



**MAG*3.0*147
Pixel Representation Fix
Patch Description**

**VistA Imaging
July 2014**

Department of Veterans Affairs
Office of Enterprise Development
Health Provider Systems

MAG*3.0*147 Patch Description July 2014

Property of the US Government

This is a controlled document. No changes to this document may be made without the express written consent of VistA Imaging development group.

While every effort has been made to assure the accuracy of the information provided, this document may include technical inaccuracies and/or typographical errors. Changes are periodically made to the information herein and incorporated into new editions of this document.

Product names mentioned in this document may be trademarks or registered trademarks of their respective companies, and are hereby acknowledged.

VistA Imaging Office of Enterprise Development

Department of Veterans Affairs

Internet: <http://www.va.gov/imaging>

VA intranet: <http://www.va.gov/imaging>

Revision Table

Rev	Date	Notes	Author
	12/5/2013	Initial draft	Doug Clayton
1.1	6/5/2014	Update in preparation for release	Maryann Shovestul
1.2	7/14/14	Updates from review meeting with Jeannie Jernigan.	Stacey Marner
1.3	7/17/14	Additional updates to installation steps after an internal test.	Stacey Marner
1.4	7/22/14	June to July change and additional edits from Jeannie and Peter.	Stacey Marner, Jeannie Jernigan, and Peter Kuzmak

Contents

Patch 147 Overview	1
Distribution of Software	1
Patch Contents	1
Associated Patches	2
Test Sites	2
Remedy Calls	2
NSRs	2
Patch 147 Changes	3
Security Keys	3
Remote Procedure Calls	3
Menu Options.....	3
Data Dictionaries.....	3
Routines.....	3
Installation	5
Installation Planning	5
Installation Prerequisites	5
KIDS Installation	5
KIDS Package Installation Steps	5
KIDS Installation Example	6
DICOM Gateway Routine Installation.....	8
Routine Installation	8
Restoring the DICOM Gateway	19

Patch 147 Overview

This patch will avoid errors in Image Processing caused by some encapsulated PDFs that do not follow the DICOM standard and improperly include the Pixel Padding Value (0028,0120) data element. This results in an “<UNDEFINED>” error and interrupts the processing of the DICOM encapsulated PDFs. The patch allows for the processing of these objects.

NOTE: All sites running VistA Imaging 3.0 that have implemented DICOM Gateways must install the updated DICOM Gateway software on all DICOM Gateway systems.

Distribution of Software

To obtain MAG*3.0*147 files, use the File Transfer Protocol (FTP) to retrieve MAG3_0P147.RTN from one of the following OI Field Offices' ANONYMOUS.SOFTWARE directories:

OI Field Office -----	FTP Address -----	Directory -----
Albany	ftp.fo-albany.med.va.gov	anonymous.software
Hines	ftp.fo-hines.med.va.gov	anonymous.software
Salt Lake City	ftp.fo-slc.med.va.gov	anonymous.software

Patch Contents

This patch includes the following files.

Software

MAG3_0P147.RTN – Routine set to be installed on the DICOM Gateway.

MAG3_0P147.KID – KIDS (Kernel Installation and Distribution System) package to be installed on the VistA hospital database.

Documentation

MAG3_0P147_Patch_Description.pdf – The release build of this patch can be downloaded from the FTP folder. Installation instructions are included in this document.

Associated Patches

Before MAG*3.0*147 can be installed, the following considerations need to be made:

- This patch **must be installed on a MAG*3.0*53 or later** legacy DICOM Gateway.
- This patch **MAY NOT be installed on a MAG*3.0*138** test DICOM Gateway.

Test Sites

The following sites are test sites for this patch:

- Hines. IL Medical Center
- Southern Arizona HCS – Tucson, AZ

Remedy Calls

The following Remedy help desk calls are addressed in this patch:

Ticket # 962507	- Site unable to import non-DICOM standard encapsulated PDF; 2-3 window errors out with encapsulated PDF.
Ticket # 968973	- DICOM Gateway is getting an error when importing non-DICOM standard encapsulated PDF.

NSRs

There are no National Service Requests (NSRs) addressed in this patch.

Patch 147 Changes

The MAG*3.0*147 patch will enable the sites to process DICOM encapsulated PDFs that do not conform to the DICOM standard and include the Pixel Padding Value (0028,0120) data element.

Security Keys

There are no new or modified security keys in this patch.

Remote Procedure Calls

There are no new or modified Remote Procedure Calls in this patch

Menu Options

There are no new menu options in this patch.

Data Dictionaries

There are no new or modified menu options in this patch.

Routines

VistA Routines

This section lists new and modified Imaging routines for the VistA system. For each routine, the second line will contain the following information.

```
;;3.0;IMAGING;**147**;Mar 19, 2002;Build 3
```

Please note that the “before” checksum may differ if any test software has been installed. Checksum values are calculated using the kernel utility program, CHECK1^XTSUMBLD.

Routine Name	Checksum Before	Checksum After	Patch List
MAGIP147	N/A	4110425	**147**

Routine MAGIPS147 is an installation routine that is automatically deleted after the KIDS installation.

DICOM Gateway Routines

This section lists new and modified Imaging routines for the DICOM Gateway system. Please note that the before checksum may differ if any test software has been installed. Checksum values are calculated using the kernel utility program CHECK1^XTSUMBLD.

Routine Name	Checksum Before	Checksum After	Patch List
MAGDDW2	52530205	52939671	**10, 30, 51, 54, 53, 147**
MAGDDR2	32387608	32693504	**10, 11, 30, 54, 147**
MAGDVRSN	21494340	24194340	**1, 7, 9, 26, 21, 10, 36, 3, 11, 30, 5, 51, 50, 52, 69, 75, 102, 103, 54, 53, 66, 49, 99, 123, 118, 147**

Installation

Installation Planning

When planning the installation of MAG*3.0*147, consider the following factors:

- This patch is to be installed on the DICOM Gateways and VistA. Installing the routines on this system will take less than five minutes.
- Users should not use the DICOM Gateways during installation. All gateway operations should be suspended at this time.

Review all installation instructions in this document before beginning the installation process.

Installation Prerequisites

NOTE: All released VistA Imaging patches must be installed on the VistA system before installing MAG*3.0*147.
--

Users can download the patch installation files from the OI Field Offices' Anonymous Software directories. All instructions in this section assume that the distribution files for this patch have been copied to a local storage location. For the list of distribution files for this patch, see page 1.

KIDS Installation

KIDS Package Installation Steps

The KIDS installation will take less than one minute.

1 Important: Before installing the KIDS, perform the following steps for each DICOM Gateway:

- a. Stop each process (use CTRL+C if needed) in each active process/telnet window. (Note that clicking only closes the window; it does not stop the process).
- b. Navigate to the main DICOM Gateway menu and enter "5" (Quit).
- c. Ensure that Caché is running. (When Caché is running, the Caché cube in the Windows taskbar is blue, not grey.)

2 On the VistA system, access the Kernel Installation and Distribution System Menu [XPD MAIN].

3 Run the `Installation` option [XPD INSTALLATION MENU].

- 4 Load the KIDS file by performing the following step:
 - a. Run the **Load a Distribution** option [XPD LOAD DISTRIBUTION] to load the KIDS distribution.
 - b. When prompted, enter the path and file name (MAG3_0P147.KID) of the Patch 147 KIDS file.
 - c. When prompted to continue with the load, enter YES. A **Distribution OK!** message will be displayed when the load is complete.

