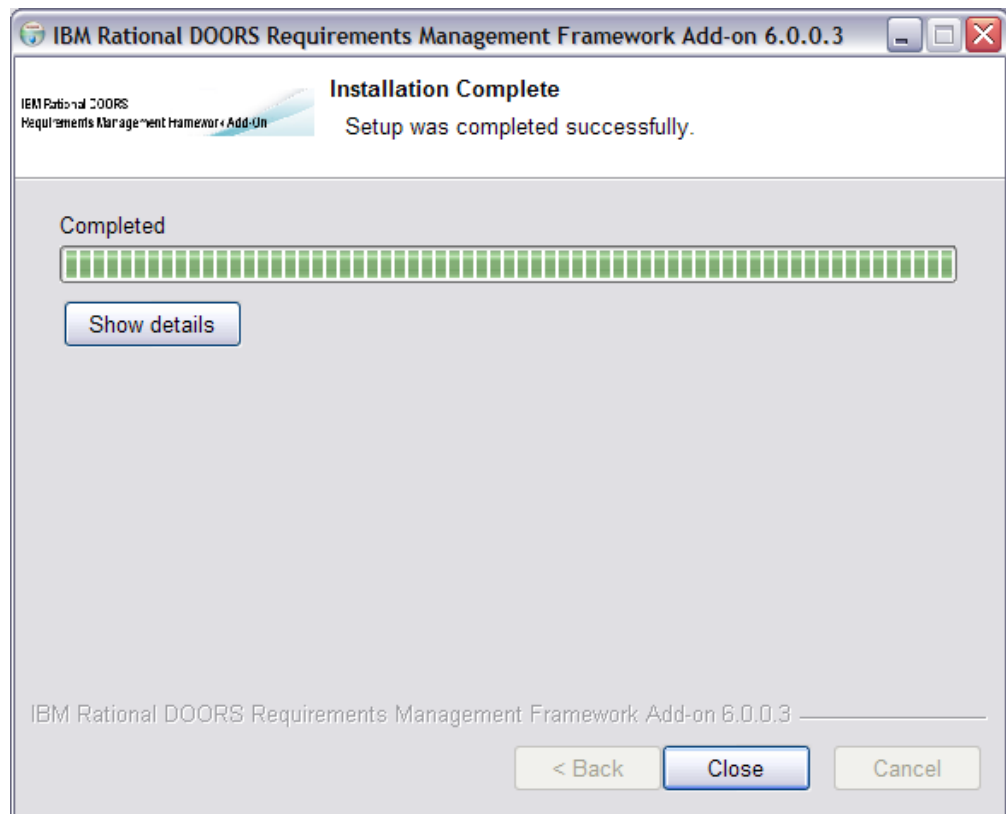
Example:

```
[Server]
IrdrmfaoDir=\\UKSERV1\DOORS\irdrmfao
```

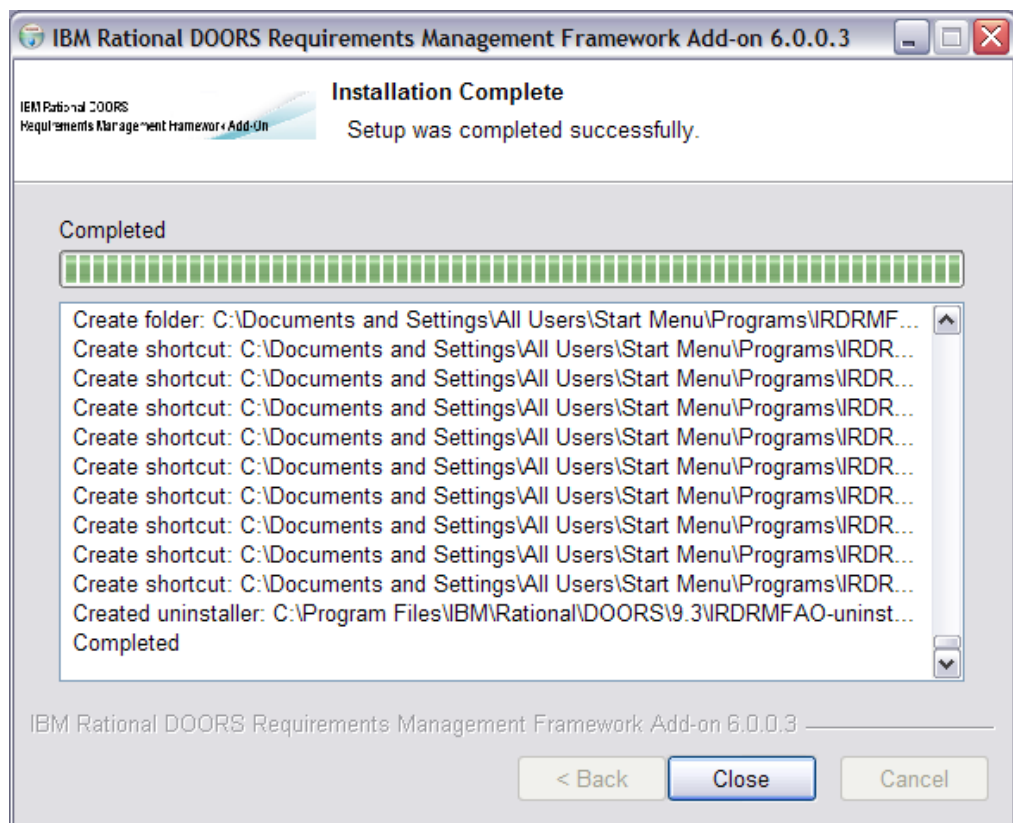
3.7 End of installation

During installation phase, the **GraphvizContainer** executable is registered as an OLE server:



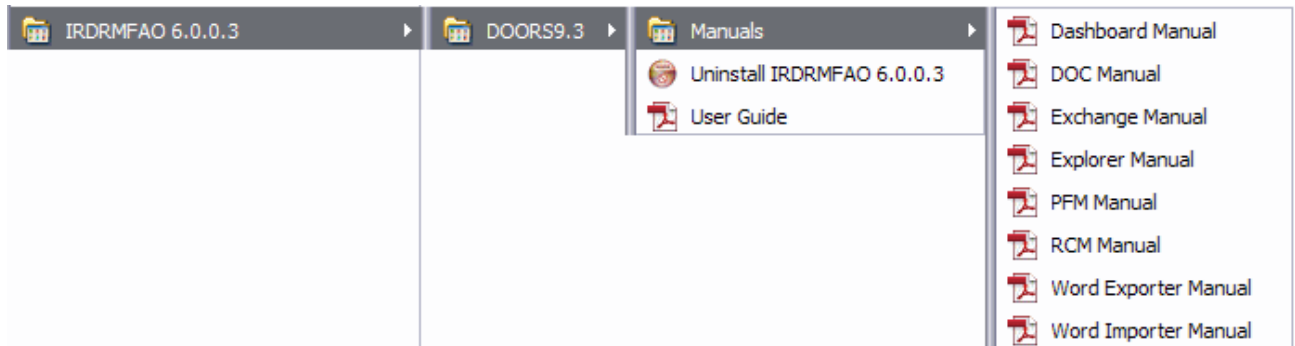


Click on the button “Show details” to obtain precisely what was done.



