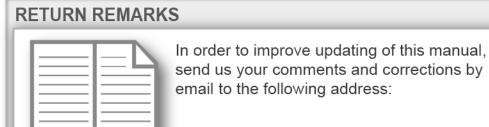
DOSIMETRY

Software

DosiCare



User's manual



Documentation-fr@mirion.com

(a)

Your "Return Remarks" will help us to provide you a better service. Thank you

References to be recalled with the "Return Remarks":

- ⇒ Title, reference and index of manual.
- ⇒ Chapter, paragraph and page concerned.

Information



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Record of revisions Dosicare

Record of revisions

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А		A. Mitchell	Creation of the document	First issue
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D	23/01/2009	O.Toussaint	DEVS 17030 DOSICARE Software evolution	All
E	16/10/2009	F. Moerel	DEVN 17566	§ 6.3.8, § 6.3.8.1 § 6.3.8.2, § 6.3.8.4 § 6.3.9 Creation of new paragraphs: § 6.3.9.1, § 6.3.9.2, § 6.3.9.3, § 6.3.9.4, § 6.3.9.5, § 7.2, § 7.3, § 7.4, § 7.5
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Dosicare Overview

1. Overview

1.1 Purpose of this document

This document provides the necessary information for the optimal use of the individual dosimetry software **DOSICARE**:

- with DMC 2000 dosimeters, and LDM 101, LDM210, LDM220, LDM230, LDM2000 readers and LDM3000 concept.
- in a windows environment.

For any use of this software on other platforms, please consult an MGP Instruments representative.

For more information on the dosimeters and readers, please refer to the respective manuals (see §1.3 Reference documents, page 2).

Note: the present document is applicable for a user that already has some basic knowledge of the windows SOFTWARE environment. I.e. mouse manipulation, menus, open, save a file. If necessary refer to the operating system's documentation.

1.2 Contents

The present document contains the following chapters:

- Installation and start up: The chapter describes the necessary operation in order to install and start the DOSICARE software. It also describes the use with dosimeter readers.
- General presentation: The chapter describes all the DOSICARE features in order to have an easy access to the program functions.
- Initializing the data: The chapter provides a detailed procedure to create and maintain the required data in order to manage the individual dosimetry. (Categories, Alarms thresholds, dose limits, company's data, doctor data and worker data).
- Assignment of a dosimeter: The chapter describes the methods to allocate temporarily or permanently (definitively) a dosimeter to a worker, to activate ("put in zone") the dosimeter (area entry), to consult the list of activated dosimeters, or deactivate ("put out of zone") the dosimeter (area exit).
- Displaying, editing dosimetric reports: The chapter describes all the reports that can be printed.
- Displaying, editing the worker files via web browser: The chapter describes the access to the worker's data via a web browser from type Internet Explorer.
- Monitoring important indicators: The chapter describes how to get alerted about area exit with alert/alarm, forced area entry and disconnection of dosimeter reader in real time via a dashboard. Watch the system (System supervision)

Overview Dosicare

This chapter describes what the user needs to know to check that the system (readers LDM101, LDM210, LDM220, LDM230 or LDM330) is working correctly.

■ Trick (System preferences)

The chapter explains how, to change the software warnings change the units, or change the language.

Extension

The chapter describes how to extend the system: multiple readers on the same PC, multiple readers on other PC's.

An appendix at the end of the document provides further information.

1.3 Reference documents

For any further information on associated equipment used by the DOSICARE software, please refer to the following documents:

•	DMC2000 user's manual :	115 170
•	LDM101 user's manual :	122 865
•	LDM210/220 user's manual :	127 356
•	LDM2000 user's manual :	115 373
•	LDM3000 user's manual :	131 319

1.4 Direct access to the information

The document is designed to provide quick access to any information, including:

- A detailed Table **of Contents** located at the beginning of the present document.
- A Glossary located at the end describes all the acronyms, abbreviations and terminology.

Dosicare Overview

1.5 Conventions

1.5.1 Typographical symbols

The ■ and □ symbols are used to describe enumerations.

The ■ symbol is to indicate the first level of the enumeration.

The \square symbol is to indicate the second level of the enumeration.

1.5.2 Screen copies

This document includes many screen copies.

All the screen copies may slightly differ with the OS version used.

Note: All the screen copies are done with the "USER" level, if it is not the case, the level will be mentioned.

1.5.3 Selecting the functions from the menu

For clarification, the selection of a function from the menu will be described as follows: from the main menu select *menu's function /menus sub-function / etc.*

Example: "To print the document select File / Print"

1.5.4 Terminology

The present manual refers to menu terms that are specific to the dosimetry. For clarity, the entire dosimetry specific vocabulary is explained in the glossary located at the end of the document.

1.5.5 Advise, reminder, Note

The user will find in the manual some text zones named advise, reminder, Notes.

Advice: the advice promotes improved work efficiency and offers shortcuts or actions that will help save time.

Note: the Notes indicate important points, exceptions and specific points.

Reminder: the "reminder" reminds some information seen to prevent additional investigations.

Overview Dosicare

1.6 Description

The DOSICARE software is especially suited to management of the individual dosimetry of the persons (termed "workers" afterwards) in compliance with the French regulations in force.

The DOSICARE software is delivered on a CD-ROM disk, including the on line documentation.

This software must be installed on PC-type machines featuring an operating system Windows XP (Latest Service Pack highly recommended), and is used with DMC2000S, DMC2000X, DMC2000XB dosimeters and one or more LDM101, LDM210, LDM220, LDM230, LDM330, LDM2000 and LDM3000 (concept) readers.

1.6.1 Features

DOSICARE offers the following functions:

- Configuration of the pre-installed data :
- Definition of the common data (Categories, alarm threshold, pre alarm threshold, dose limits, unit)
- Basic data creation :
- company's data creation
- Section's data creation
- Doctor's data creation
- worker's data creation
- Assignment of a dosimeter :
- Permanent assignment
- Temporary assignment
- Dosimeter reading.
- After use dose assignment.
- Alarm cases sorting.
- Displaying, editing dosimetric reports.
- Dose export in as text file for specific statistics or reports.
- survey of the system

Dosicare Installation and setup

2. Installation and setup

2.1 Introduction

The installation and the setup of DOSICARE consists in:

- Installing the software modules on the required platform (generally a PC)
- Installing the hardware configuration (linking the PC to the dosimeter reader)
- Setting up the link between the PC and the reader

2.2 Hardware required configuration

The minimum requirements for a pc to run the DOSICARE software are specified as follows:

- PC compatible (INTEL Pentium II >= 400 MHz)
- Hard drive >= 4 Gbytes
- RAM memory >= 1 Gbytes
- 1 serial RS232 port available (or USB) and recognized by the operating system.
- Microsoft Windows (XP-SP2, Vista or Windows 7) for DosiCare, LdmMgr and LdmMgr2000
- Microsoft Windows (2000-SP4 + IE6 + MDAC2.8, Server 2003-SP1, XP-SP2, Vista, Windows 7 or Windows 8) for the Database SQLServer 2005 Express Edition
- Color screen SVGA resolution 1024 x 768 (recommended screen size 17 inch)
- Printer
- Mouse
- The CD-ROM, MGP Instruments containing the DOSICARE software.

2.3 Installing the software

Advice: before starting the installation software, we recommend that you quit all other running applications on the PC.

2.3.1 Client and server installation

2.3.1.1 Running the installer

The DOSICARE software is delivered on a CD-ROM containing the DOSICARE, DosiCare Web, Dashboard, IRSN mail generator, LdmMgr and LdmMgr2000 modules.

Note: LdmMgr is the software module that manages the communication layers between DOSICARE and LDM101-family, LDM210, LDM220, LDM230 and LDM330 readers. LdmMgr2000 manages the LDM2000 and LDM3000 via the Ethernet connection.

