

INSTALLATION MANUAL

- SONARSCOPE AND ADD-ONS -

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2. GLOSSARY

| | |
|----------|---|
| DTM | Digital Terrain Model (modèle numérique de terrain) |
| ERS | Format de fichiers visibles depuis les applications ER Viewer ou ER Mapper |
| ETOPO | Format de fichier de données cartographiques |
| GeoTIFF | Geo Tag Image File Format, format d'image enrichi d'un référentiel géographique |
| GMT | Generic Mapping Tools, outils pour des cartes de type Raster. |
| JPEG2000 | Joint Photographic Experts Group, norme de format d'image compressé |
| MNT | Modèle Numérique de Terrain |
| NSIS | Nullsoft Scriptable Install System |
| HM Edit | Hector Mauricio Editor |
| TBD | To Be Defined |

3. REFERENCIES

SonarScope documents :

1. User Manual
2. Installation Manual V3.0, SonarScope, Date : 25/01/2015
3. <http://flotte.ifremer.fr/Presentation-de-la-flotte/Logiciels-embarques/SonarScope>

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4. INTRODUCTION

Within the framework of the exploitation and processing of data of bathymetry and imagery Sonar, IFREMER develops algorithms of treatment. These algorithms allow, while being pressed on a bookshop of modules of image and signal processing, visualization, the analysis and the exploitation of the data SONAR exit from series of measurements.

SonarScope is the result from these studies. This document presents its process of installation.

NB



: Advertisement symbol. Describe a recommended action or status inherent to the paragraph concerned.

5. INSTALLATION

5.1. Introduction

The SetUp of SonarScope is a set of four Wizards :

- SetUp for SonarScope :
 - SetupSonarScope_External__<yyyymmdd>_<RMatLab>

- SetUp for installation of all the tools, the annexes used or necessary add-ons for SonarScope(Ex : MatLab Component RunTime) :
 - SetupSonarScope_Software_<yyyymmdd>_<RMatLab>.exe

- SetUp for datas
 - SetupSonarScope_Data_<yyyymmdd>_<RMatLab>.exe

- SetUp for Documentation
 - SetupSonarScope_Doc_<yyyymmdd>_<RMatLab>.exe

yyyymmdd : date of SonarScope compilation by IFREMER (Jean-Marie Augustin)

RMatLab : release of MatLab on which SonarScope is compiled. It is associated with MCR component installed in external SetUp.

The update SonarScope simply requires the rerun of the SonaScope SetUp (not others) except request of Jean-Marie Augustin when creating major release.

It is not necessary to reboot computer after installation except if you install some annexes software proposed by SonarScope.

5.2. Pre-requisites

SonarScope is compiled for OS Windows : XP, Seven or 10.

The 32-bit version is no longer supported. Only 64-bit Windows-based architectures are supported.

Volume disk required for all the application is :

| Module | Estimated size required |
|-------------------------------------|------------------------------------|
| SonarScope install directory | # 300 Mo |
| MCR MatLab | # 2 Go |
| SonarScopeDoc | # 260 Mo |
| SonarScopeData | # 1 Go |
| All annexes applications | information is given by the Setup. |

5.3. SetUp SonarScope wizard

5.3.1. Object

During the wizard, the operator has to indicate his password provided by IFREMER (contact Jean-Marie AUGUSTIN, Tel: +33 2 98 22 47 03).

This wizard installs SonarScope in a directory selected by the User.

Many shortcuts are deployed on the desktop, on the “quick launches” programs and in the samples programs.

5.3.2. Language

Only english language is proposed for installation. By defaults, once SonarScope is installed, it is running in the same language as installation but it is possible to change it in Menu Preferences of SonarScope. : (préférences → Language),

It is also possible to change it before launching SonarScope via the file Config.ini (see below) the variable lfrTbxLang = 'US' or 'FR'(see following chapters) in folder lfremerToolboxResources of SonarScope install root.

The uninstallation process is also in English.