After the installation of IRDRMFAO, you may check the correct execution of the setup program:

1. A new menu will appear in the Windows start menu and you will have some shortcuts to the IRDRMFAO documentation and the shortcut to uninstall IRDRMFAO.



2. Execute the DOORS client to access to the DOORS data base.

You should have a RMF menu in the DOORS explorer tool, and also in the module windows.

Run the About operation in the RMF menu (for project and for module), a dialog box should be displayed as :



3. Open a Word document.. You should be able to see the IRDRMFAO menu bar, as in:



If the menu bar is not visible, the **irdrmfao.dot** file has not been copied into the Office startup directory and is not visible as a Word complement.

Current version is 1.12. The macros are digitally signed and therefore no longer require your MS Word security options to be lowered to the level “Medium”.

4 Silent Installation

IRDRMFAO supports Silent Installation mode.

When the installer is run, it does not ask anything to the user but instead reads some parameters into a response file.

4.1 Create the response file

The response file shall be called “IRDRMFAO.INI” and be located in the same directory as the installer.

This “IRDRMFAO.INI” file shall have the following content :

```
[SilentInstall]
InstallMode=full OR workstation
DoorsVersion=<version number (see examples below)>
InstallDir=<directory in which IRDRMFAO will be installed - useful ONLY in full mode>
IrdrmfaoDir=<directory of the remote installation of IRDRMFAO - required ONLY in workstation mode>
```

NB :

1. in full installation mode, if the parameter “InstallDir” is missing, then IRDRMFAO will be installed in the Installation directory of DOORS.
2. DOORS version number format : <major>.<minor>
Example: 9.2
3. If the DOORS version provided is not one of the available DOORS versions, then IRDRMFAO is by default installed for the most recent version of DOORS.

Some examples below:

```
[SilentInstall]
InstallMode=workstation
DoorsVersion=9.2
IrdrmfaoDir=\\uranus\rmf6.0
```

```
[SilentInstall]
InstallMode=full
DoorsVersion=9.2
```

```
[SilentInstall]
InstallMode=full
DoorsVersion=9.2
InstallDir=D:\Software\RMF\v6.0
```


4.2 How to run the installer in silent mode

The response file shall be located in the same directory as the installer.

Then simply run the installer passing /S on the command line (case sensitive) :

```
ratlDOORS_RequirementsFrmwork_6-0-0-3.exe /S
```

You can also request the creation of a log file that will contain an error message whenever the installation fails.

```
ratlDOORS_RequirementsFrmwork_6-0-0-3.exe /S /LOG=<file  
path>
```

Exemples :

```
ratlDOORS_RequirementsFrmwork_6-0-0-3.exe /S  
/LOG=C:\temp\IRDRMFAO.log  
ratlDOORS_RequirementsFrmwork_6-0-0-3.exe /S  
/LOG="C:\IRDRMFAO\IRDRMFAO.log"
```

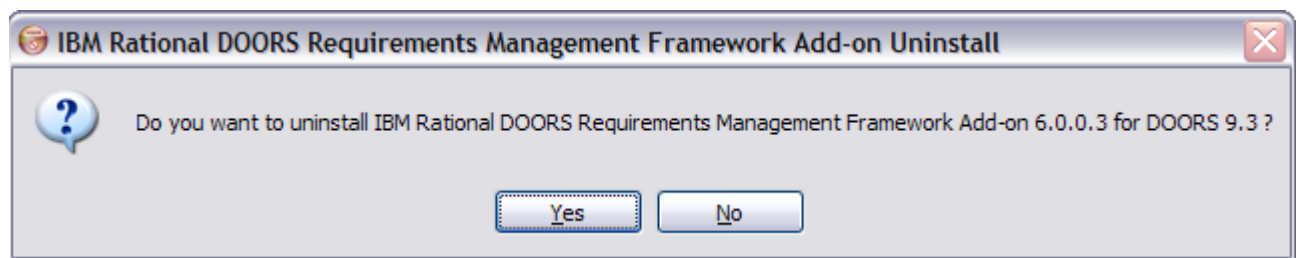
The IRDRMFAO installer returns an error level as a result of its execution, and write the following error messages into the log file :

<i>Error level</i>	<i>Comment</i>	<i>Content of the log file</i>
0	Normal execution (no error)	
2	Installation aborted by script	IRDRMFAO installation aborted : the response file IRDRMFAO .ini is missing
3		IRDRMFAO installation aborted : invalid parameter 'InstallMode' in the file : IRDRMFAO.ini
4		IRDRMFAO installation aborted : none of the supported DOORS versions is installed
5		IRDRMFAO installation aborted : bad or missing parameter 'IrdrmfaoDir' in the file : IRDRMFAO.ini

5 Uninstall IRDRMFAO

To uninstall IRDRMFAO, use the shortcut directly present in the start menu or go directly to “Add/remove Programs” in the Control Panel.