Installation involves running the installer "setup.exe" from the CD-ROM and following the instructions displayed on the screen.

Notes:

Installation is valid only for:

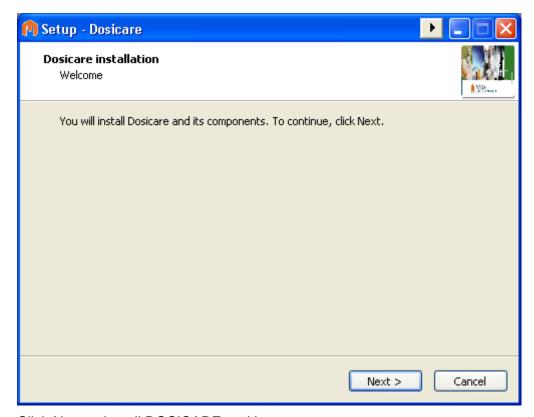
- one type of dosimeter reader (LDM101, LDM210, LDM220, LDM230, LDM330, LDM2000 or LDM3000),
- one configured language (French or English)

Changing the dosimeter type or language afterwards requires a fresh installation.

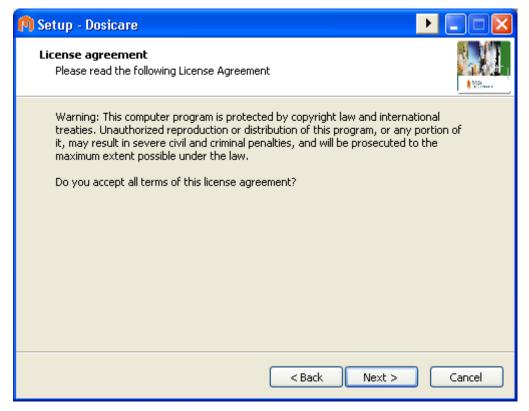
If you wish to use DOSICARE software with another type of reader, please consult Mirion Technologies.

Choose the installation language:

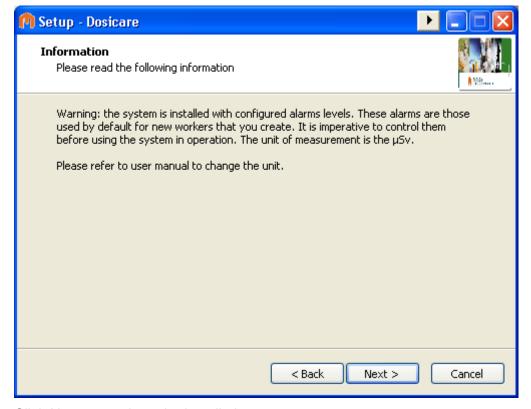




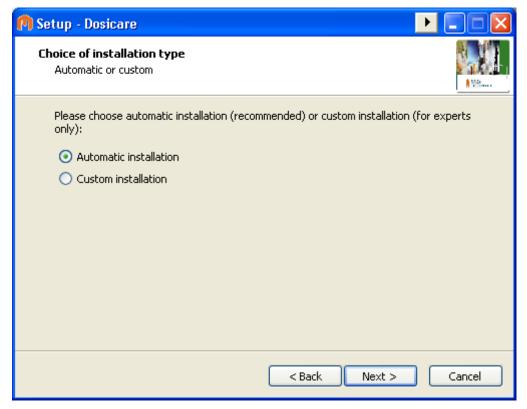
Click Next to install DOSICARE and its components.



Click Next to accept the license agreement.



Click Next to continue the installation.



The installation wizard offers the choice of automatic or custom installation.

Automatic installation

- Operating system is automatically detected,
- Required components (Windows Installer, .NET 3.5 Framework, SQL Server 2005 Express Edition) are installed if not present,
- Components are installed in the directory C:\Program Files\Dosicare,
- All Dosicare components are installed (Dosicare, LdmMgr, LdmMgr2000, Dashboard, Dosiweb, Siseri Sender and SiseriWebReport),
- The DOSICARE database is created, and installation is set up (as a server), but replication is not activated in the LdmMgr application,
- The applications are configured in French,
- Drivers for the LDM220, LDM320 and LDM330 readers are installed.

If any of the following applies to you, it is recommended that you should use custom installation:

- You want to choose which required components (Windows Installer, .NET 3.5 Framework, SQL Server 2005 Express Edition) to install,
- You want to choose the operating system manually,
- You want to change the installation directory or choose which components to install,

Dosicare Installation and setup

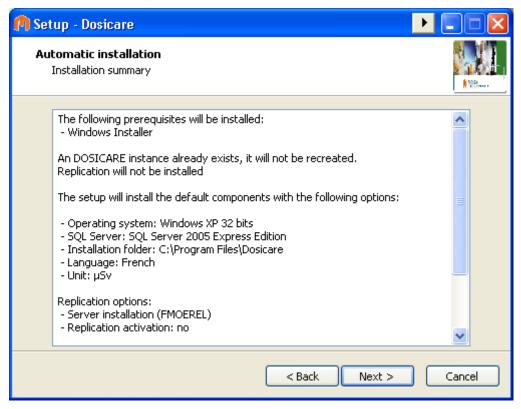
■ You do not want to create or update the database, or you want to manage the creation of the database manually (because a version of SQL Server is already installed and you want to manually create an instance called DOSICARE)

What automatic installation does not do:

- Create an instance called DOSICARE if a version of SQL Server is already installed. In this case you must create an instance called DOSICARE manually before running automatic installation.
- Installation of Framework 4.5 (mandatory for SiseriWebReport). If you install SiseriWebReport, then you need to install Framework 4.5.

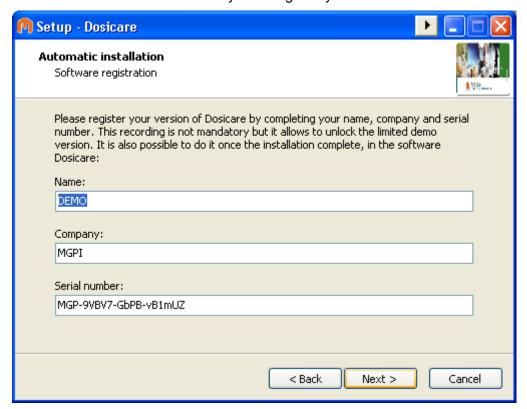
2.3.1.2 Automatic installation

If you have selected automatic installation, the installation wizard displays a summary of the actions which will be performed:



If you are agree with this installation, click Next to continue. Otherwise click Back and select custom installation. Click Cancel to cancel installing DOSICARE on this machine.

The installation wizard then asks you to register your version of Dosicare:



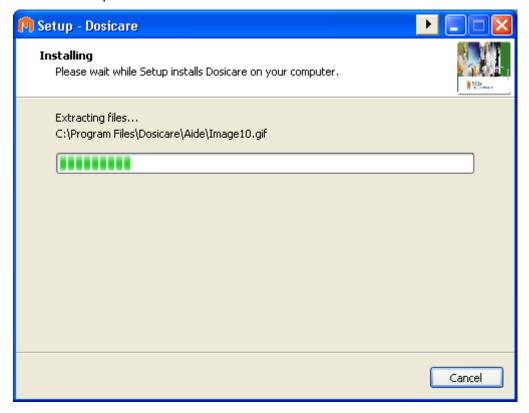
By default, Dosicare is registered as a demonstration version. This blocks access to some of the functions of Dosicare's components. If you want to use the full version of the Dosicare tools, you should register your version of Dosicare.

Note: you can register your software after installing the application, via the Dosicare registration interface.