5.3.3. Steps setup

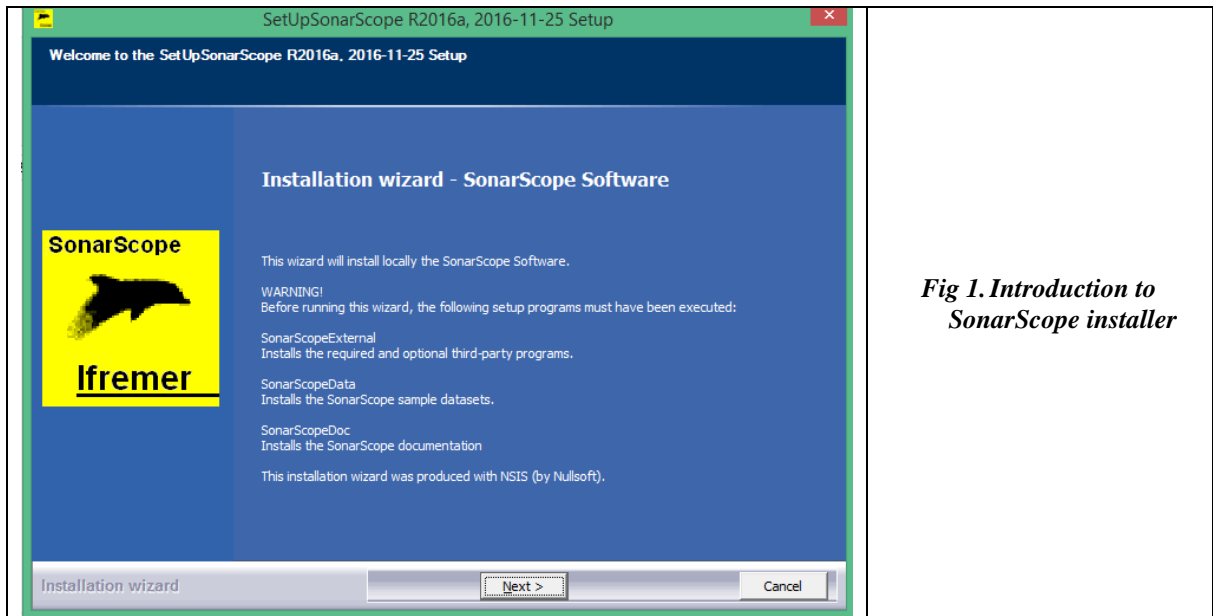


Fig 1. Introduction to SonarScope installer

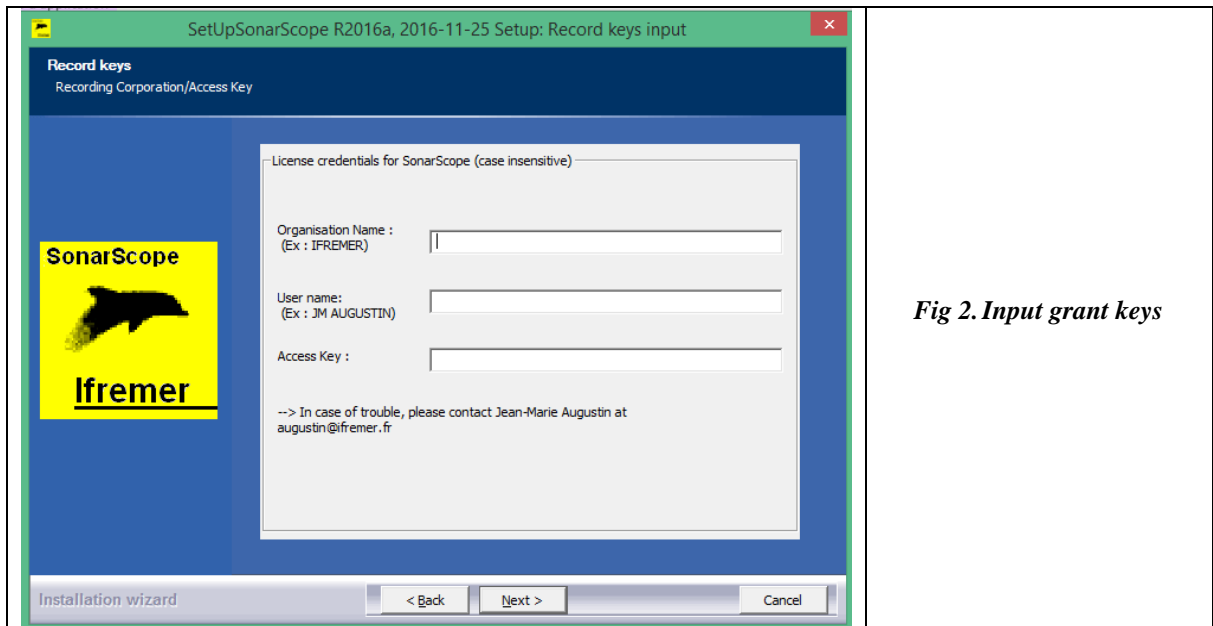


Fig 2. Input grant keys

The keys have to be provided before by IFREMER.