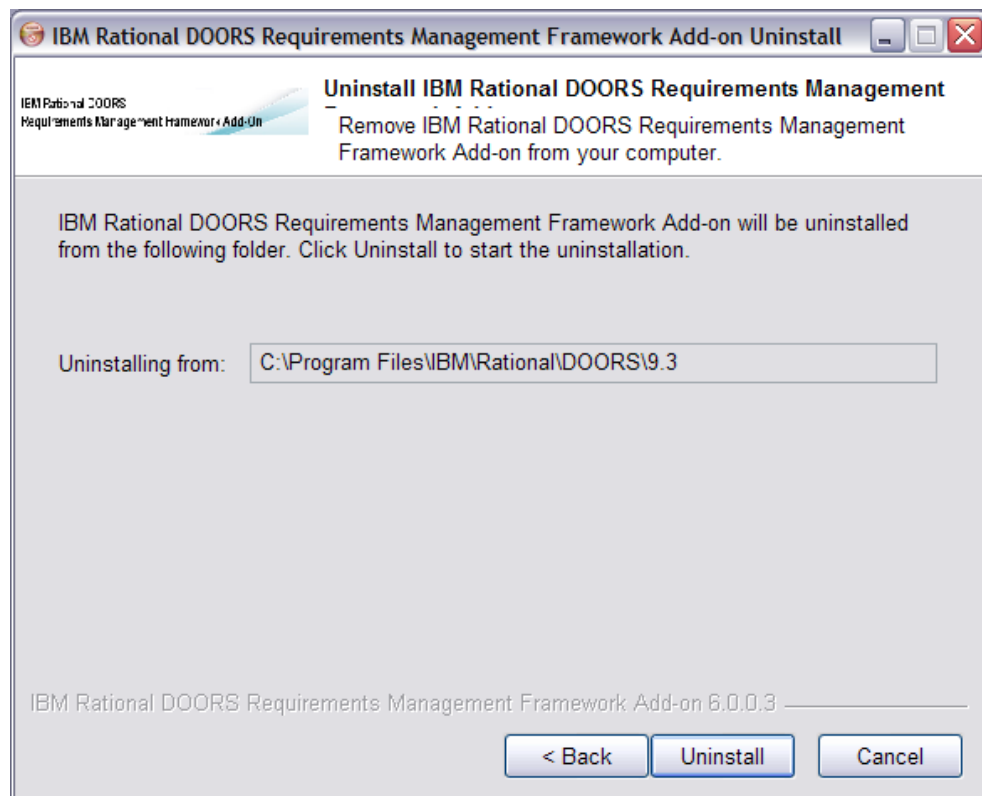
5.1 Confirm uninstallation

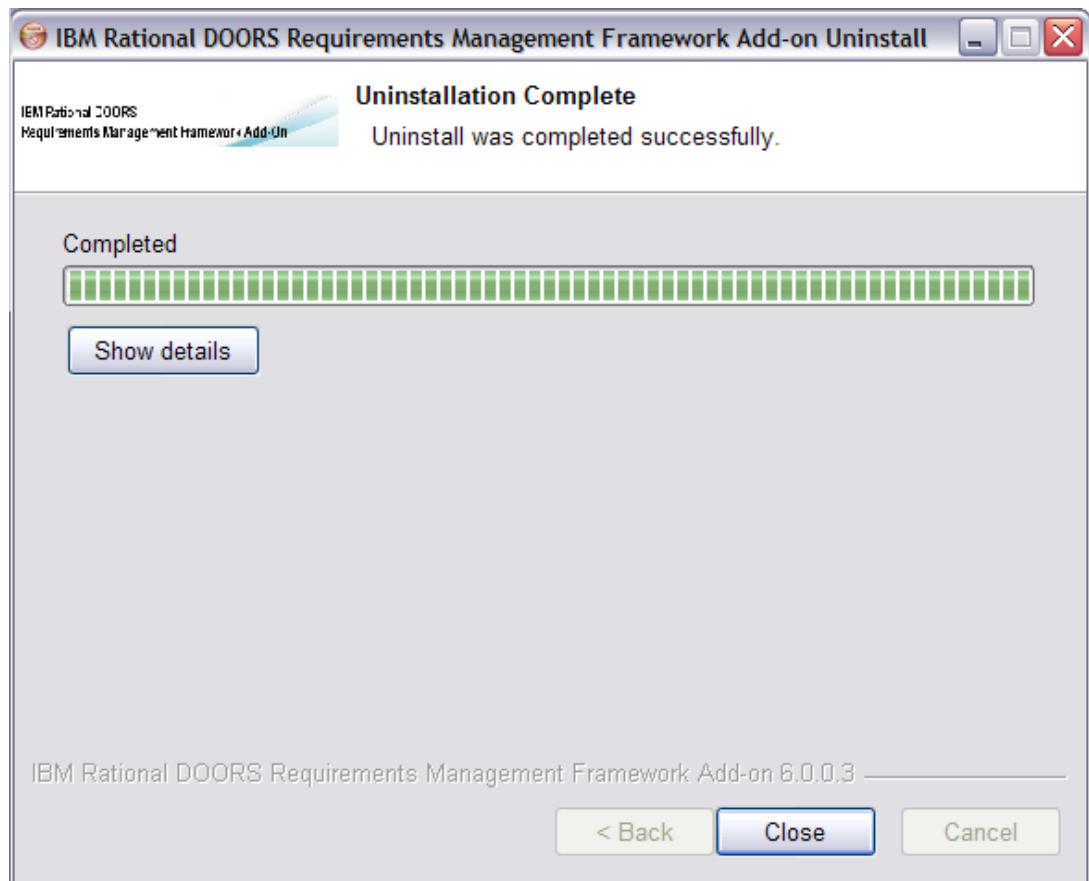


Before beginning the uninstallation, the Wizard will ask you if you want to remove IRDRMFAO.

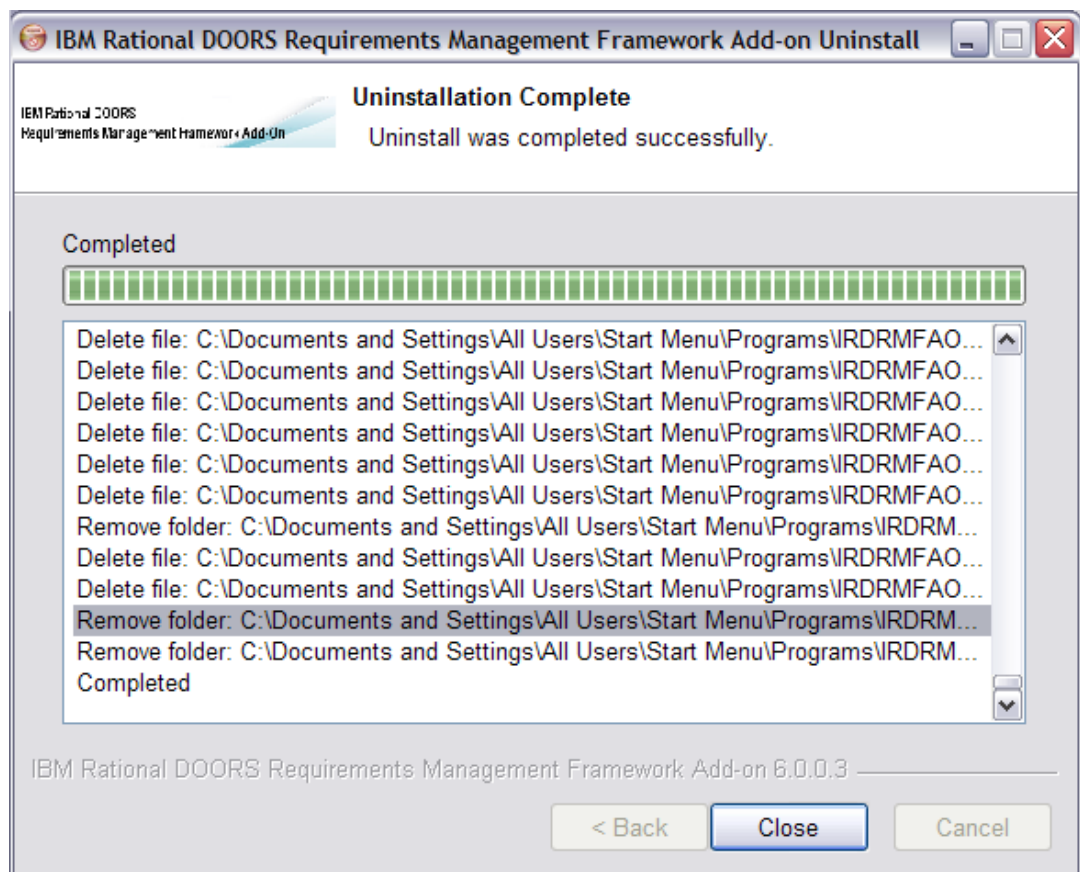
5.2 Do uninstall

After this window, there is no way to return if you decide to uninstall IRDRMFAO. If yes, you will have the next window as follows:





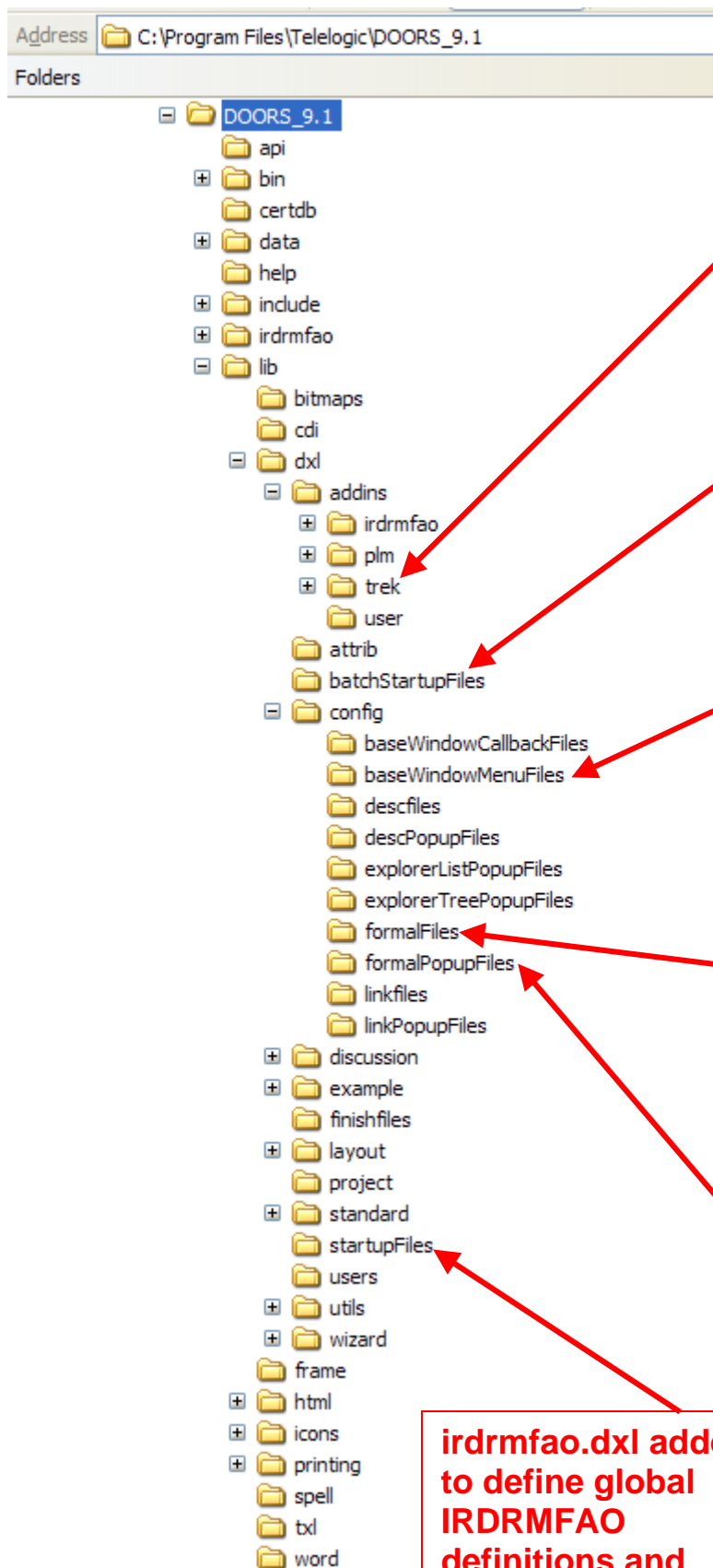
We can click on the button “Show details” to see the details of the uninstallation process.



6 Modifications in the environment

When installing IRDRMFAO, some modifications of your standard DOORS environment occur. Several files are added into the IRDRMFAO standard directories.

Example for DOORS 9.1:



Folder to be used for compatibility with previous versions. It does not impact IRDRMFAO.

irdrmfao.dxl added to define global IRDRMFAO definitions and function in batch mode.

irdrmfao.dxl added to define IRDRMFAO Project menu.

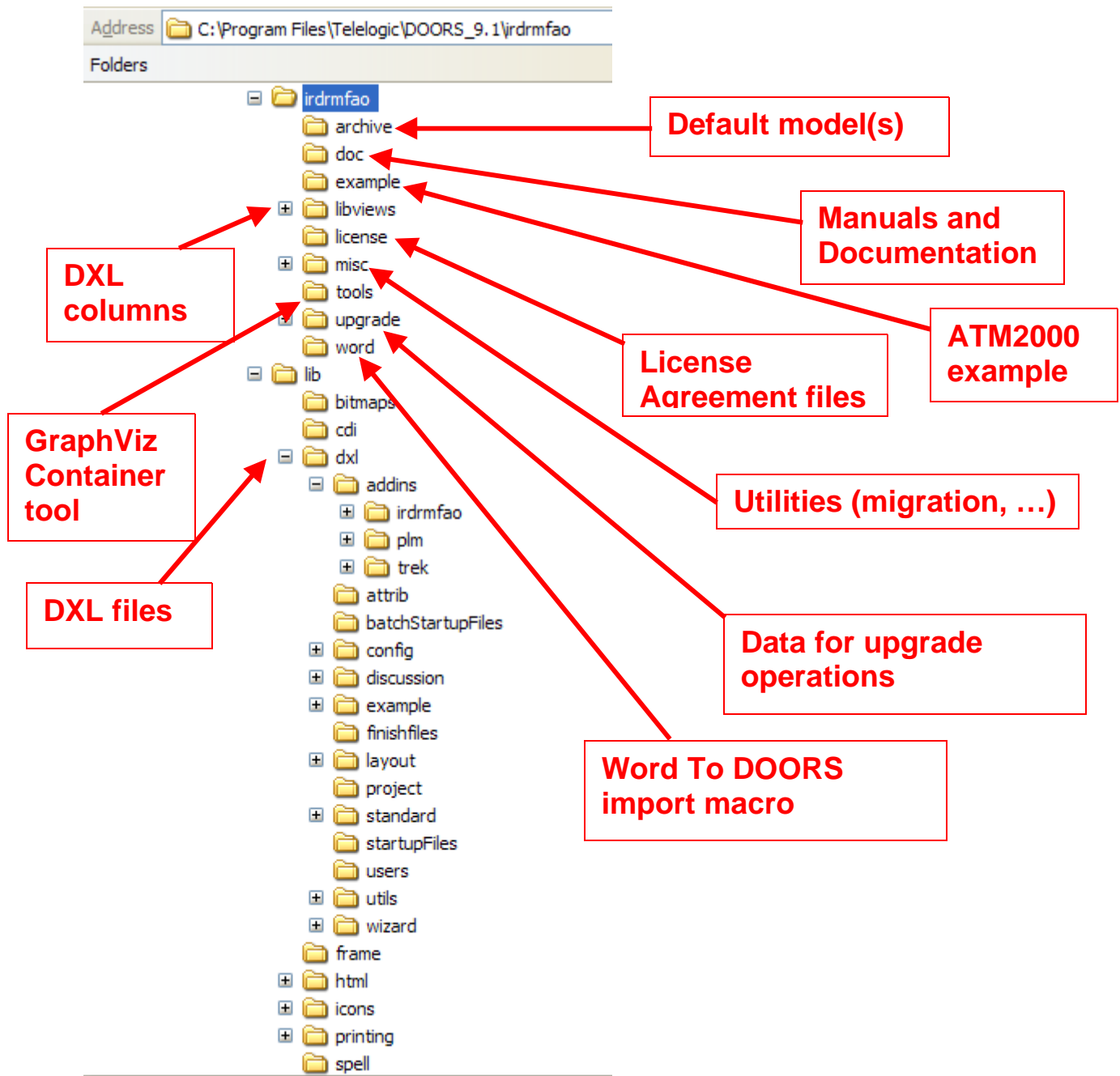
irdrmfao.dxl added to define IRDRMFAO module menu.