Depending on the components required, the installation wizard may launch the installation of Windows Installer, .NET 3.5 Framework or SQL Server 2005 Express Edition Follow the instructions for installing these required components.

Dosicare Installation and setup

Once any required components have been installed, the installation wizard installs the Dosicare components:



Once the DOSICARE components have been installed, the wizard will install the drivers for LDM3X0 readers. The installation screens may differ depending on the operating system. Follow the installation instructions for these drivers. Below is an example of installing the LDM220 driver on Windows XP:

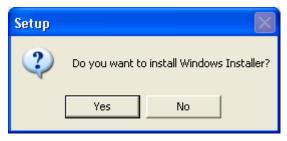


Installation completed, click Finish to quit the setup wizard.



2.3.1.3 Custom installation

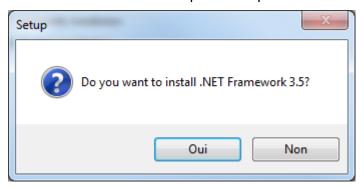
If you have selected custom installation, the wizard asks whether you want to install Windows Installer:



The Windows Installer setup wizard automatically detects if Windows Installer is already installed or if an update is required. If you have clicked on Yes and Windows Install and sex that installation is not required, you will see the following message:

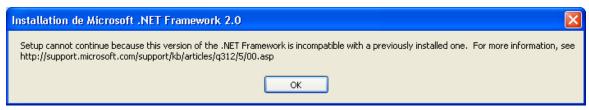


This message informs you that it is not required to install Windows Installer. This error does not prevent DOSICARE from being installed. Click OK and the installation of DOSICARE will resume with the next required component:

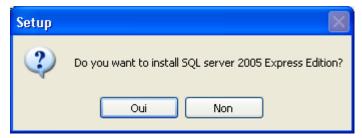


The .NET 3.5 Framework setup wizard launches, follow the instructions.

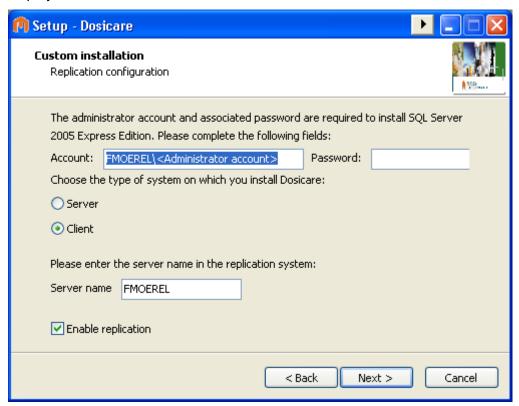
If a more recent version of the .NET Framework is already installed, you may see a message reporting that the installation failed, or a dialogue box offering the choice to modify, repair or uninstall it. This indicates that the .NET Framework is already installed and it is not necessary to continue installing it. Cancel installing the .NET Framework and go back to DOSICARE installation.



The DOSICARE setup wizard then offers to install SQL Server 2005 Express Edition:



If you have chosen to install SQL Server 2005 Express edition, the following window is displayed:

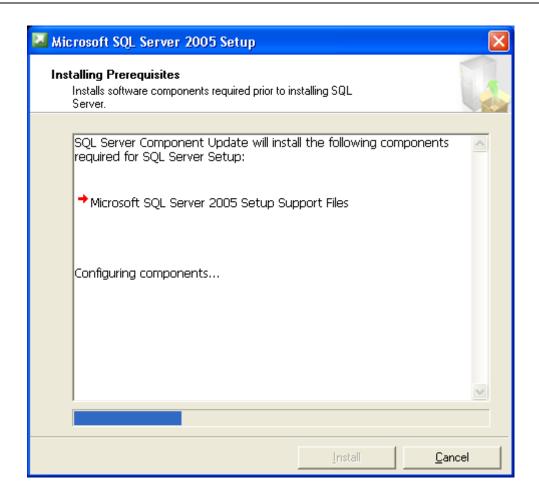


To install SQL Server 2005 Express Edition and configure the replication module, the following fields must be completed:

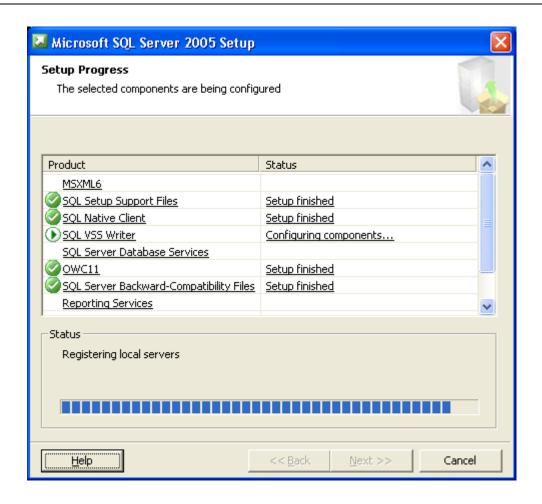
- Administrator account and password: required to configure SQL Server 2005 services. If you do not have a password for your administrator account, you must set one up. The account name must contain the machine name and username in the form <machine>\cuser>. The setup wizard supplies the machine name for you.
- Choice of machine type: server or reader,
- In the case of a reader (client) installation, the server name is requested in order to configure the replication module,
- You can also activate replication

Click Next to start installing SQL Server 2005 Express Edition required components:

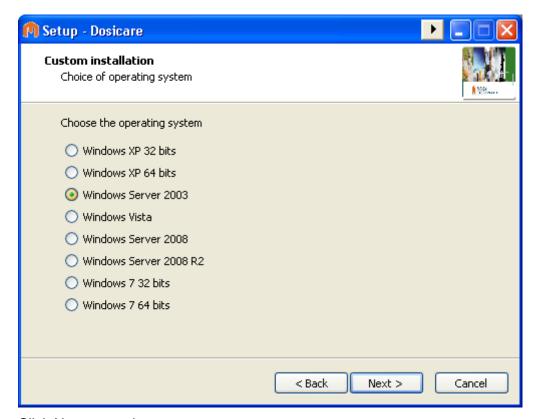
Dosicare Installation and setup



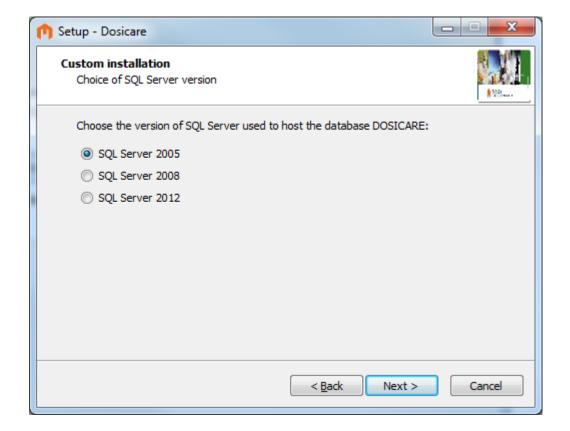
SQL Server 2005 Express Edition installation screen:



When SQL Server 2005 Express Edition installation is complete, the DOSICARE setup wizard continues with the operating system selection screen:

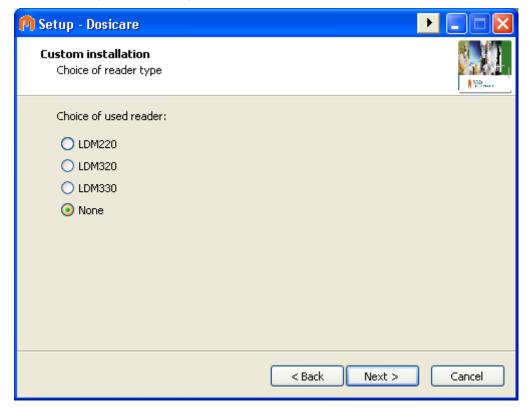


Click Next to continue.