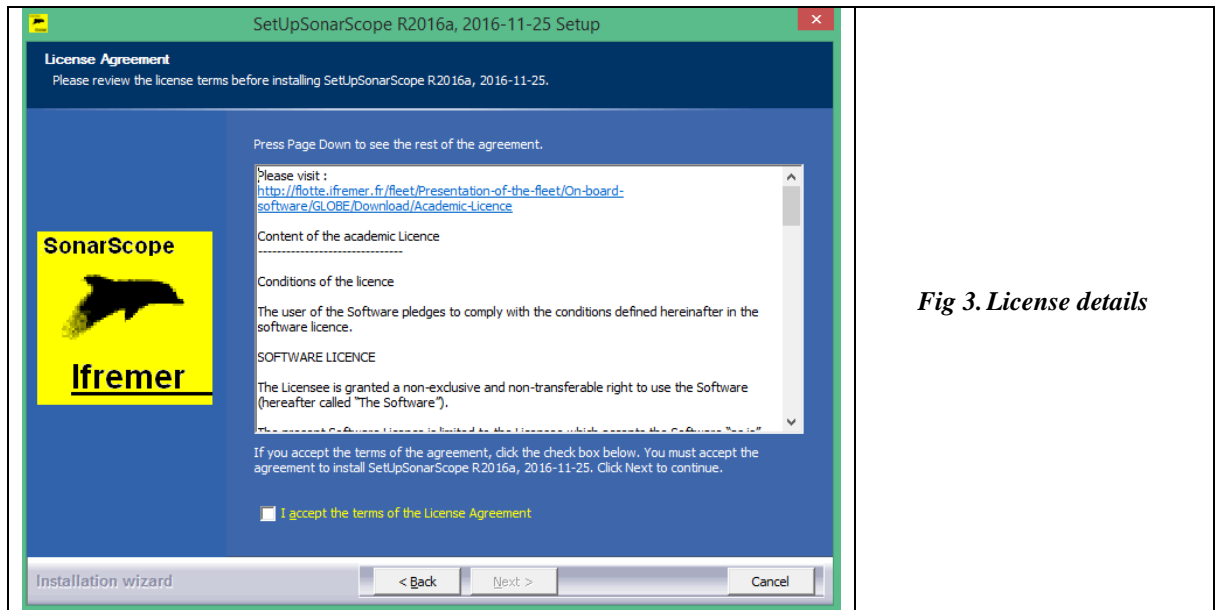


Fig 3. License details

The user has to select the check box to go forward.

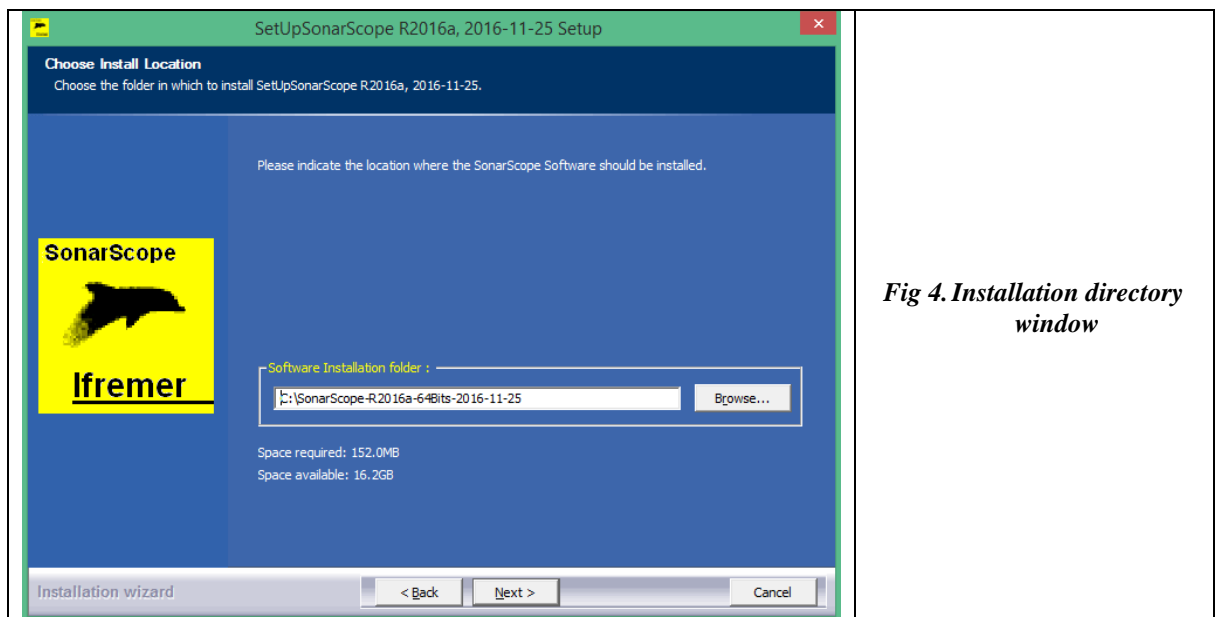


Fig 4. Installation directory window

The user can choose the install directory. Have a look to the required space: it indicates the spaces for all elements except the data directories.