irdrmfao.dxl added to define IRDRMFAO popup object menu.

irdrmfao.dxl added to define global IRDRMFAO definitions and functions.

These files are added in case of default installation or out of place installation. In case of an out of place installation, the IRDRMFao install may be anywhere in the file system. These files are source DXL files, but they do not contain DXL definition, but only includes to DXL source files that are located always in the IRDRMFao install directory.

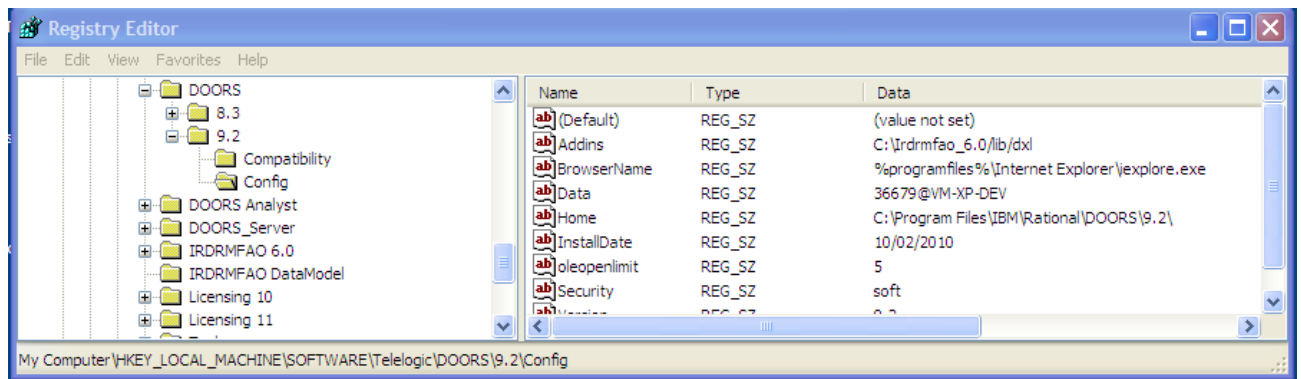
The structure of the IRDRMFao files is displayed in the next figure:



In case of default installation, the “IRDRMFao ” directory is replaced by the DOORS install directory, for example: “C:\Program Files\IBM\Rational\DOORS\9.2”.

The **irdrmfao.dot** Word complement file should be automatically installed into the standard Office startup directory, if not; it is required to copy by hand this file into the right place.

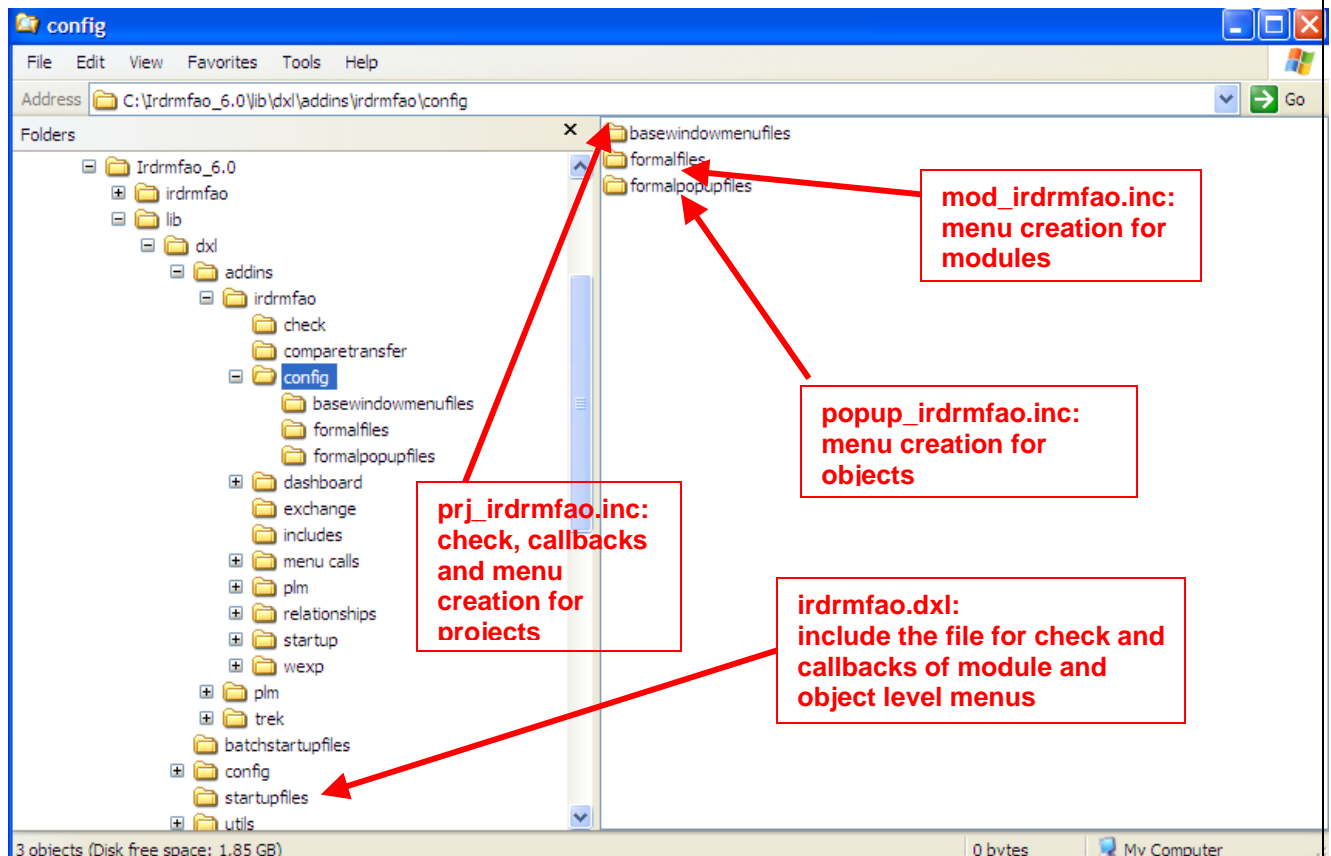
In case of out of place install, the setup program modifies the registry key **Addins**, allowing defining the list of complementary directories:



7 Menu configuration

All the IRDRMFao menus are dynamically created and checked. The corresponding code is not unencrypted, and it is possible to change these menus. Only people with a good knowledge of DOORS and IRDRMFao should modify these files that are coded into DXL.

The different files that are involved into the IRDRMFao menu creation are:



Example: RMF menu for projects

```
...
#include <addins/irdrmfao/startup/usercallout/fctusercallouts.inc>
#include <addins/irdrmfao/startup/config/fctdefs.inc>
#include <addins/irdrmfao/startup/config/basecheck.inc>

/////////////////////////////////////////////////////////////////

// utility function to create a menu

void RMF_declareMenu (string sName, int checkFunction())
{
    createMenu (checkFunction, sName, null, null)
}

void RMF_declareItem (string sName, int checkFunction(), void executeFunction())
```



```

{
    createItem (checkFunction, executeFunction, sName, null, null, modKeyCtrl, null
                ,null, sName, sName)
}
...
const string RMF_MENU_RMF = "RMF"
int RMF_MENU_RMF_check()
{
    return menuAvailable_
}
const string RMF_ITEM_CREATE_PROJECT = "Create/Tag a RMF Project"
void RMF_ITEM_CREATE_PROJECT_exec() {eval_ "#include <addins/irdrmfao/menu
calls/project/CREATE_P.DXL>"}
int RMF_ITEM_CREATE_PROJECT_check()
{
    User u = find()
    if (null u)
        return menuUnavailable_
    UserClass c = u.class
    if (c != databaseManager)
        return menuUnavailable_
    Folder f = current
    if (null f || !canControl(f))
        return menuUnavailable_

    return menuAvailable_
}
...

// RMF menu
RMF_declareMenu (RMF_MENU_RMF, RMF_MENU_RMF_check)

RMF_declareItem (RMF_ITEM_CREATE_PROJECT, RMF_ITEM_CREATE_PROJECT_check,
                RMF_ITEM_CREATE_PROJECT_exec)
RMF_declareItem (RMF_ITEM_CONFIGURE_PROJECT, RMF_ITEM_CONFIGURE_PROJECT_check,
                RMF_ITEM_CONFIGURE_PROJECT_exec)
RMF_declareItem (RMF_ITEM_CREATE_MODULE, RMF_ITEM_CREATE_MODULE_check,
                RMF_ITEM_CREATE_MODULE_exec)

separator

RMF_declareMenu (RMF_MENU_EXPLORE, RMF_MENU_EXPLORE_check)
    RMF_declareItem (RMF_ITEM_INDEX, RMF_ITEM_INDEX_check, RMF_ITEM_INDEX_exec)
    RMF_declareItem (RMF_ITEM_SCOPE, RMF_ITEM_SCOPE_check, RMF_ITEM_SCOPE_exec)
    separator
    RMF_declareItem (RMF_ITEM_EXPLORE_MODEL, RMF_ITEM_EXPLORE_MODEL_check,
                    RMF_ITEM_EXPLORE_MODEL_exec)
    RMF_declareItem (RMF_ITEM_EXPLORE_PROJECT, RMF_ITEM_EXPLORE_PROJECT_check,
                    RMF_ITEM_EXPLORE_PROJECT_exec)
    RMF_declareItem (RMF_ITEM_EXPLORE_MODULE, RMF_ITEM_EXPLORE_MODULE_check,
                    RMF_ITEM_EXPLORE_MODULE_exec)
end menu
...

```

8 Troubleshooting

If DOORS reports some errors after the installation of IRDRMFAO, check:

- That the file named **irdrmfao.dxl** exists in the **config** and **startupfiles** directories of DOORS.
- Checks the content of the other files in the same directories, to detect any conflict between the IRDRMFAO files and the other files.
- Checks the content of the file “**...Migration.dxl**”, in the **startupfiles** directory. Suppress any IRDRMFAO file inclusion found in this file.
- Check the content of the predefined **startup.dxl** file.

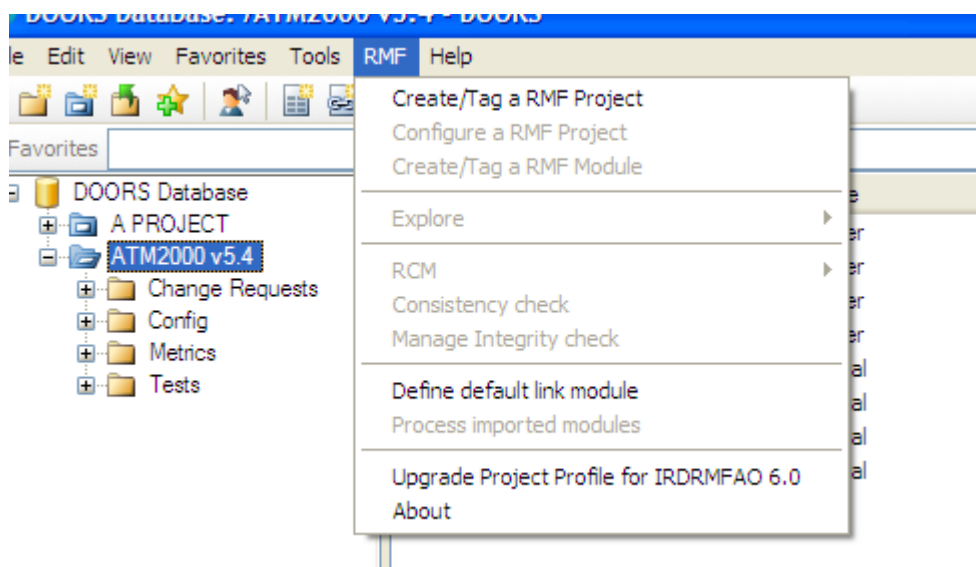
Always remove the previous version of IRDRMFAO (or any installed T-REK version) before reinstalling IRDRMFAO.