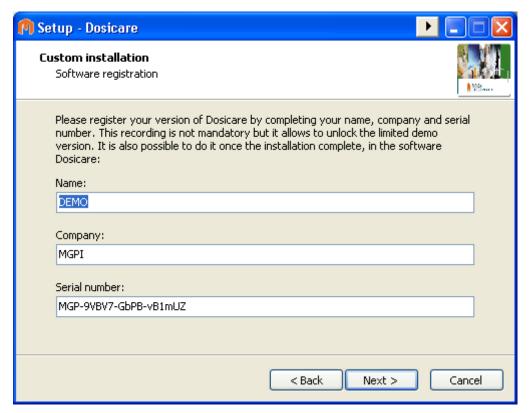


Select the version of SQL Server which hosts the database. If you have just installed SQL Server 2005 Express Edition, select SQL Server 2005 from the list. If you did not install SQL Server 2005 Express because a version of SQL Server was already installed on your machine, selected in the list and click Next to continue.

Choose the type of reader you will use:



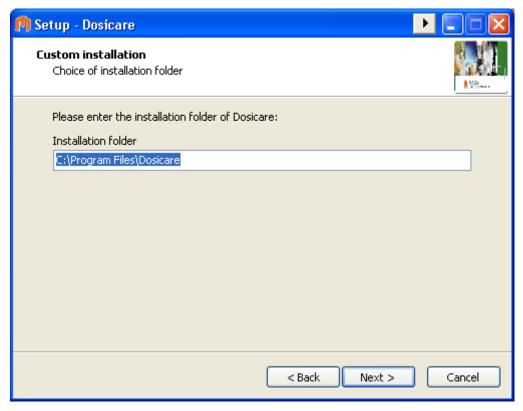
If you do not know which reader to install, or you are installing components which do not require the use of a reader, select None. Click Next to continue.



By default, Dosicare is registered as a demonstration version. This blocks access to some of the functions of Dosicare's components. If you want to use the full version of the Dosicare tools, you should register your version of Dosicare.

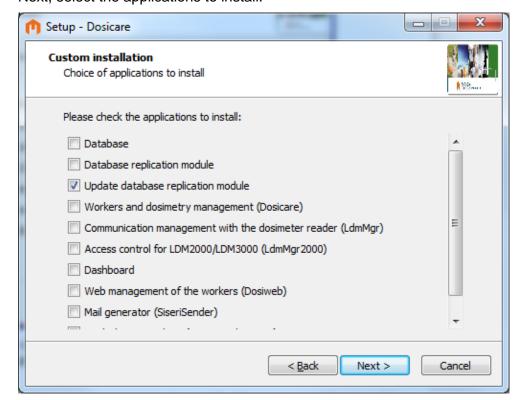
Note: you can register your software after installing the application, via the Dosicare registration interface.

Click Next to continue the installation.



Enter the installation directory for the DOSICARE components. By default, on 32-bit operating systems, the directory C:\Program Files\Dosicare is used.

Next, select the applications to install:



Dosicare Installation and setup

If you install the database, it is highly recommended to install the replication module. Replication is essential for systems with several readers and a central server.

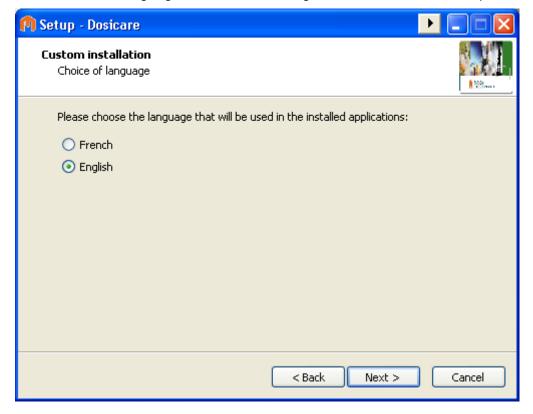
As a general rule when installing on a server, the following applications can be installed:

- Database (recommended)
- Database replication module (recommended)
- Worker and dose management (Dosicare)
- Dashboard
- Mail generator (SiseriSender)
- Dose check on the Internet (SiseriWebReport)

When installing on a client (reader), the following applications can be installed:

- Database (essential)
- Replication module (recommended)
- Dosimeter reader communication manager (LdmMgr)
- Access control for LDM2000/LDM3000 (LdmMgr2000)

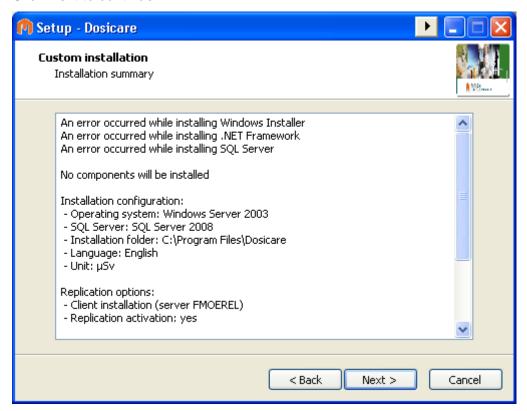
Next, select the language which will be configured for the Dosicare components:



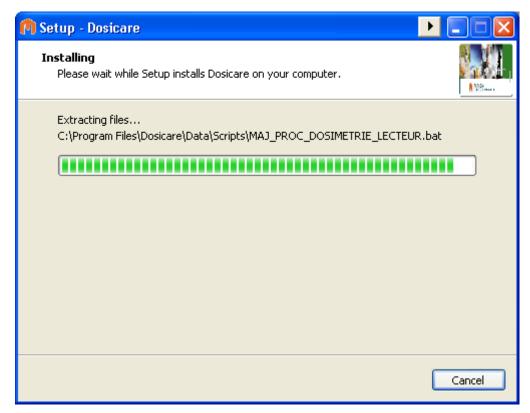
Note that the language may be changed in each application after installation, by editing the appropriate configuration files.

Click Next to continue.

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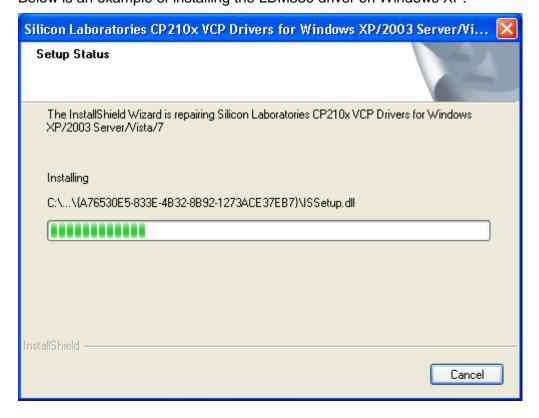


The setup wizard displays the custom installation summary. If you are agree with this, click Next to continue or Back to change the installation options.



The setup wizard installs the Dosicare components. Depending on the options selected, several installation windows may be displayed for the database or driver readers. Follow the instructions given by these setup wizards.

Below is an example of installing the LDM330 driver on Windows XP.



The setup wizard displays the end of installation message:



Click Finish to quit the DOSICARE setup Wizard.

2.3.2 Server installation

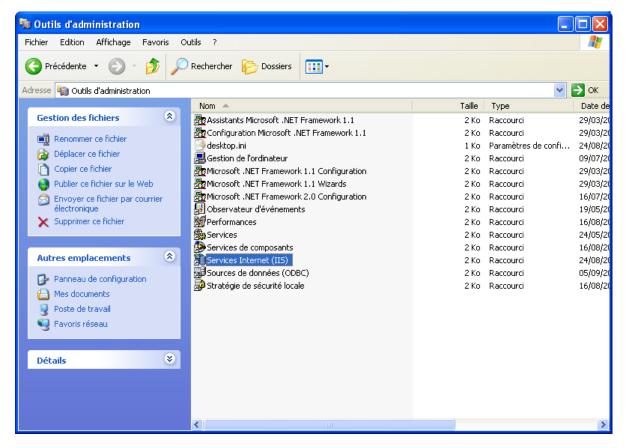
2.3.2.1 Required components

If you have chosen to install the DosiWeb or SiseriWebReport application, you may need to install and configure IIS. To do this, go to "Control Panel", "Add/Remove programs", "Add or remove Windows components", and select "Internet Services (IIS)".