- 5 After loading the KIDS file, use the following options to verify the contents of the patch and to back up any affected routines.
 - a. **Verify Checksums in Transport Global** [XPD PRINT CHECKSUM] – Run this option to ensure the integrity of the routines in the patch.
 - b. **Compare Transport Global to Current System** [XPD COMPARE TO SYSTEM] – Run this option to view all changes that will be made when the patch is installed. All components (routines, options, and so on) in the patch will be compared.
 - c. **Backup a Transport Global** [XPD BACKUP] – Run this option to create a backup message of any routines exported with the patch. It will NOT back up any of the other changes.

- 6 After performing the load and any optional verification steps, install the KIDS file by performing the following steps:
 - a. Run the **Install Package(s)** [XPD INSTALL BUILD] option.
 - b. When prompted for the install name, enter MAG*3.0*147.
 - c. Answer NO to the following prompts:

```
Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//  
Want KIDS to INHIBIT LOGONS during the install? NO//  
Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//
```

7 When installation is finished, an **Install Complete** message will be displayed.

8 Restart the DICOM Gateways and associated processes.

KIDS Installation Example

The sample below illustrates the installation of MAG*3.0*147.

```
Select Installation Option: 6 Install Package(s)
```

```
Select INSTALL NAME: MAG*3.0*147      5/1/14@20:03:24
=> MAG3_0P147 ;Created on Feb 11, 2014@05:43:11

This Distribution was loaded on May 01, 2014@20:03:24 with header
of
  VistA Imaging V3.0- Patch 147 ;Created on Feb 11, 2014@05:43:11
  It consisted of the following Install(s):
    MAG*3.0*147
Checking Install for Package MAG*3.0*147

Install Questions for MAG*3.0*147

Want KIDS to INHIBIT LOGONS during the install? NO//
Want to DISABLE Scheduled Options, Menu Options, and Protocols?
NO//

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.

DEVICE: HOME//  HERE

  Install Started for MAG*3.0*147 :
    May 01, 2014@20:03:47

Build Distribution Date: Feb 11, 2014

  Installing Routines:..
    May 01, 2014@20:03:47

  Running Post-Install Routine: POS^MAGIP147.

Post Install Mail Message: May 01, 2014@20:03:47

  Updating Routine file.....

  Updating KIDS files.....

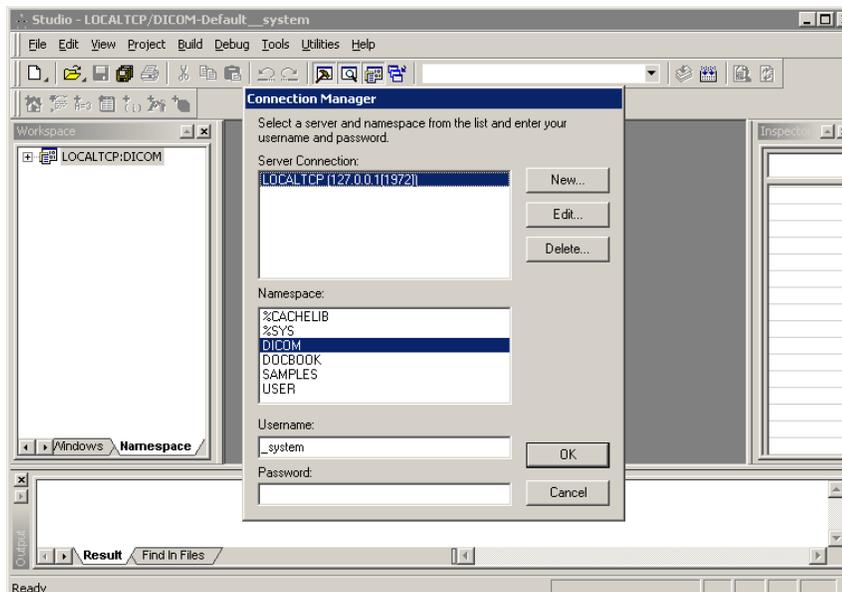
MAG*3.0*147 Installed.
    May 01, 2014@20:03:47
```

DICOM Gateway Routine Installation

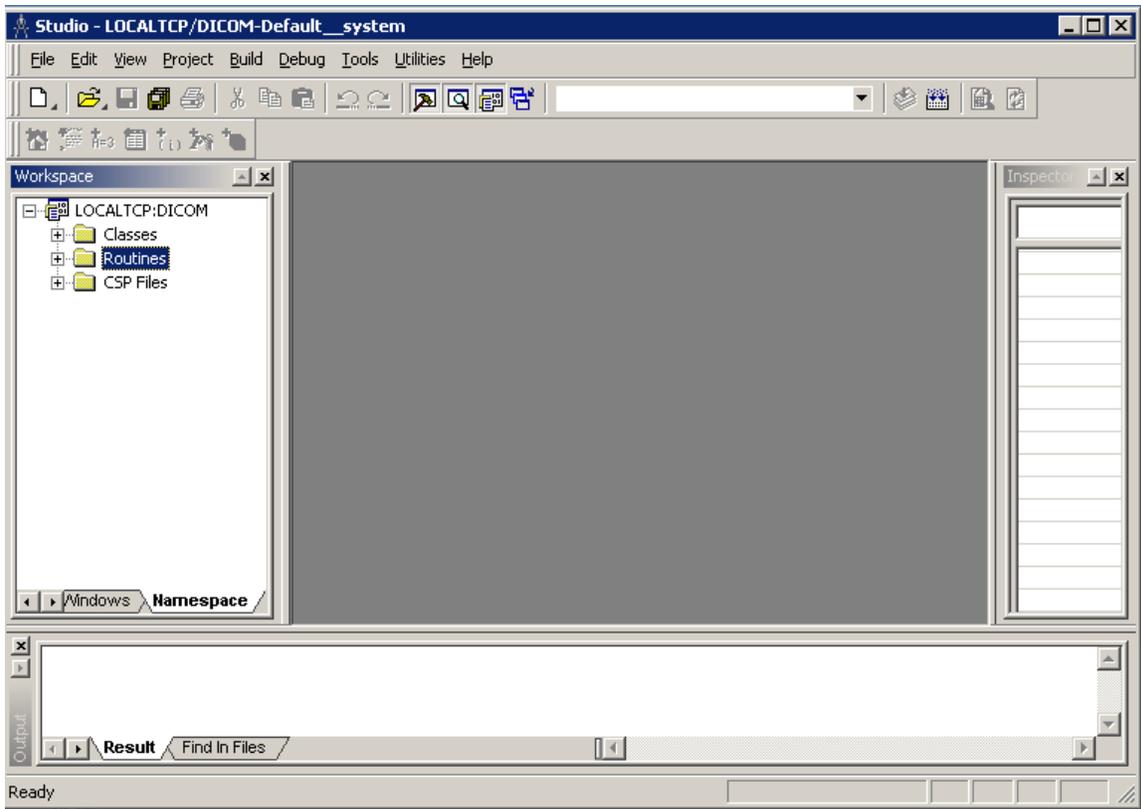
Routine Installation

Users should not use the DICOM Gateways during installation. Installation will take less than five minutes on each DICOM Gateway.