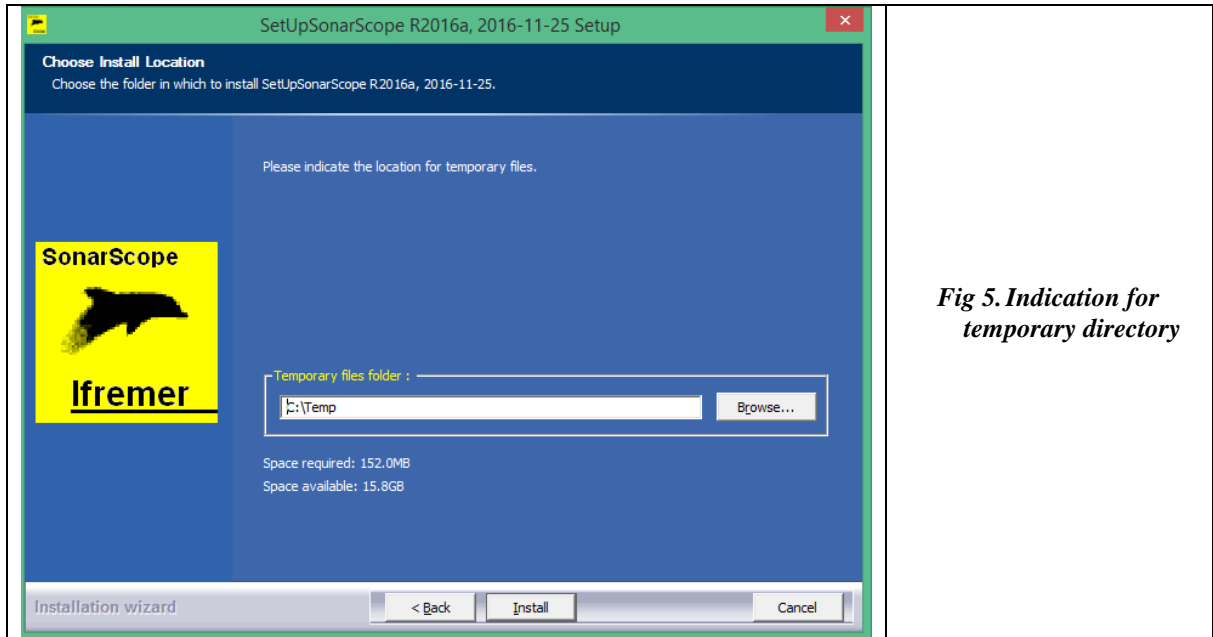


Fig 5. Indication for temporary directory

The user can choose the temporary directory that will be use by SonarScope for hidden operations.