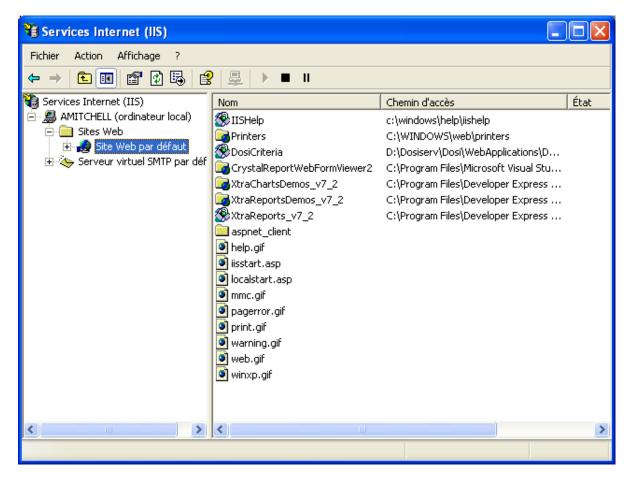
2.3.2.2 Configuration of DosiWeb

On the machine which will operate as Web server for DosiWeb:

- Go to the installation directory of DosiCare, generally "C:\Program Files\DosiCare" and copy the directory "DosiCare Web". Paste this directory in "C:\Inetpub\wwwroot".
- Go to the Control Panel, open the administration tools and double click on Services Internet (IIS). See below.



- If Services Internet (IIS) is not present, you have to install it.
- Go to the menu "Default Website " as shown below :

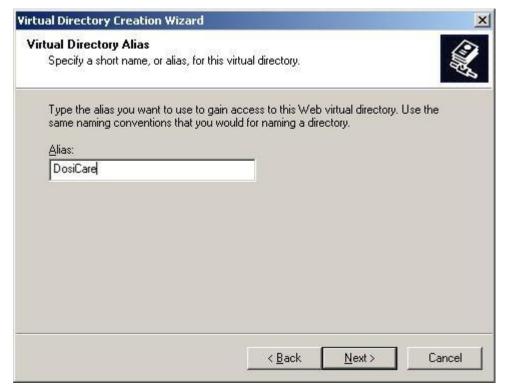


Right click on "Default Website", go to "New" and select "Virtual directory".

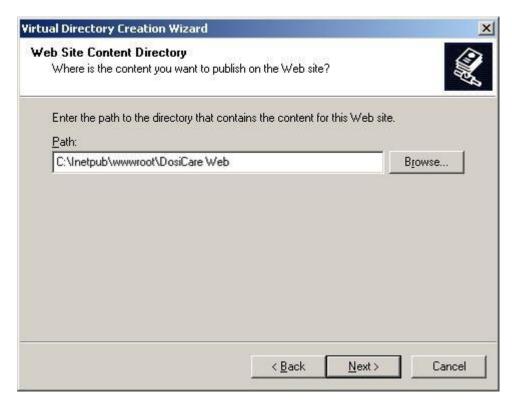
Dosicare Installation and setup



Click on "Next".



Create the alias "DosiCare" and click on "Next ".



Enter the directory as "C:\Inetpub\wwwroot\DosiCare Web" and click on "Next ". Fill the next window as shown below:

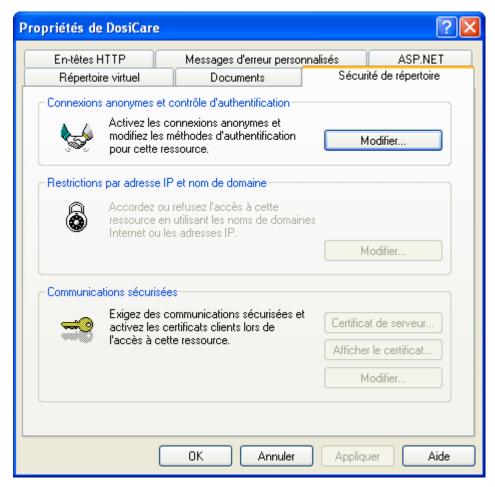


Click on "Next".

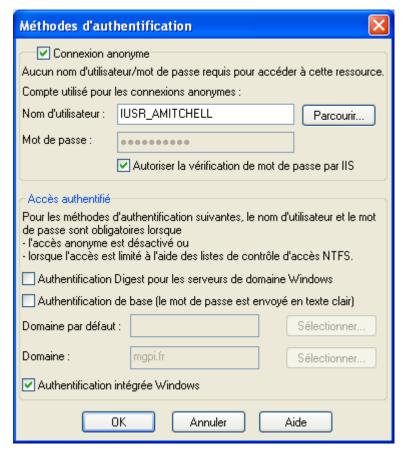


Click on "End".

Right click on the alias "DosiCare" in the list of "Default Website" and select "Properties". Go to the tab "Directory security" and click on "Change " on the window below:

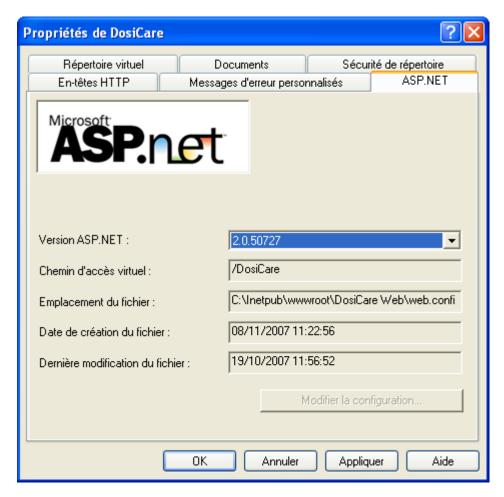


Following window appears and should be filled as shown:

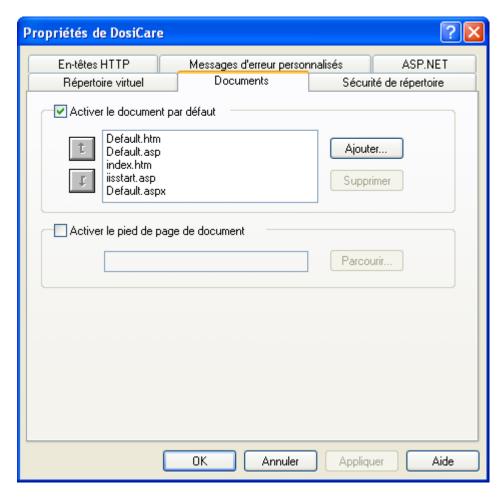


Click on "OK" in order to validate.