9 Upgrade of IRDRMFAO projects

IRDRMFAO 6.0.0.3 operations are available only for project updated or created for IRDRMFAO 6.0.0.3. An “upgrade” operation is provided with IRDRMFAO 6.0.0.3. This upgrade operation makes the project configuration compatible with IRDRMFAO 6.0.0.3, for any previous IRDRMFAO or DOORS T-REK version.

The project data are not modified by the upgrade, nor the existing module types in project configuration, except in case of migration of a previous DOORS T-REK version, with the RCM component deployed on the project. In this last case, because of the modification of the RCM trigger management, the old RCM triggers at **project level** are deleted and created again, but at **module level**.

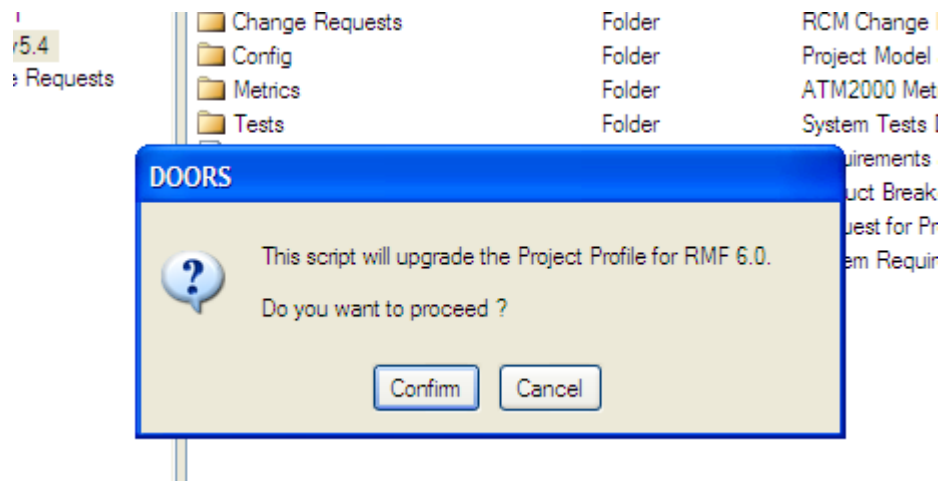
Example:



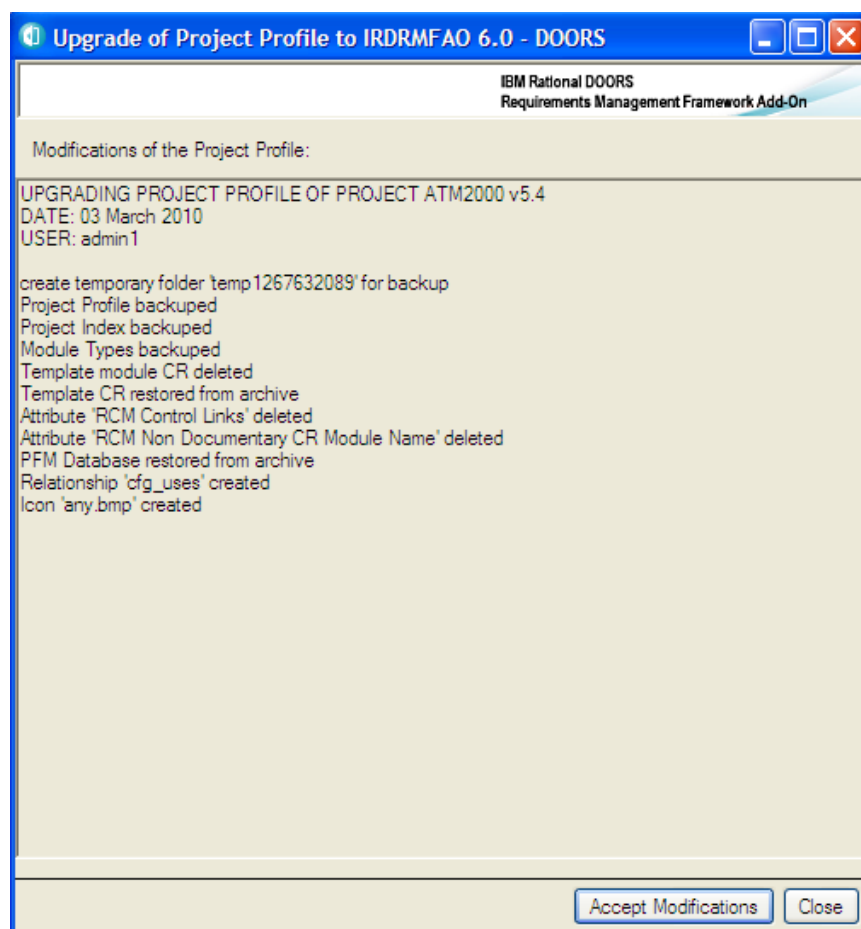
The “Upgrade Project Profile for IRDRMFAO 6.0 ” operation is visible only for the RMF projects not yet compatible with IRDRMFAO 6.0 .

The execution of this operation will extend the “Project Profile” of your project, and with add some new module types in the “Module Types” folder.

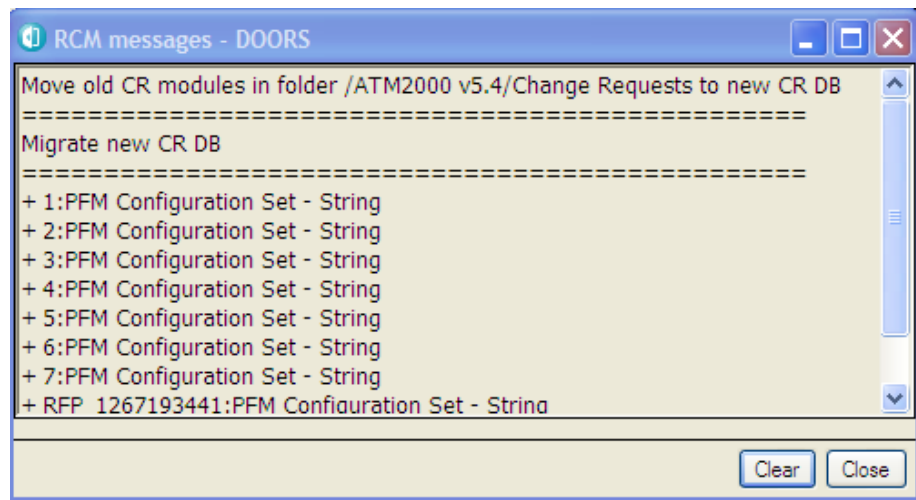
- Execute the “Upgrade” operation



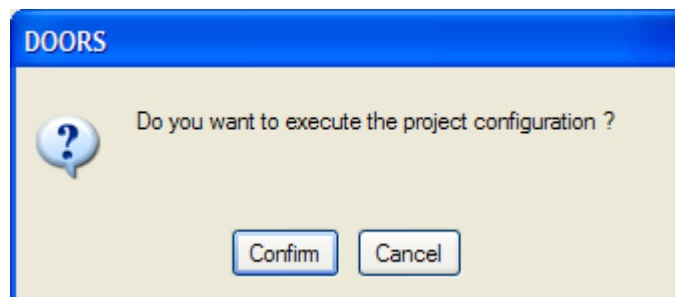
- Accept the modifications



- If RCM has been previously deployed on the project, the CR project database structure is checked to be modified if required (for old T-REK versions) and the CR modules are upgraded according to the current CR template