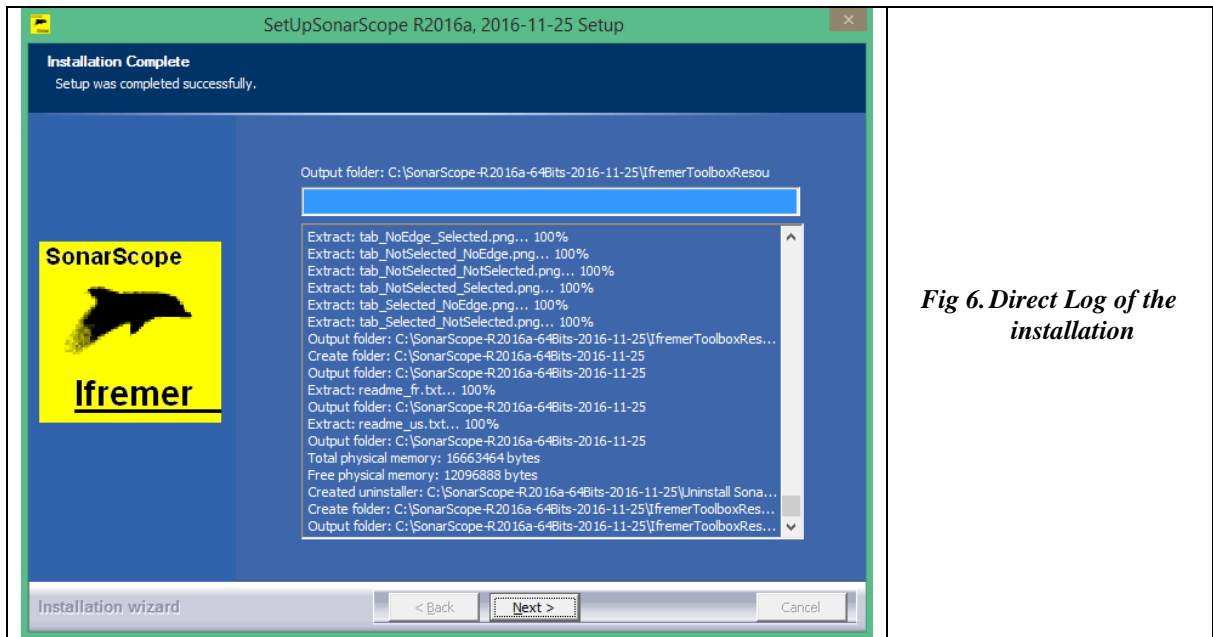


Fig 6. Direct Log of the installation

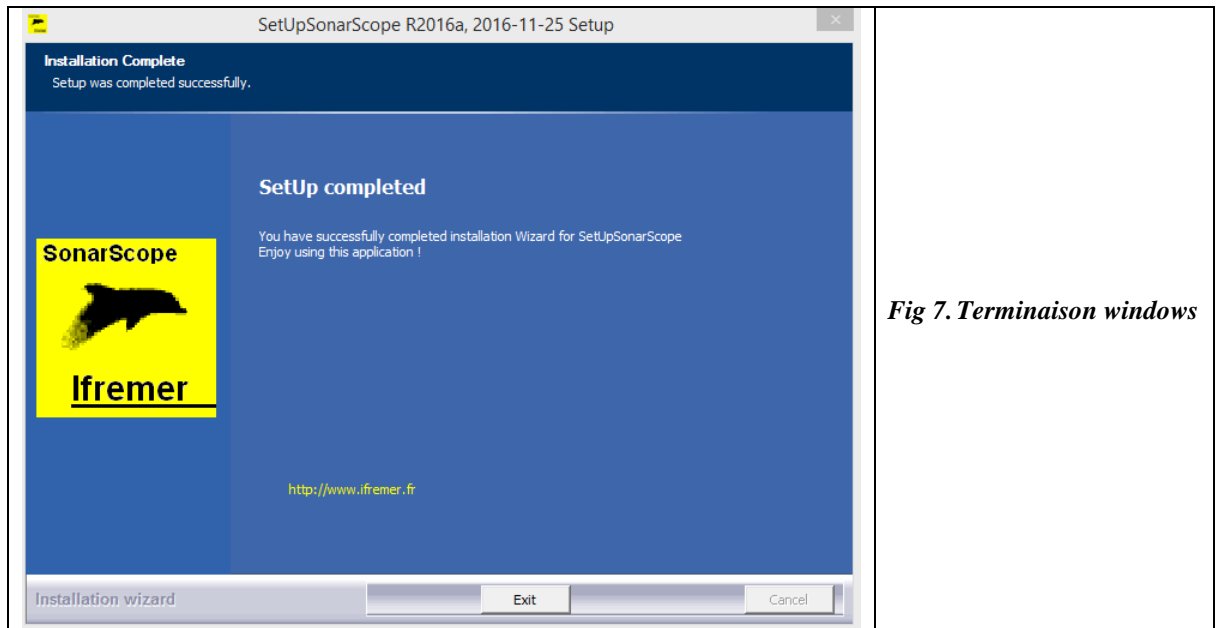


Fig 7. Terminaison windows

Once installed, SonarScope is located in a directory with the name:
SonarScope-<VersionOfMatLab>-<ArchitecturePC>-<Date>
Ex :
SonarScope-R2011b-64Bits-2014-01-29

5.3.4. Log file

In <Installation> directory, we find the "Install.log" which contents following data (unused for the moment):

Example:

```
[[INSTALL]
SonarScope=Yes
[CONFIG]
Language=FR
TempDirectory=C:\Temp
PATH=C:\SonarScope\SonarScope-R2011b-64Bits-2014-01-29
```

5.4. SetUp Data wizard

Some data are necessary for SonarScope (Etopo, Levitus, ...). This data directory is installed through a SetUp Wizard.