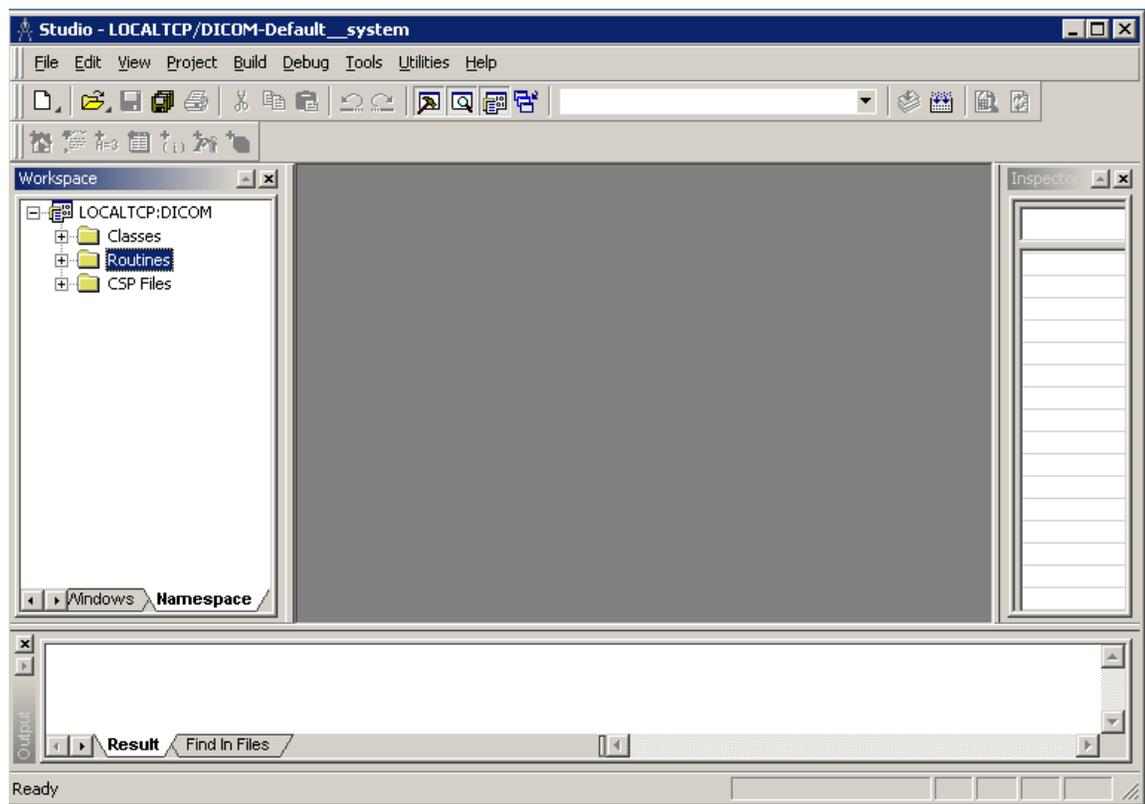
- 1 The MAG3_0P147.RTN files must be transferred to the DICOM Gateways. Create a C:\MAGPATCHES\P147\M\ directory on the DICOM Gateway and place the MAG3_0p147.RTN file in the directory.
- 2 After the routine file is placed on the DICOM Gateway, the user should open the Caché Studio from the Caché cube located on the taskbar.
- 3 From the Caché Studio window, the user should open the File menu located on the Studio toolbar and select the **Change Namespace** option. The user should verify that the DICOM namespace is highlighted. If not, the user should select the DICOM namespace and click OK.



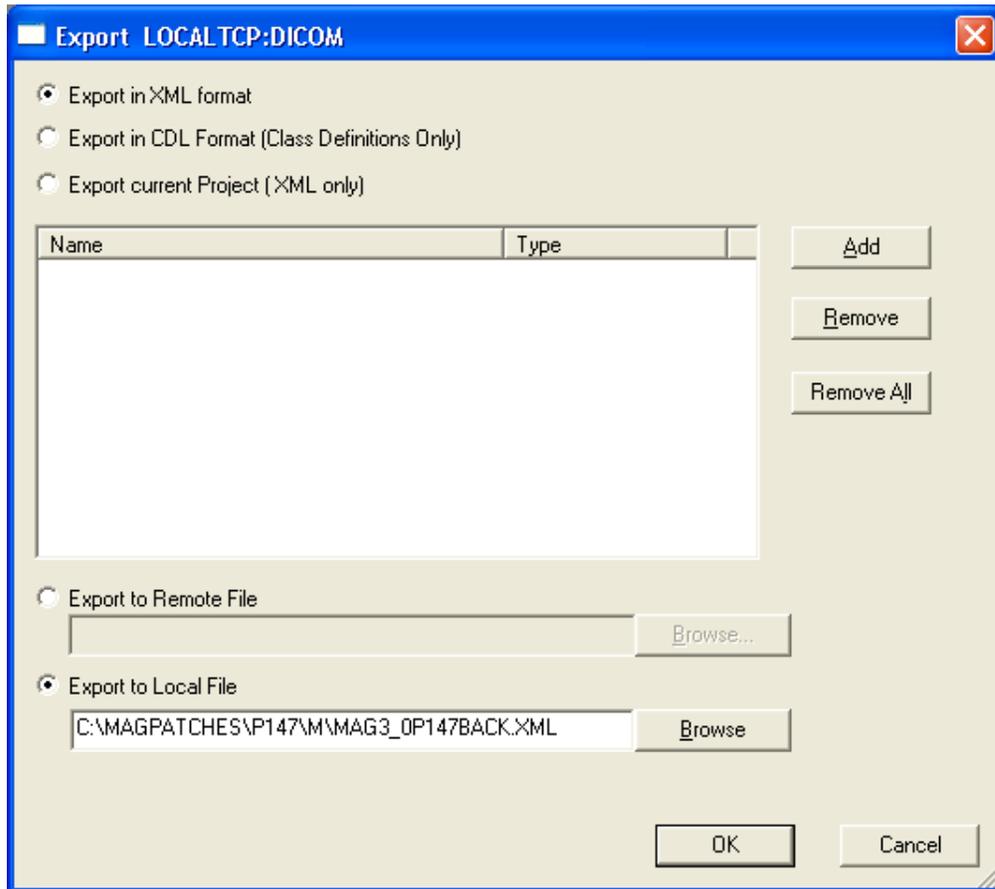
- 4 Prior to installation, the user should backup up the original routine files (MAGDDR2.INT, MAGDDW2.INT, MAGDVRSN.INT) with the following steps:



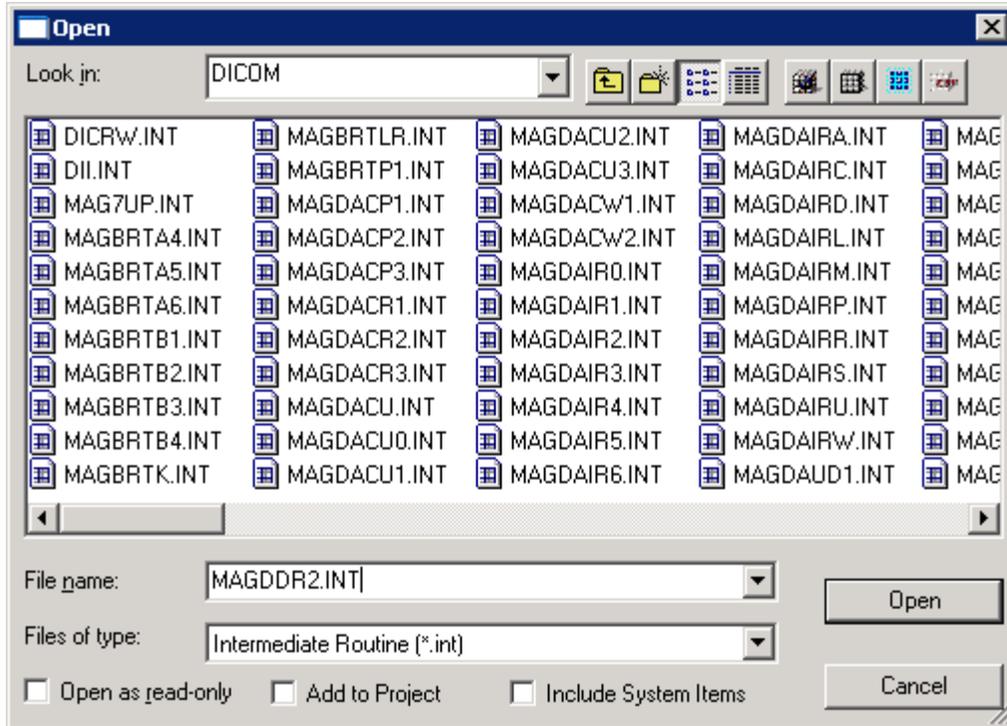
- a. From the Caché Studio window, the user should open the Tools menu located on the Studio tool bar and select the **Export** option on the menu.



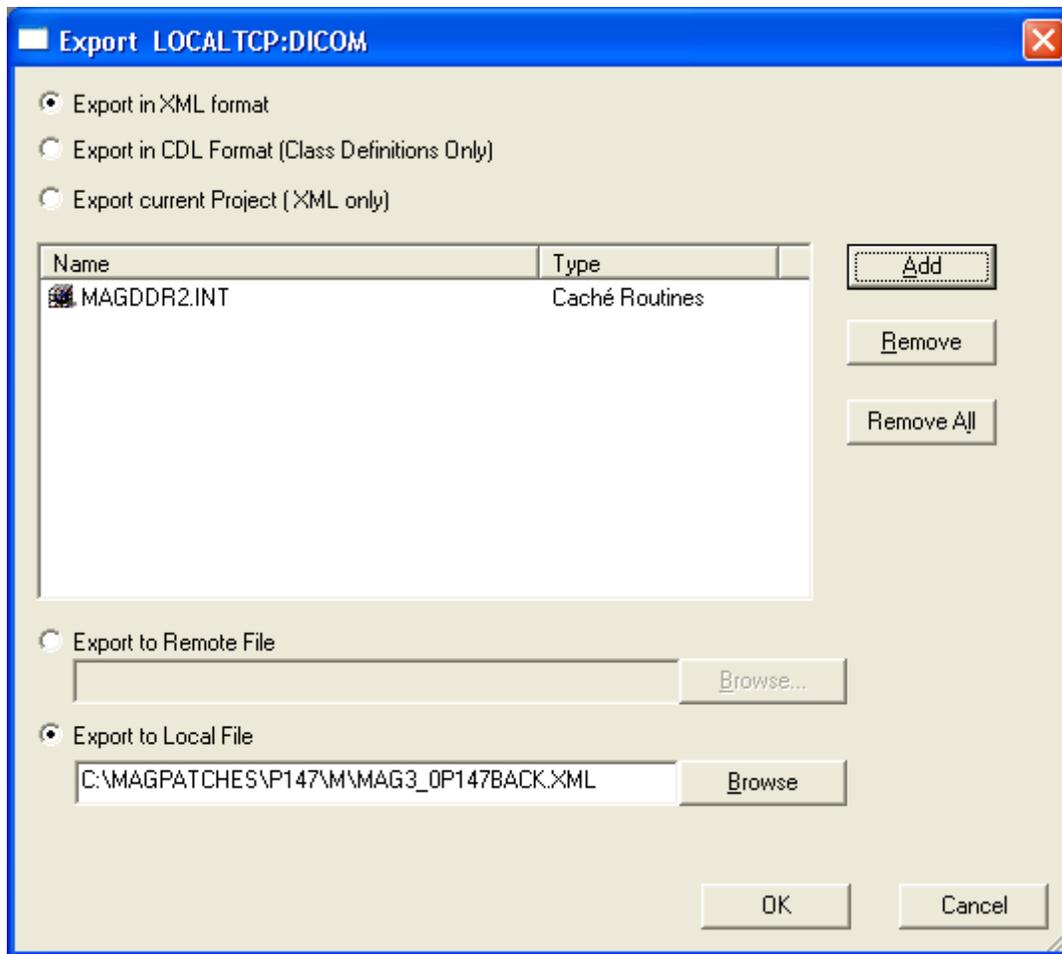
- b. First, select routine **MAGDDR2.INT** in the default Export in the XML format setting. (Make sure the location is set to Export to LOCAL file.) Enter the destination folder "C:\MAGPATCHES\P147\M\" and change to the filename to MAG3_0P147BACK.XML.



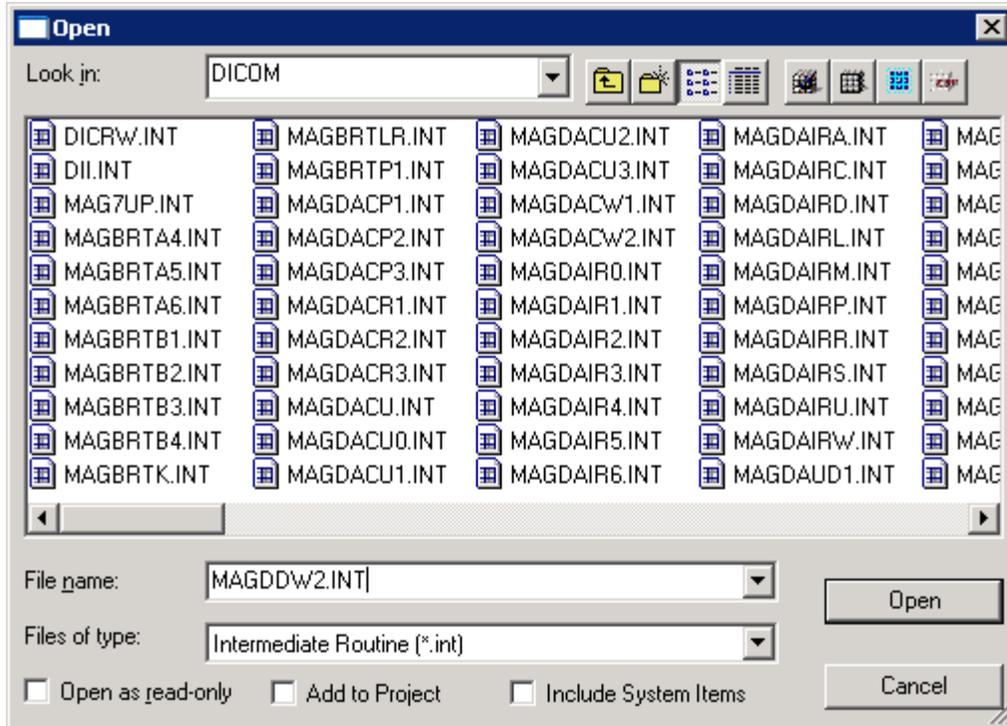
- c. Select Add and select the **MAGDDR2.INT** routine.