- If you want to use RCM , DOC or EXCHANGE functionalities, you may execute the default project configuration (if these functionalities have not been configured yet)



- If you have answered 'Confirm', then the project configuration utility is automatically executed:

IBM Rational DOORS
Requirements Management Framework Add-On

Project profile: /ATM2000 v5.4/Config/Project Profile

PUID | WORD | RCM | PFM | DOC | EXCHANGE | CHECK | VISIBILITY

Project's PUID Strategy
Automatic

Project's PUID default properties
Counter Increment Value: 1
Number of digits: 3
Separator: - ☐ No separator

Apply Close

The modifications done inside the profile depends from the last version of IRDRMFAO that was used in the project. Upgrade operation adds all required definitions allowing the new version of IRDRMFAO to be usable. For example, an upgrade from 5.2 to 6.0 corresponds to this list of modifications:

```
Template module NON_DOC_CR_LIST deleted
Template module CR deleted
Template CR restored from archive
Object Attribute 'IE Priority' created
Object Attribute 'IE Model View deleted
Object Attribute 'IE View Name created
Object Attribute 'IE View' created
Module Attribute 'RCM CR Impact Mandatory' created
Object Attribute 'IE Is Contextual Attribute' created
Module Attribute 'IE PFM Configuration Index' created
```

```
Module Attribute 'RCM Is Specific Version Code' created
Module Attribute 'RCM Detect links to working obj with different CR'
created
Module Attribute 'RCM Repair Link Modification' created
Attribute 'RCM Control Links' deleted
Attribute 'RCM Non Documentary CR Module Name' deleted
Section 'Definition of the Views' created
Section 'Definition of the icons' created
Module Type 'Non Documentary CR List' deleted
Template 'NON_DOC_CR_LIST' deleted
PFM Database restored from archive
Icon 'any.bmp' created
Icon 'cr.bmp' created
Icon 'db.bmp' created
Icon 'di.bmp' created
Icon 'id.bmp' created
Icon 'ivv.bmp' created
Icon 'pbs.bmp' created
Icon 'sr.bmp' created
Icon 'ur.bmp' created
View 'Definition of the Templates' created
View 'Definitions of the Model Views' deleted
View 'Definition of the Views' created
View 'Definition of the Icons' created
```

Some technical templates in the **Module Types** folder may be also replaced. The templates that are associated with tools and not to the user data model are:

- CR: Change Request template. Used by RCM.
- DASHBOARD: Dashboard template, used by Dashboard functionality.
- DI: Document Index, used by DOC.

No existing module of your project is modified by the Upgrade.

To complete the upgrade of your project, you will probably have to upgrade your already existing templates and your project modules as well.

10 Client configuration

DOORS allow you to give parameters on the command line of the shortcut used to execute the DOORS client. The list of parameters may be found in the DOORS standard documentation.

Here you can find some useful examples.

Connexion to a database server different from the standard one

-data *36677 @ my_server*

may be used to define the DOORS server from which the data should be downloaded (in the example on the port *36677* of the *my_server* computer)

Connexion with a user name already defined

-user *my_name*

may be used to define the DOORS login name.

Installation of IRDRMFAO on an application server (or file server)

-addins or **-a** "*\\app_server\IRDRMFAO\lib\dxl* "

to define a directory to find the IRDRMFAO addins. This information may be also entered in the registry configuration of the DOORS client, or in the "ADDINS" environment variable. In the example *app_server* is the name of the computer used as application server.

-dxl "*#include <\\\\app_server\IRDRMFAO\lib\dxl\startupfiles\irdrmfao.dxl>*"

to specify a startup file. This parameter cannot be defined in the registry.

These parameters allow you to have different IRDRMFAO contexts. You should notice that the command line has a limited size, in case of overflow you may define these three values as a combination of registry/environment variables values and command line.

Also, it is required to add the **irdrmfao.dxl** files in the standard DOORS **config** directory.

11 Complements

IRDRMFAO is delivered with some sample or utility DXL script files. For example, the “Kitchen” scripts are delivered as a ZIP archive named RMF_kitchen.zip in the directory IRDRMFAODIR\misc\addins. To install it, you may unzip it in the directory DOORS DIR\lib\dxl\addins.

Content of Misc:

addins: complement utilities

History.zip (complement DOC)

irdrmfao_lib.zip (minimum files to include for RMF views)

RMF_kitchen.zip (RMF kitchen scripts)

attributes: DXL attributes

ie_puid.dxl (example of DXL attribute for “IE PUID”)

migration: to update existing data (only for old projects developed on old DOORS versions and/or old T-REK versions)

migrate-rcm.dxl

patch-dashboard.dxl

patch-puid.dxl

model: datamodel level utilities

define_description.dxl (set the descriptions of views and attributes according the configuration file model.txt)

synchronize_definitions.dxl (example of project synchronization alternative to the use of create/tag operation)

other: restore links from history and unlock baseline set

restore_cancelled.dxl (example of restoration of a requirement from the information saved into a cancel CR)

restore_links.dxl (use of history to restore links)

unlockbsd.dxl (unlock a baseline set definition)

project_index: creation/modification of a project index in batch

create_index.bat

create_index.dxl

update_index.bat

update_index.dxl

wexp: execution of WEXP without any GUI (maybe not up to date)

batchwexp.dxl

wexp_spooler: batch management of the WEXP spooler

spooler_getlog.bat

spooler_pause.bat

spooler_remall.bat

spooler_remlocks.bat

spooler_restart.bat

spooler_stop.bat

startspooler.bat

12 Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send written license inquiries to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send written inquiries to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions. Therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it

believes appropriate without incurring any obligation to you. Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

Intellectual Property Dept. for Rational Software
IBM Corporation
1 Rogers Street
Cambridge, Massachusetts 02142
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, ibm.com, Rational, DOORS, are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both, are trademarks of Telelogic, an IBM Company, in the United States, other countries, or both. These and other IBM trademarked terms are marked on their first occurrence in this information with the appropriate symbol (® or ™), indicating US registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.html.

Adobe, the Adobe logo, Acrobat, the Acrobat logo, FrameMaker, and PostScript are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions.

Microsoft, Windows, Windows 2003, Windows XP, Windows Vista, Excel and/or other Microsoft products referenced herein are either trademarks or registered trademarks of

Microsoft Corporation.

AT&T is a trademark of AT&T Intellectual Property and/or AT&T affiliated companies.