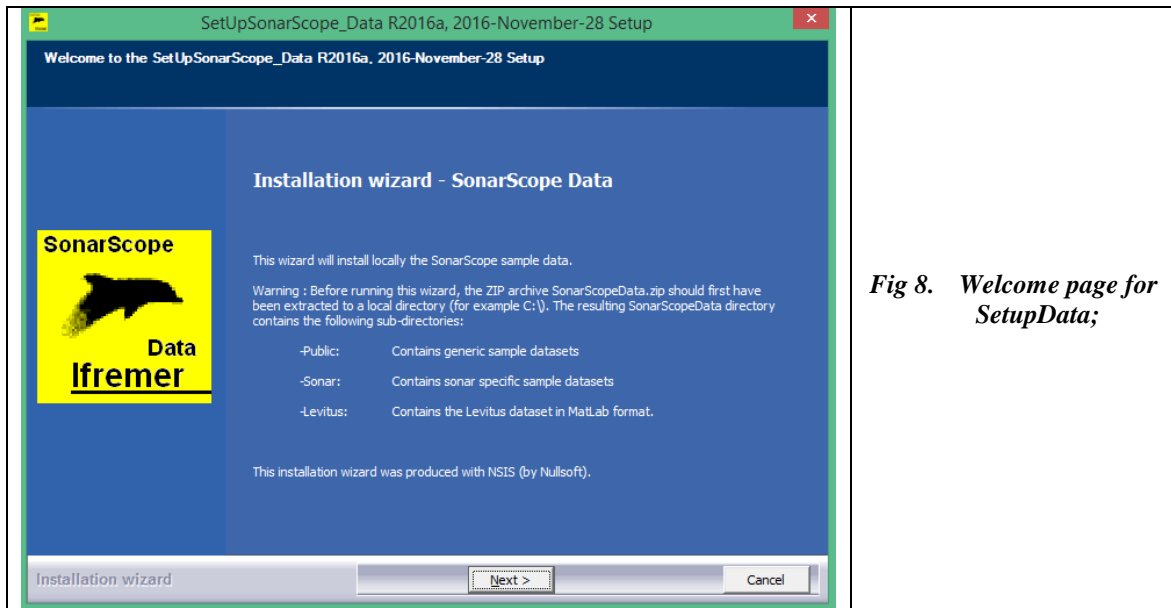


Fig 8. Welcome page for SetupData;

Then, the operator can choice if he installs Data (option 1) or only change reference of data repository.

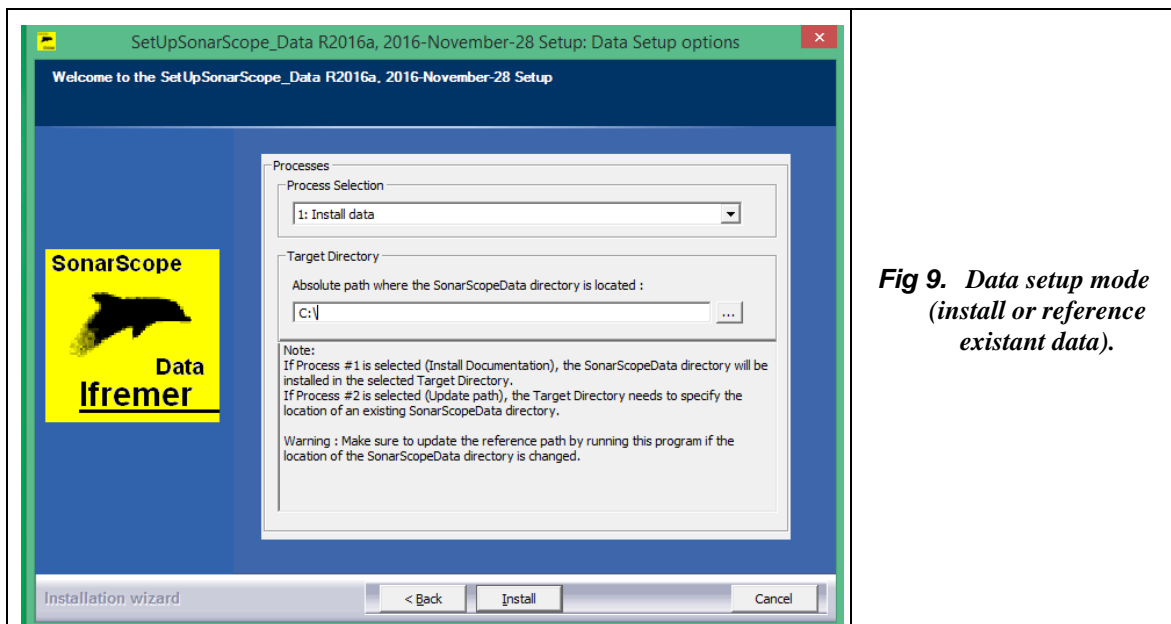


Fig 9. Data setup mode (install or reference existant data).

After choosing, details and ending page are displayed.

5.5. SetUp Annexes wizard

SonarScope need one component to work:

- **Matlab Component RunTime < MCRInstaller.exe >. This component depends from the platform where SonarScope has to be installed (64 bits).** Once MCR installed, the installation directory can be find under Program Files :
<C:\Program Files\MathWorks\MATLAB Component Runtime>

If MCR is not installed, the SetUp wizard detects it and will give a warning message during installation process.

NB:

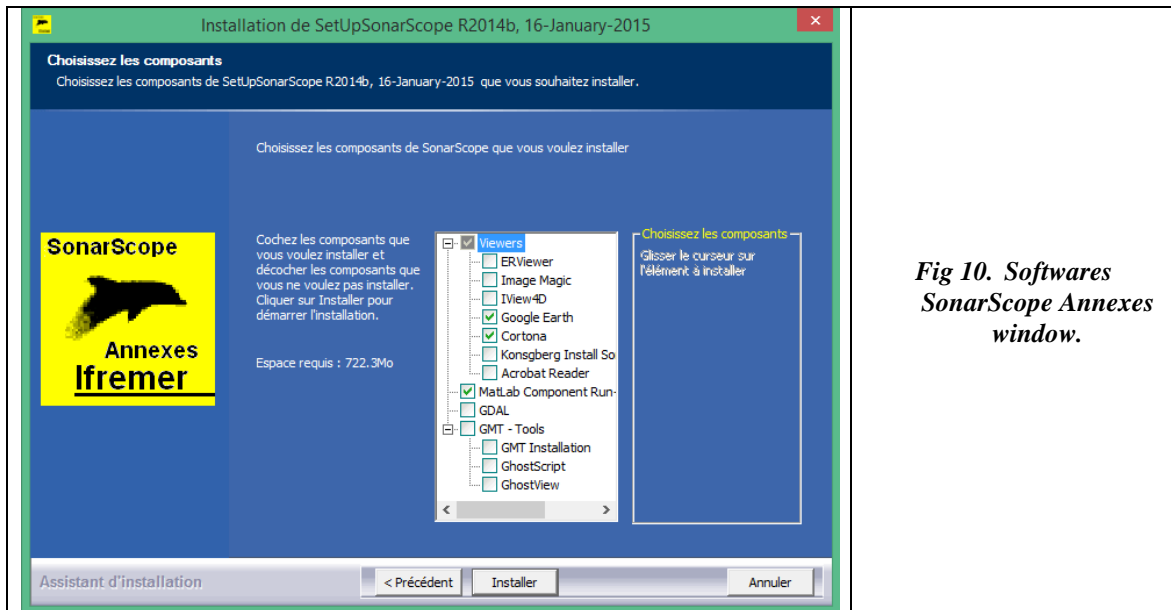
For R2016a version, path is <C:\Program Files\MathWorks\MATLAB Runtime>

Some components are proposed with the installation of the software. They could have been already installed on the platform. In this case, the installation detects it and proposes to not install the viewer(s) concerned.

All those viewers or applications are copying in <C:\fremmerToolBox\Installation\Viewers>:

- ER Mapper : ERViewer7_0.exe
- Image Magic : ImageMagick-6.1.5-Q16-windows-dll.exe
- iView4D : pc_iv3d_61.exe
- Google_Earth_Win.exe : famous Google Earth application
- Cortona : Viewer Cortona 3D to display in Web browser data exported
- Sonar Record Viewer : Multibeam files parser (to view contents), v .3.1.1 (ex : Konsberg Install Software). WinPCap, which is necessary for this software, is installed by the setup if is needed.
- GDAL : GDAL Library (to process images georeferenced).
- AdbeRdr811_en_US.exe Acrobat Reader
- GMT.zip : allows GMT plot (Release 5.0)
- gs851w32.exe : GhostScript application (used for GMT plot)
- gsv47w32.exe : GhostView application for viewing PS files.

All the applications are installed if not detected. The operator has to follow the instructions of each installer.



*Fig 10. Softwares
SonarScope Annexes
window.*

5.6. SetUp Documentation wizard

Documentation is installed through a SetUp Wizard.
Documentation is important to guide users in SonarScope exploitation.

5.7. Messages

5.7.1.1. Viewers already installed

Before choosing to install the components, the Setup attempts to detect the existence of viewers on the exploitation machine.

If a viewer is present, this message below appears. Example for ERViewer :

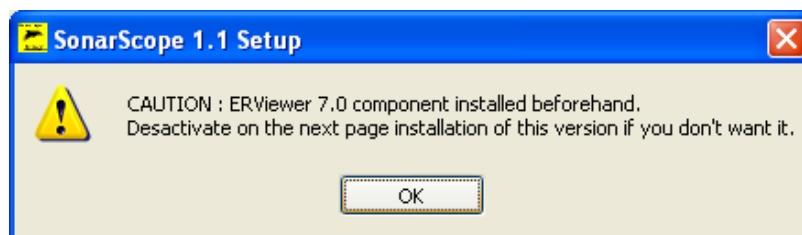


Fig 11. Component already installed.

5.7.1.2. MCR already installed

Before choosing to install the MatLab Component RunTime, the Setup attempt to detect the existence of a previous MCR on the exploitation machine. If the MCR is present, a message below appears as in §5.7.1.1.

5.7.1.3. Files already installed

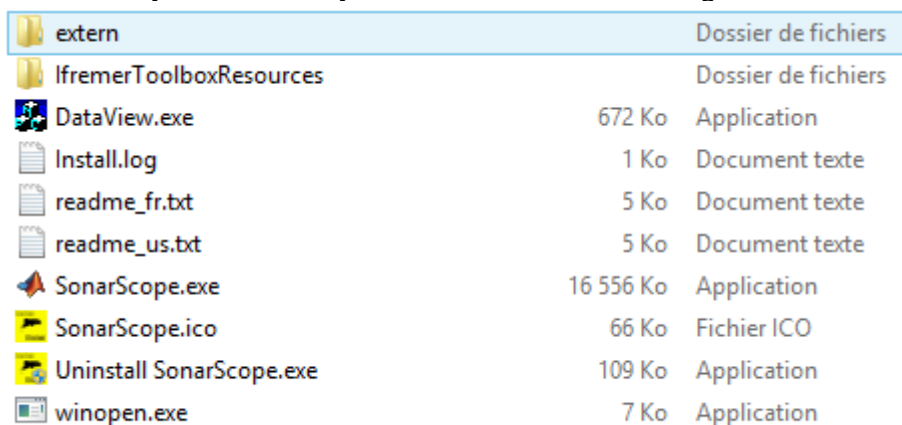
In case a component is already installed, a message appears in DOS command window to go on or stop the operation. The user can answer [Y]es, [A]ll, [n]o or [N]one to the system which detects that files are already in place (ex: directory < C:\MatLabRunTime>)