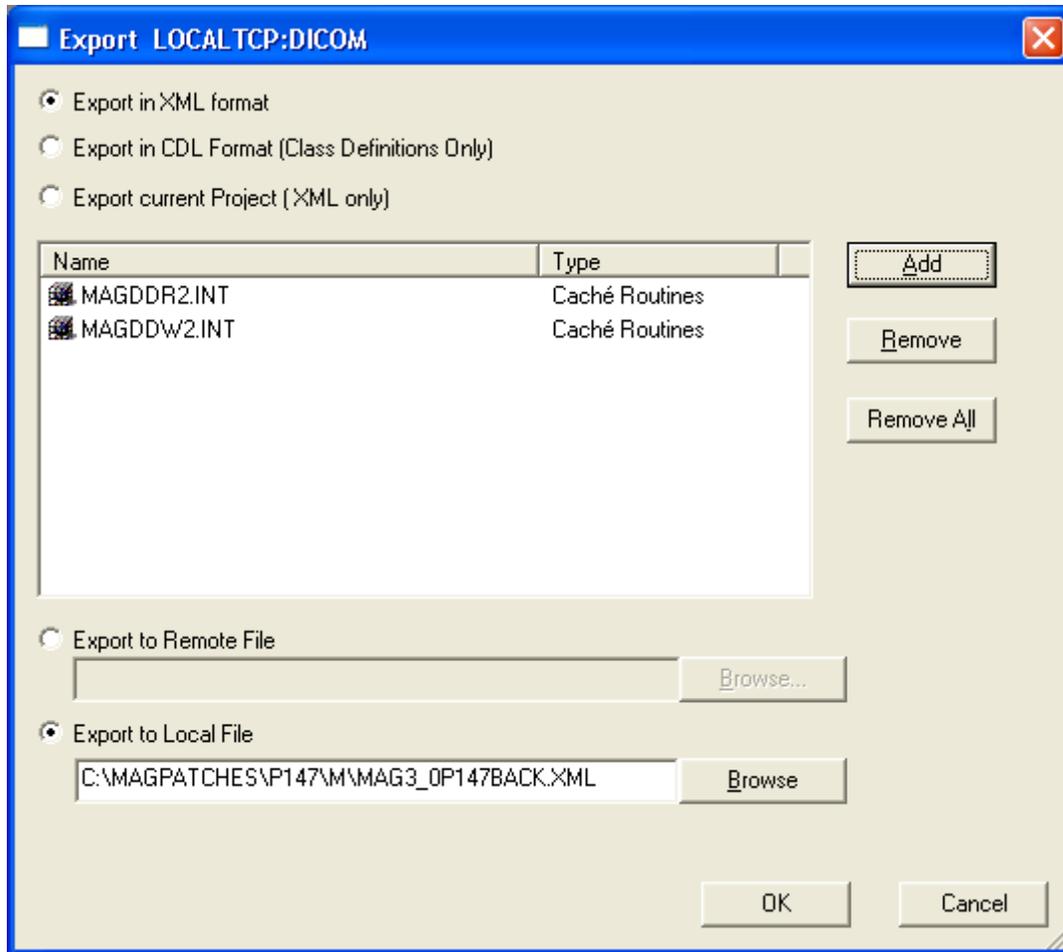
d. Press “Open.”



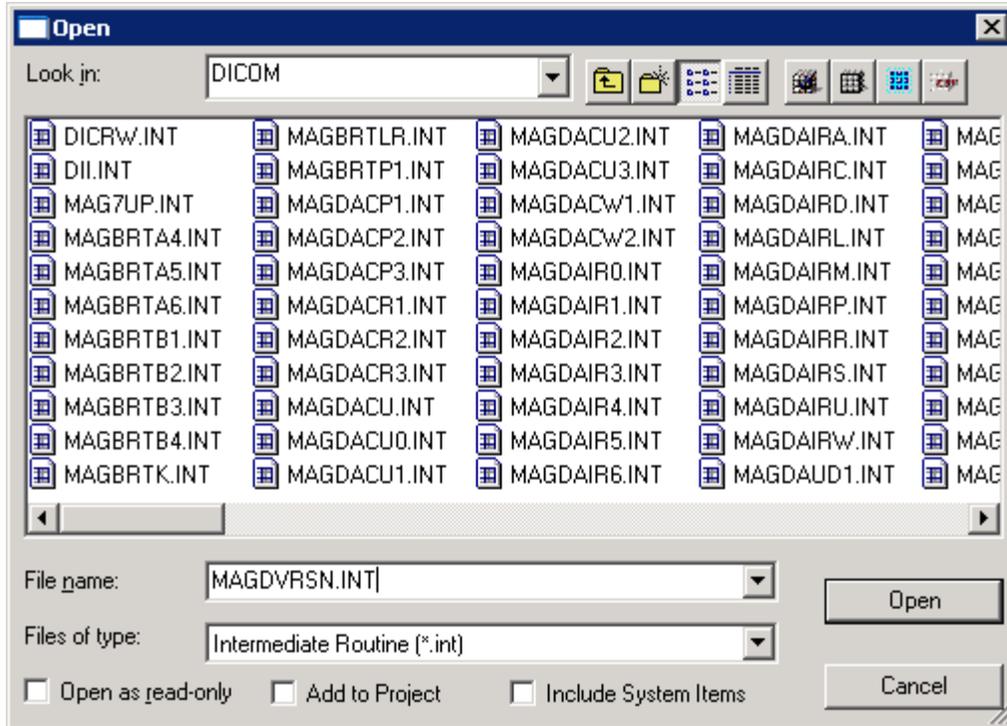
e. Then, select Add and select the **MAGDDW2.INT** routine.



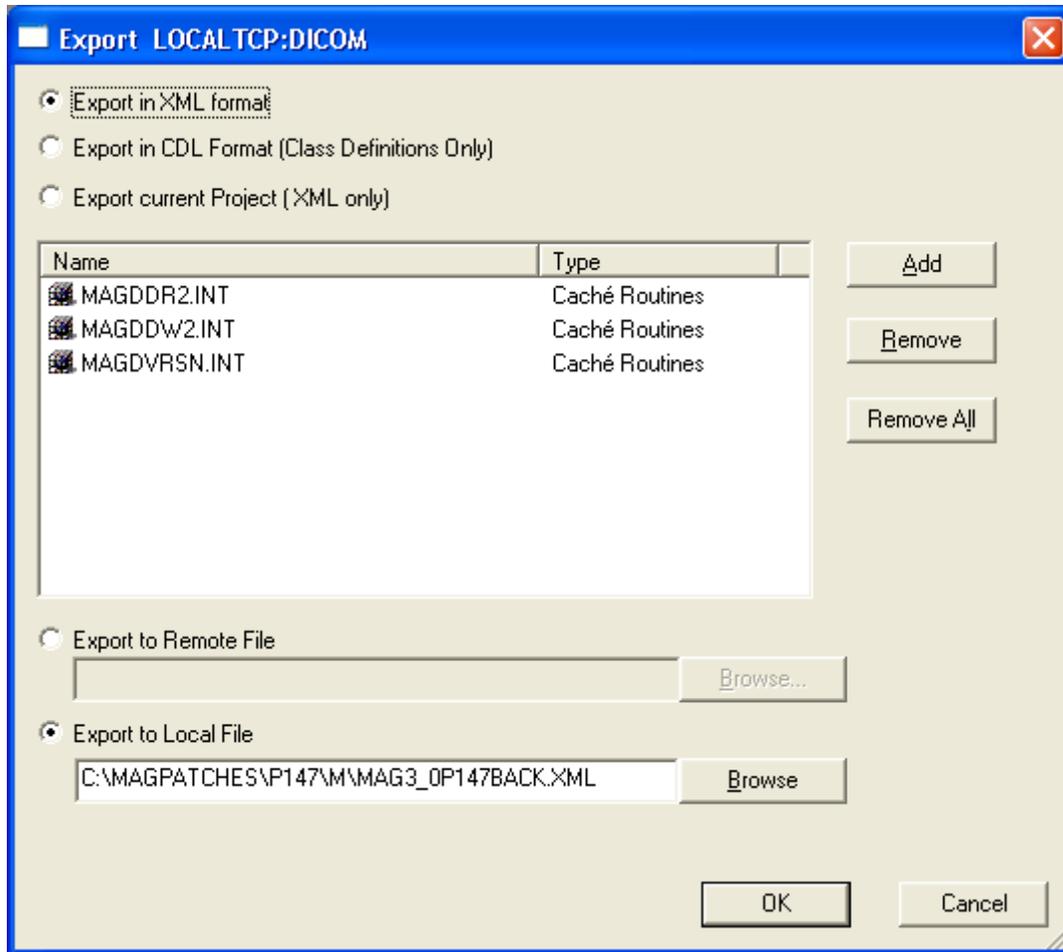
f. Press “Open.”