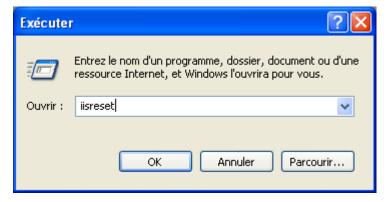
On the windows of the properties, go to the tab "ASP.NET". For the "Version ASP.NET", select the line from type "2.x.yyyyy" that corresponds to the framework .Net to be used:



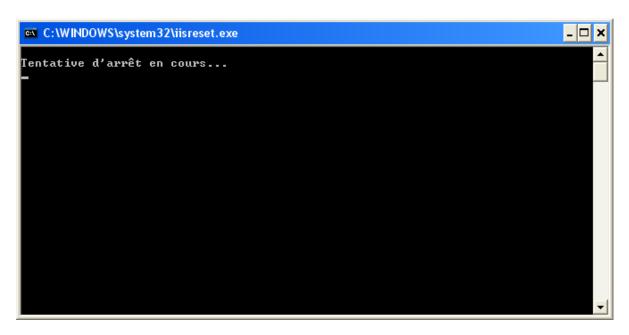
Go to the tab "Documents" and, if not already present, add the element "Default.aspx" by clicking on the button "Add " in order to obtain a similar window as below:



Go to the menu START and select "Run...". In the appearing window, enter "iisreset":



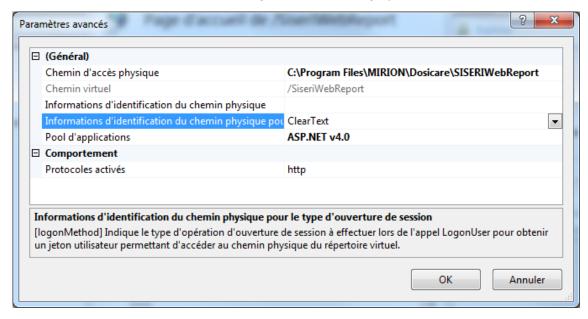
■ Click on "OK". The following window appears and will then close.



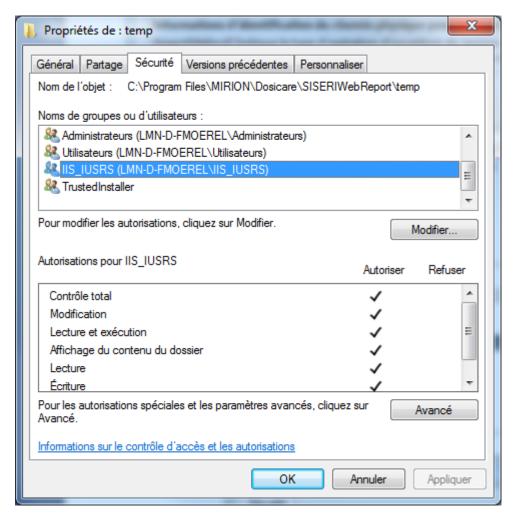
2.3.2.3 SiseriWebReport Setup

On the PC that will be used as a Web server for SiseriWebReport:

- Go to the Control Panel, open the administrator tools and then double-click on Services Internet (IIS). Add the SiseriWebReport virtual directory the same way you did for DosicareWeb.
- In the advanced settings, select ASP.NET v4.0 as the ASP.NET software version (or as Pool d'applications, depending on the operating system in use :



 Setup the « SiseriWebReport/Temp » directory where report files are generated by enabling the « IIS IUSRS » user to write in this directory (full control) :



 The generation of report (as .pdf files) requires the installation of Acrobat Reader or equivalent.

2.3.2.4 Configuration of the mailgenerator

The mailgenerator IRSN allows sending an email to a responsible person in order to automate the transmission of the file to the IRSN. This attached file contains the doses, which are not yet transmitted. A reminder of the file content is done in the body of the email. The range of covered dates is shown in the email subject.

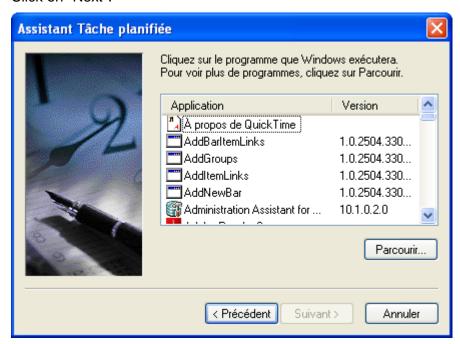
The mailgenerator IRSN has not graphic interface for the user. It will be executed only once. In order to regularly send an email to a responsible person, you have to add a scheduled task.

Due this, go to the Control Panel of the PC and open "Scheduled task". Double click on "Create a scheduled task".

Follow the steps below:



Click on "Next".

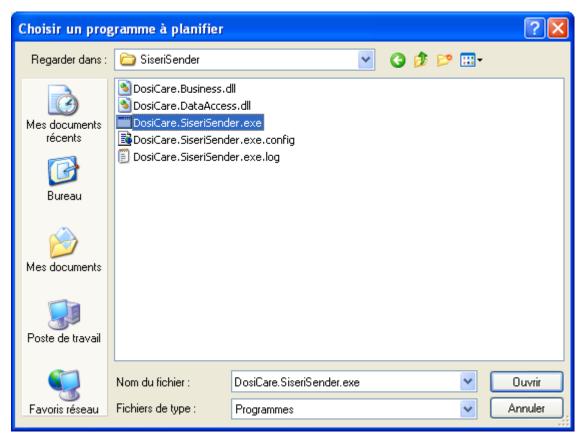


Click on "Browse...".

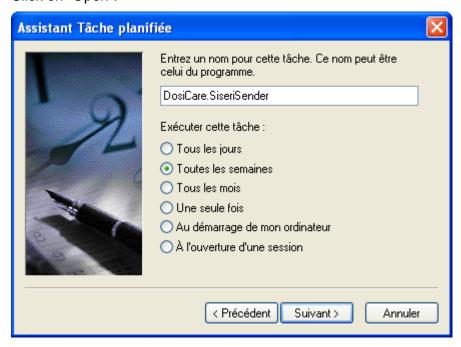
Navigate to the installation directory of DosiCare.

Go to the subdirectory SiseriSender and select DosiCare.SiseriSender.exe. In the default case, the entire path is:

"C:\Program Files\DosiCare\SiseriSender\DosiCare.SiseriSender.exe".



Click on "Open".



Select the execution frequency, for example "Each week ", and click on "Next".



Select a time and a day of the week and click on "Next ".



Click on "Next".



Click on "End".

Then you have to set the application itself. In the installation directory, go to SiseriSender and open the file "DosiCare.SiseriSender.exe.config".

The file appears as below:

You can set the following data:

- The SMTP server, "smtpHost" (mandatory)
- The SMTP port, "smtpPort" (mandatory), default value 25.
- The recipient(s) separated by semicolons, "recipient" (mandatory). The email addresses must be valid. "useSSLAuthentification" which enable / disable the authentication encryption (facultative). Default value: disabled.
- The login and password used to authenticate to the SMTP server "loginSMTP" and "passwordSMTP" (facultatives). Default value: no authentication.

■ The sender, "sender" (mandatory, but it is better to enter a different email address from the recipient's address in order to inform a person in case of an error by transmission of the email to the recipient).

- The threshold of dose limit, "dose Threshold", that allows to alert the recipient in the body of the email about the exceeding of this threshold (facultative).
- The relative location of the backup of the sent files, "CSVDirectory" (facultative).
- The identifier of the user, whose the email has been placed as recipient, "login" (mandatory).
- The company of the user, whose the email has been placed as recipient, "company" (mandatory).

In order to fill in this file, you should fill the space between the quotation marks just after "value". It is important to keep the quotation marks. See the file below as example:

2.3.2.5 Initialization of working codes

Task codes depending on the customer, no working code is inserted in the data base during its creation when the installation is lauching.

To initialize the task codes, you must execute the file

- « PATCH_INITIALIZE_CODE_TRAVAIL.BAT » after having modified the file
- « INITIALIZE_CODE_TRAVAIL.sql » which contains all the task codes we want to insert. These files are in the directory « Data/Scripts/ » of the installation's directory of DOSICARE application.

The file « PATCH_INITIALIZE_CODE_TRAVAIL.txt » allows verifying the good flow of task codes' initialization. We can also verify in data base (by using SQL Server Management Studio Express) that the table CODE_TRAVAIL is correctly initialized.