5.8. Results

Different elements are impacted on the machine once the installation terminated.

5.8.1. Installation content

The created directory after directory has to content the following items:

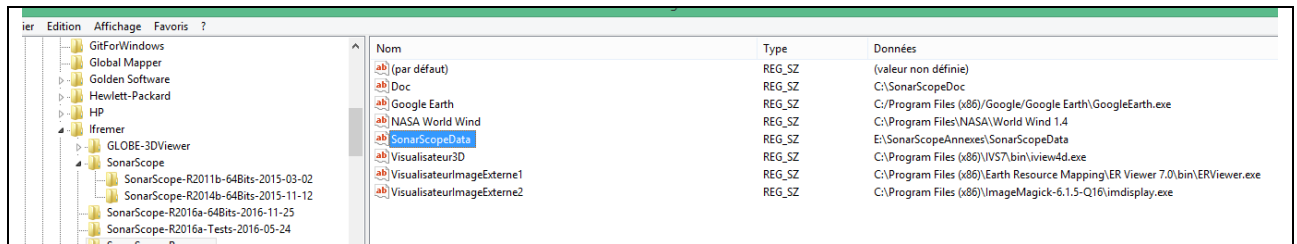


| | | |
|--------------------------|-----------|---------------------|
| extern | | Dossier de fichiers |
| IfremerToolboxResources | | Dossier de fichiers |
| DataView.exe | 672 Ko | Application |
| Install.log | 1 Ko | Document texte |
| readme_fr.txt | 5 Ko | Document texte |
| readme_us.txt | 5 Ko | Document texte |
| SonarScope.exe | 16 556 Ko | Application |
| SonarScope.ico | 66 Ko | Fichier ICO |
| Uninstall SonarScope.exe | 109 Ko | Application |
| winopen.exe | 7 Ko | Application |

Fig 12. Content of Sonarscope installation directory.

The java directory contents, as his name says, the java libraries (example for reading or writing .ALL and .S7K formats, or managing the graphics Lib for Java Objects).

5.8.1. Software Resources and Configuration



| Nom | Type | Données |
|----------------------------|--------|--|
| (par défaut) | REG_SZ | (valeur non définie) |
| Doc | REG_SZ | C:\SonarScopeDoc |
| Google Earth | REG_SZ | C:\Program Files (x86)\Google\Google Earth\GoogleEarth.exe |
| NASA World Wind | REG_SZ | C:\Program Files\NASA\World Wind 1.4 |
| SonarScopeData | REG_SZ | E:\SonarScopeAnnexes\SonarScopeData |
| Visualisateur3D | REG_SZ | C:\Program Files (x86)\IVS7\bin\iview4d.exe |
| VisualisateurImageExterne1 | REG_SZ | C:\Program Files (x86)\Earth Resource Mapping\ER Viewer 7.0\bin\ERViewer.exe |
| VisualisateurImageExterne2 | REG_SZ | C:\Program Files (x86)\ImageMagick-6.1.5-Q16\imdisplay.exe |

Without those declarations, SonarScope won't work.

Fig 13. Key register content for SonarScope.

If SonarScope seems to not find the datas, the operator can observe and test contents of windows register (as picture above).



5.8.2. Path, Environment Variables

After installation of GMT Tools, the following items are changed:

Path (access by click Property System on "C:/"Advanced Tab/Environment Variable button): the new Value is to be

- Path = ...;%GMTHOME%\BIN;%NETCDF%; C:\Program Files\Ghostgum\gsview

The path is updated only if the directory selected exist o the disk.

Environment Variables:

- GMTHOME = C:\GMT (installation directory of GMT)
- HOME = C:\GMT (installation directory of GMT)

5.8.3. Topics, GuideLines

During installation, the user indicate the installation directory of this component at :

- <C:\Program Files\MathWorks\MATLAB Component Runtime>
- Or for since R2016a release : :\Program Files\MathWorks\MATLAB Runtime>

On the development platform, we could find it at:

- <C:\Program Files\MATLAB\toolbox\compiler\deploy\win64> with xxxx as the version of Matlab.