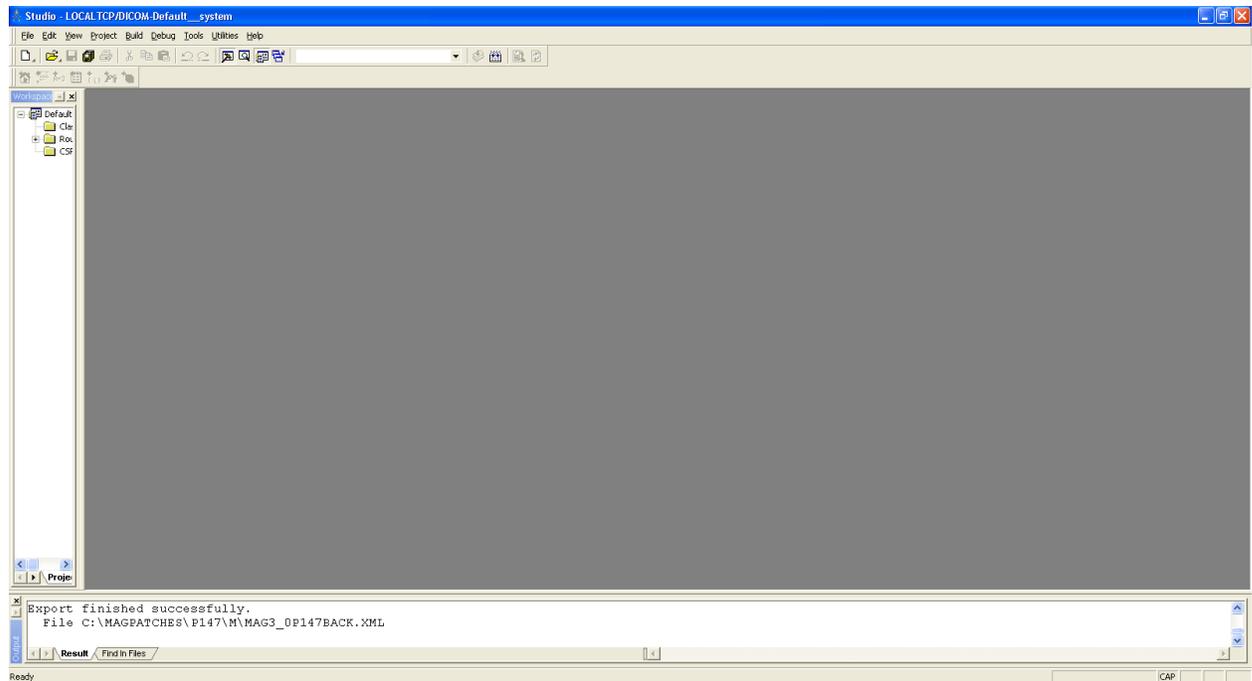
g. Then, select Add and select the **MAGDVRSN.INT** routine.



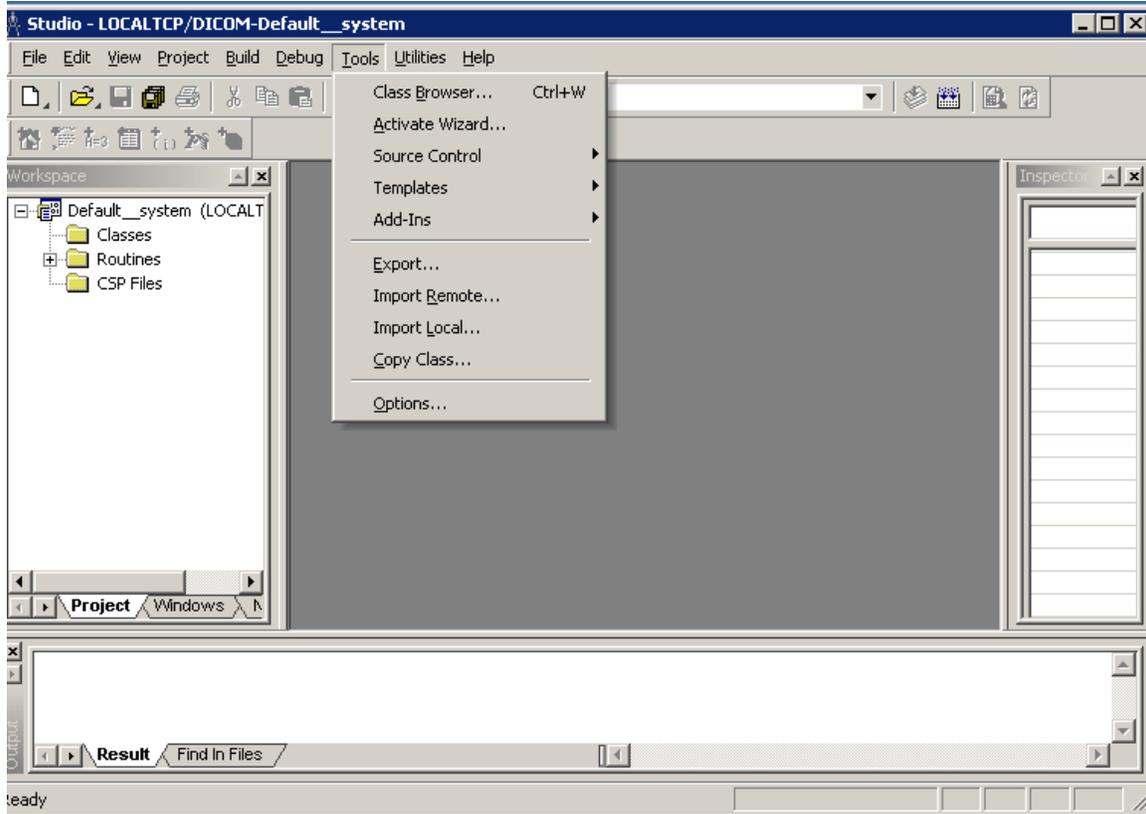
h. Press Open.