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2.4 Launch

2.4.1 Launch the main application

When installing, a folder called " **DOSICARE** " is created on the desktop.

Open this folder by double clicking the folder icon.

Double click on the "DosiCare" shortcut.

The same shortcut can be launched from the menu START/Programme/DosiCare.

Due to the fact the DOSICARE Software manages individual dosimetry information, it has to provide protection to some of the information by a password access.

When the program loads, the user is requested to enter a user name and a password.

The user and password (**in lower case**) have to be declared in the database. This is performed in the "add user" function.

Note: It is mandatory the very first time this system is used to launch DosiCare BEFORE LdmMgr or LdmMrg2000.

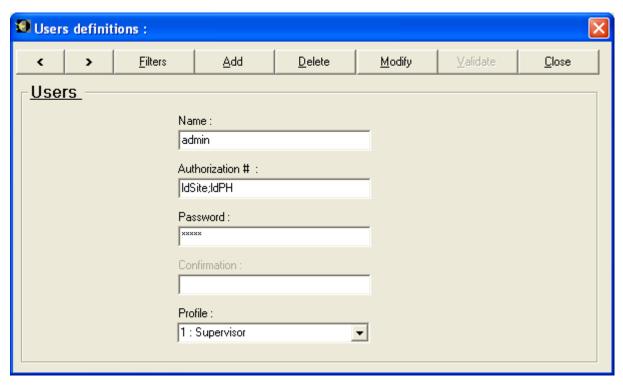
Double click on the "LdmMgr" or "LdmMgr2000" icon to launch the module that manages the communications with the LDM readers.

Note: If you have connected more the one LDM 101/501 reader to your PC, please refer to §13.2 Several LDM connected to the same PC, page. 184

Please connect your LDM reader prior to proceeding. The procedure is described in the next chapter.

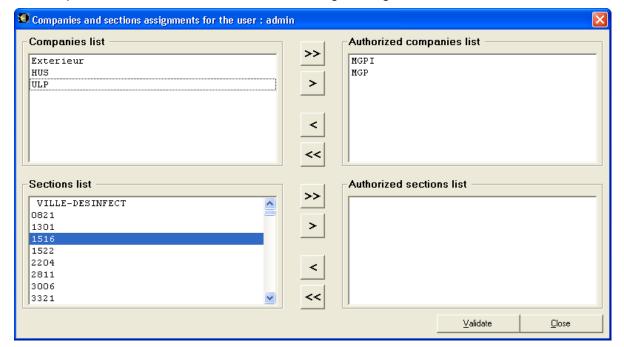
Warning: For the first use of the software, you should enter "mgpa" as user and "mgpa as password". It is the only defined user.

Example: to continue, create the user "user" by filling it login profile (*Profile/* field).



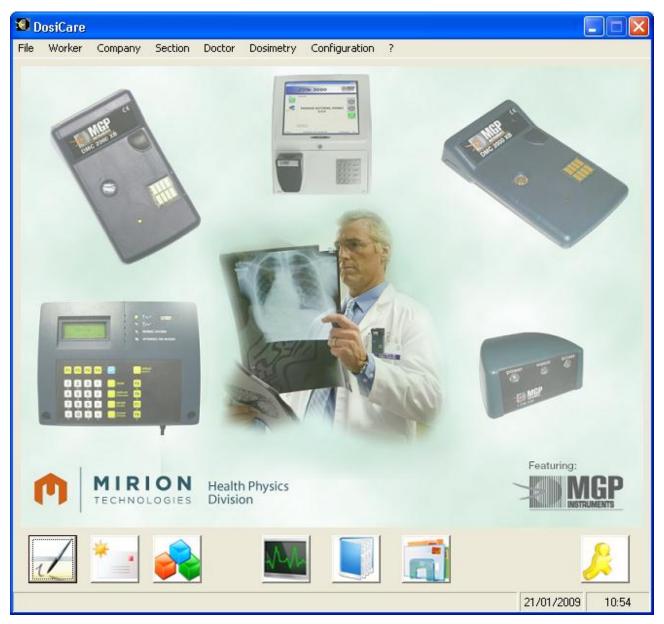
If the user and password are known by the system, the DOSICARE main window appears. The accessible functions are listed in the main menu on top of the screen.

With the button "Filters" you get access to a menu that allows restraining the access of the users to the workers of certain companies or sections. To do this, you only need to move the companies and sections from the left to the right using the arrows.



Note: If the lists on the right side are empty (no company or section assigned), the user is authorised to display all workers and all their data.

Important: This choice of limitation will be applicable for all windows involving the workers or their data for the main application as well as for the dashboard and DosiCare Web.



Check the link with the reader:

The state is indicated by a symbol at the bottom right of the task bar. (systray).

If the symbol has a red cross on it, it means that the LdmMgr software is not communicating with the reader. (See § 11.3, LDM 3000 page 170).

If the symbol appears not crossed, then the system is operational and ready for use.

2.4.2 Launching LdmMgr

On the desktop double click on the folder "DosiCare" to open it.

Double click on the shortcut "LdmMgr".

The same shortcut can be launched from the menu START/Programs/DosiCare.

2.4.3 Launching LdmMgr2000

On the desktop double click on the folder "DosiCare" to open it.

Double click on the shortcut "LdmMgr2000".

The same shortcut can be launched from the menu START /Programs/DosiCare.

2.4.4 Launching dashboard

On the desktop double click on the folder "DosiCare" to open it.

Double click on the shortcut "Dashboard".

The same shortcut can be launched from the menu START/Programs/DosiCare.

2.4.5 Launching DosiCare Web

After a standard installation on the machine "MaMachine", it is theoretically possible to access the "DosiCare Web" application by following the steps below:

- Open an Internet browser (for example Microsoft Internet Explorer)
- Enter the address http://MaMachine/DosiCare
- The login window appears. Enter your user identifier and validate.

2.4.6 Launching SiseriWebReport

Usually, after a standard install on the « MyMachine » computer, it is theoretically possible to access the « SiseriWebReport » application by following the steps below :

- Open an Internet browser (for example Microsoft Internet Explorer)
- Enter the address http://MaMachine/SiseriWebReport
- The login window appears. Enter your user identifier and validate.

2.5 Installing the hardware

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This operation consists in physically connecting the PC and the LDM 101/2XX, or the pc and the reader to the network. Then configure them and set up the link.

The procedures related to the installation of the LDM101, LDM2XX, LDM2000 and LDM3000 readers are covered hereafter.

2.5.1 Hardware configuration for use with a LDM 101.

2.5.1.1 Connecting the LDM 101 to the PC

 Connect the cable provided with the reader between the serial port # 1 of the PC and the LDM 101. This cable is a DB 9 serial cable with a male connector for the LDM 101 and a female connector on the PC side.

- Connect the power cable to the LDM 101 the cable is a DIN 5 male connector on the LDM side.
- Connect the other side (AC Power Adapter) of the cable to a power source.

Note: In case of use with a different serial port you must configure the software in order to use a different port. (See § 11.4 Reader configuration, page 172).

2.5.1.2 Selecting the LDM101's address

Every LDM101 is identified with an address that can be set from **0** to **7**.

For a use with DOSICARE this address should be set to "0".

A new LDM101 is pre-configured from the factory with address **0**.

If problems are encountered with reader configuration, refer to user's manual of the LDM101.

2.5.2 Hardware configuration for use with an LDM210 reader

2.5.2.1 Connecting the LDM210 to the PC

- Connect PC serial port COM1 (for instance) to the LDM210 serial port using the serial cable supplied in standard version with the reader. This cable is provided with a 9-pin contact connector (DB9) and a 9-socket contact connector (DB9).
- Connect the mains adapter power supply cord fitted with a connector at the rear of the LDM210 (DC input)
- Connect the transformer to the mains.