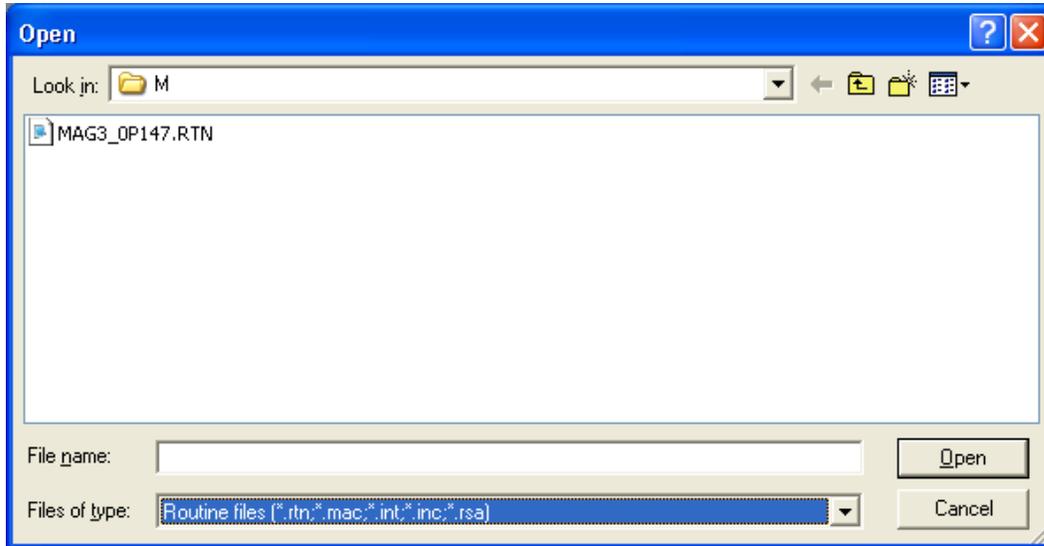
- i. Press OK to create the XML routine backup.



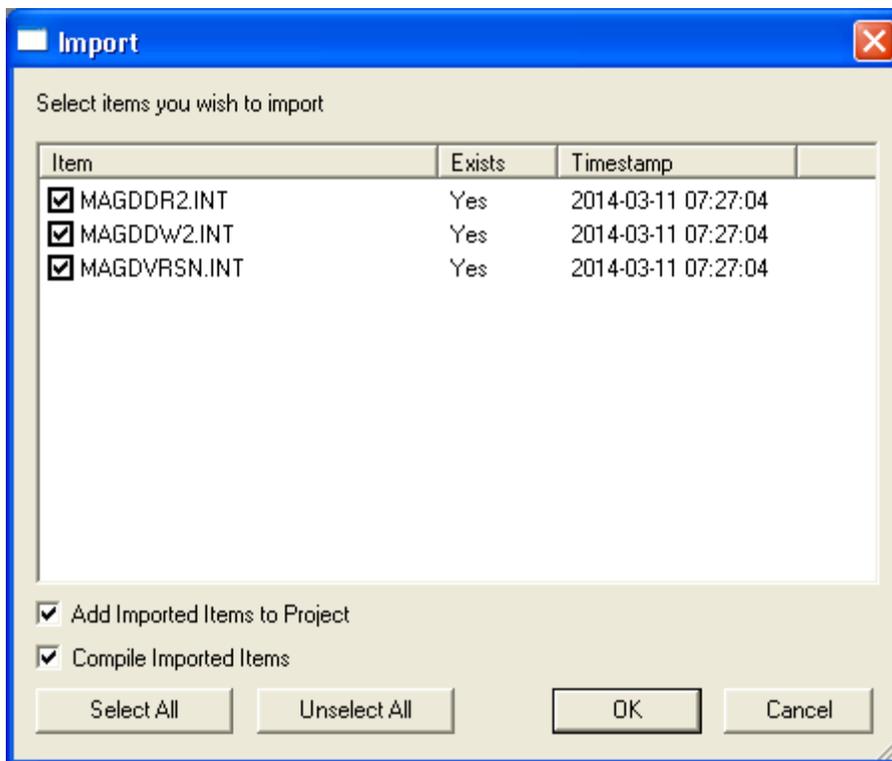
- 5 Next, to install the new MAG3.0P147 routine from the Caché Studio window, the user should open the Tools menu located on the Studio toolbar and select the **Import Local** option on the menu.



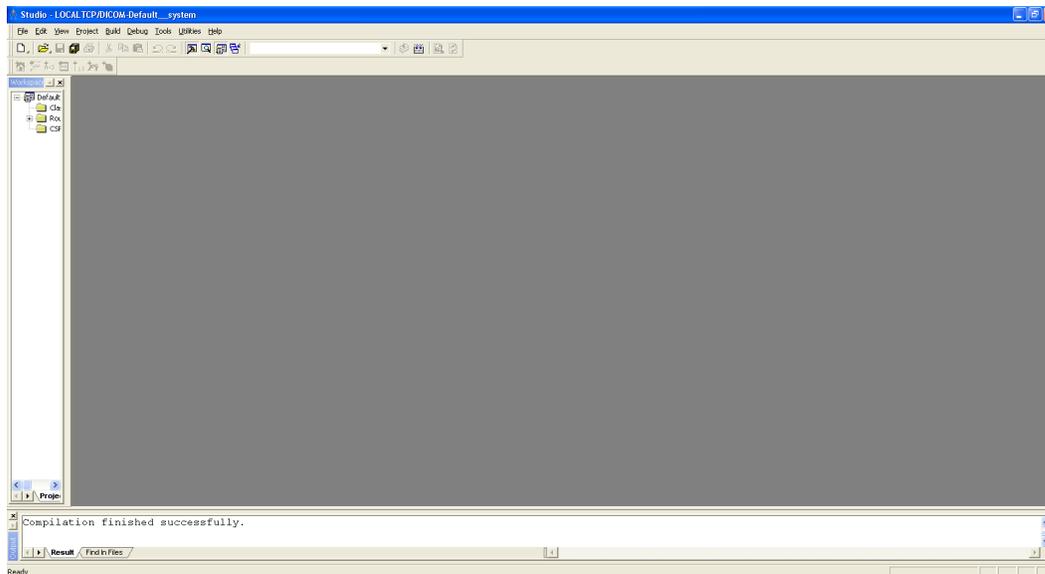
- 6 The user should navigate to and then select the MAG3_0P147.RTN file located on the DICOM Gateway at C:\MAGPATCHES\P147\M, and then press the Open button.



- 7 Make sure that the **Compile Import Items** option is checked and press the OK button.



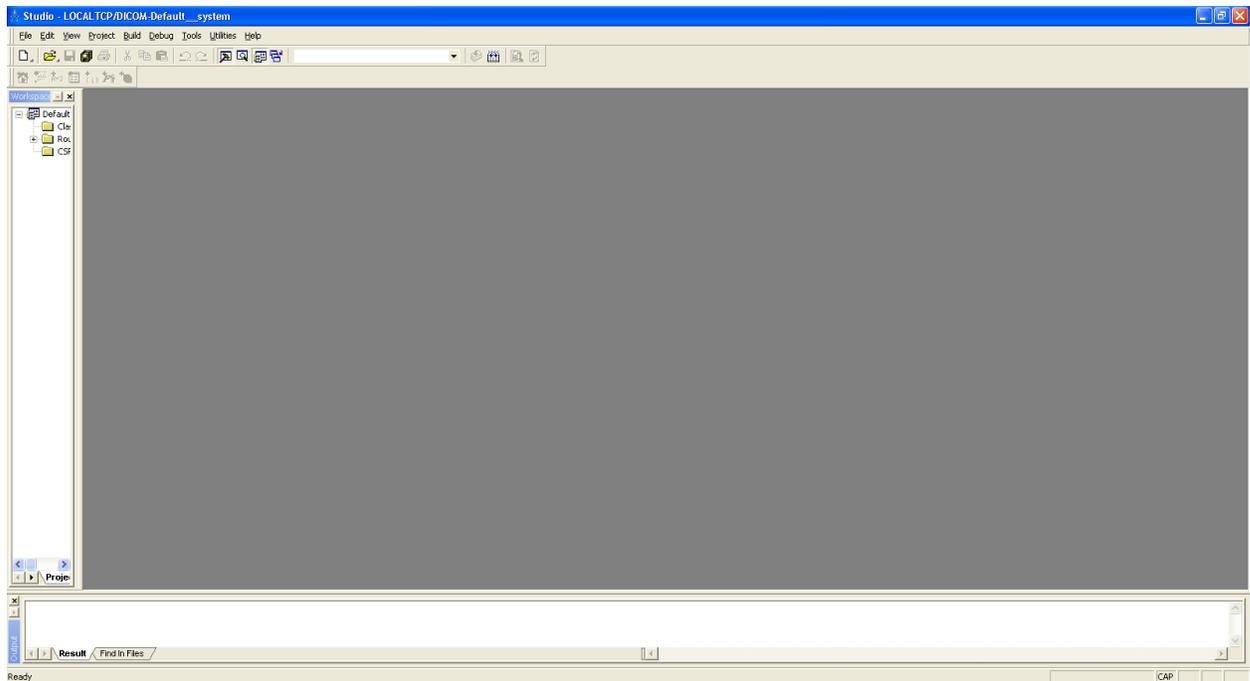
- 8 The patch routines have now been applied to the DICOM Gateway. The user may now close the Caché Studio window (and start the gateway process again). The following screen shows that the compilation has finished successfully.



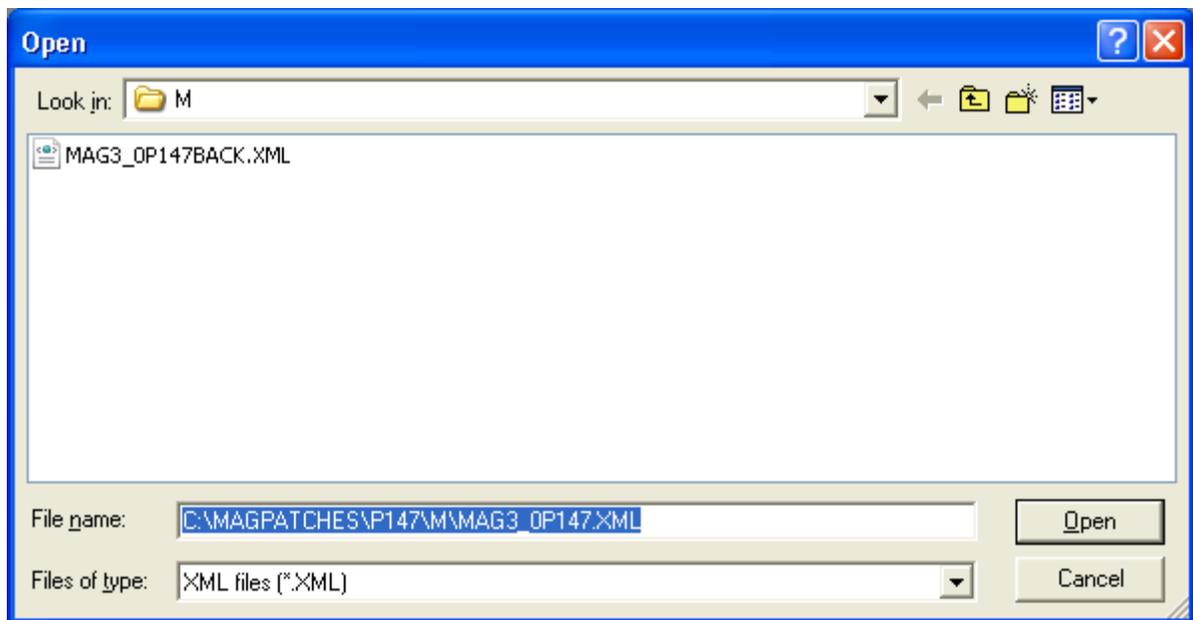
Restoring the DICOM Gateway

If the original state of the DICOM Gateway should have to be restored, perform the following steps:

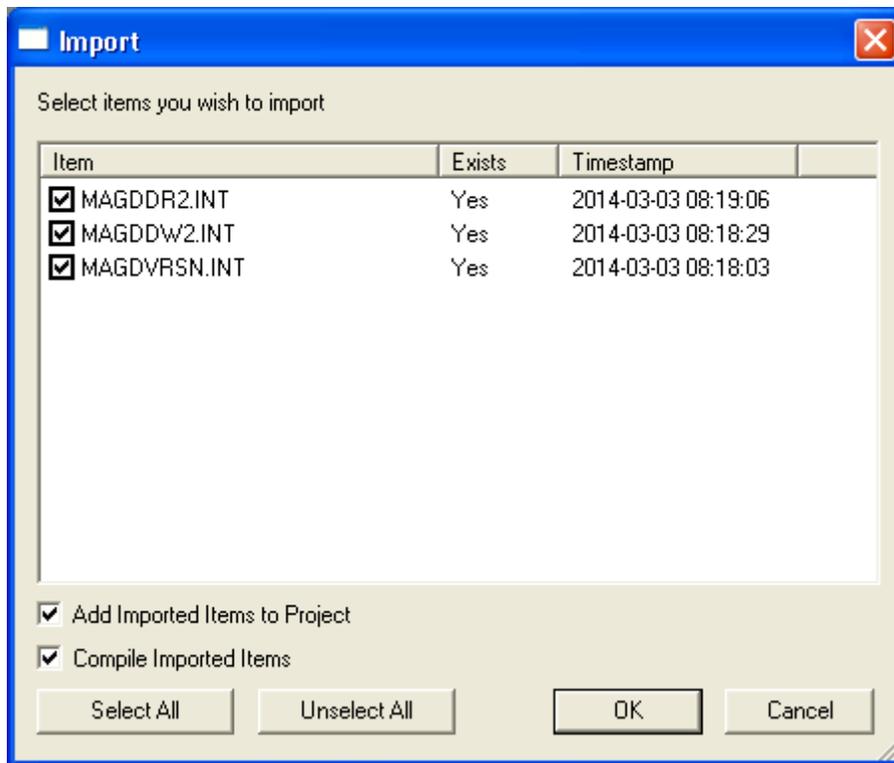
- 1 The user should open the Caché Studio from the Caché cube located on the taskbar.
- 2 From the Caché Studio window, the user should open the Tools menu located on the Studio toolbar and select the **Import Local** option on the menu.



- 3** The user should select the C:\MAGPATCHES\P147\M\MAG3_0P147BACK.XML file located on the DICOM Gateway and then press the Open button.



- 4** Make sure that the **Compile Import Items** option is checked and press the OK button.



- 5 The backup routines have now been restored on the DICOM Gateway. The user may now close the Caché Studio window.