Note: In case of use of a serial port other than COM1, a software configuration is required (See § 11.3, LDM 3000 page 170).

2.5.2.2 Selecting the LDM210's address

The LDM210, LDM220 and LDM230 readers are ALWAYS at address 01. Take care not to change this address in the LdmMgr configuration unless the reader would no longer reply.

2.5.3 Hardware configuration for use with an LDM220 reader

2.5.3.1 Connecting the LDM220 to the PC

Connect the USB cable of your reader to a free USB input of your PC.

Note: If no more USB ports are available, HUBs are provided to increase the capacity of your computer.

 It is highly recommended to always connect your reader to the same USB connector unless an LdmMgr software configuration would be required upon each connector change (change of the virtual COM port number).

2.5.3.2 Selecting the LDM220's address

The LDM210, LDM220 and LDM230 readers are ALWAYS at address 01. Take care not to change this address in the LdmMgr configuration unless the reader would no longer reply.

2.5.4 Hardware configuration for use with an LDM230 reader

2.5.4.1 Connecting the LDM230 to the PC

Insert the LDM230 reader into the PCMCIA slot of the computer.

2.5.4.2 Selecting the LDM230's address

The LDM210, LDM220 and LDM230 readers are ALWAYS at address 01. Take care not to change this address in the LdmMgr configuration unless the reader would no longer reply.

2.5.5 Hardware configuration for use with an LDM2000 reader

2.5.5.1 Connecting the LDM2000 to the network

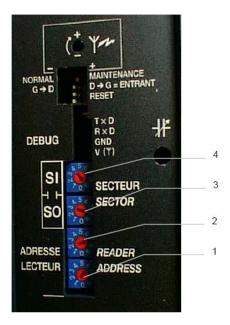
■ The LDM2000 must be an Ethernet reader. Use a standard network cable.

2.5.5.2 Selecting the LDM2000's address

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LDM2000 are delivered with address set to 1 (one). This address SHOULD change if more than one reader is used in the architecture.

A small screw driver is to be used to turn the coding wheels.

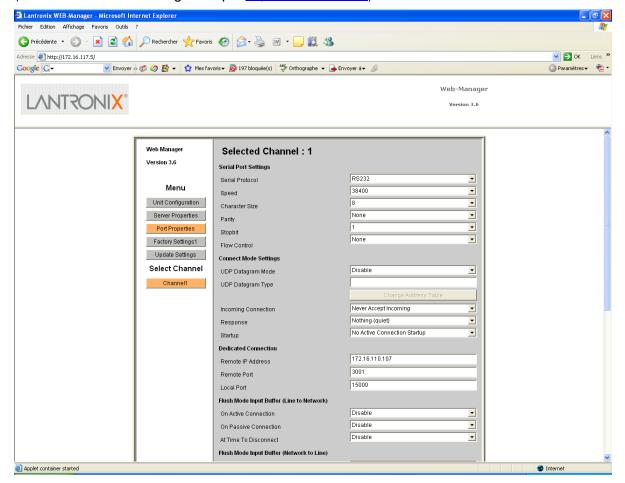


The lowest coding wheel is used for the units (1), the one on top of it is used for ten (2).

2.5.5.3 Configuration of the LDM2000

The network adaptor (Ethernet module) should be told "where" the access control server is located on the network. (in other words where is the LdmMgr2000 SW).

A browser is used to connect to the network adapter's configuration web page (as shown in the following example http://172.16.130.23/).



The "Remote IP address" is to be set with the TCP/IP address where LdmMgr2000 is run (remote port should remain to 3001). Then click on "Update Settings" to validate the changes.

2.5.5.4 LdmMgr2000's configuration

When reader is connecting, LdmMgr2000 sends operational parameters to it..

The LdmMgr2000's folder contains all the configurations files of any LDM2000/3000 that could connect.

The files names are establish as follow:

"LDM2000X.ini' where X is the reader number. (C.F. §2.5.5.2 Selecting the LDM2000's address)

In a multi LDM2000 architecture, these files should be duplicated (one file per LDM).

2.5.6 Hardware configuration for use with an LDM3000 reader

2.5.6.1 Connecting the reader to the network

The LDM3000 is made of a PC and a LDM210, LDM220, LDM230 . The PC should be connected to the Ethernet network.

2.5.6.2 Selecting the LDM3000's address

Default address of the LDM3000 software is 1 (one) This address is to be changed if more than one reader is used in the architecture. See LDM3000 user's manual for changing address.

2.5.6.3 LdmMgr3000's configuration

The reader (the SW in fact) should be told "where" the access control server is located on the network. (in other words where is the LdmMgr2000 SW)... See LDM3000 user's manual for changing access control's address.

2.5.6.4 LdmMgr2000's configuration

When readers will connect, LdmMgr2000 will upload it more theirs setup parameters In LdmMgr2000's start-up folder are located the LDM2000/3000 configuration files.

File names defined as follow:

"LDM2000X" where X is the readers physical address. (refer to § 2.5.5.2 Selecting the LDM2000's address and §2.5.6.2 Selecting the LDM3000's address) If the architecture contains more than one LDM2000/3000 reader then ONE file per reader is required

2.6 Exiting the application

The following procedure describes the process for successfully exiting the software modules (DOSICARE, LdmMgr and LdmMgr2000).

2.6.1 Stopping DOSICARE

- From the main menu select File/Quit
- Click on "Quit""
- You will not be prompted to confirm.
- Stopping Dosicare is also possible by clicking on the following button, situated on the main page of Dosicare application:

2.6.2 Stopping LdmMgr

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- On the bottom right of the screen is the LdmMgr icon.
- Click on this icon with the right button of the mouse, the following menu pops up.



In touchscreen mode, to stop the application, use the keyboard combination
 CTRL + Q

2.6.3 Stopping LdmMgr2000

- On the bottom right of the screen is the LdmMgr2000 icon.
- Click on the icon with the right button of the mouse, the following menu pops up.



Or click on the File/Exit menu

2.6.4 Stopping DosiCare Web

- On the top left of the window of your Internet browser, an available cross allows to close the window. Click on the cross.
- You will not be prompted to confirm.

2.6.5 Stopping SiseriWebReport

 On the top left of the window of your Internet browser, an available cross allows to close the window. Click on that cross.

2.6.6 Stopping the dashboard

- On the bottom left of the main screen is the button "Quit".
- Click on this button and answer "Yes" when you are prompted to confirm.

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3. General presentation of the main module

3.1 Introduction

This chapter describes all the DOSICARE features in order to have an easy access to the software functions.

The following features are detailed:

- Access level to information
- Main screen presentation
- General description off all the functions accessible from the main menu.
- Using the software with the keyboard only.

3.2 Access levels

Some of the functions are only accessible if the user has been configured with the correct access level.

An access level is selected by entering the following information:

- the user name
- the associated password

The default values of these parameters are covered hereafter for each access level.

3.2.1 User profile

This access level allows a user to manage worker database, company database, section database and doctors database (add, modify, suppress). It is the lowest level of the system.

3.2.1.1 Default user pre installed with this profile

■ User name: "mgpu"

■ Password: "*mgpu*"

3.2.2 Supervisor profile

This user can access any function of the software, with exception to the following:

The user will not be able to access the user management function (adding new user into the system, or deleting an existing user)

He will not be able to see data older than one year.

3.2.2.1 Default user pre installed with this profile

■ User name "mgps"

■ Password: "mgps"

3.2.3 Medical level

This level is similar to the supervisor level except that the medical profile allows looking backward 5 years of dose accumulation (supervisor can only look back 1 year of dose accumulation).

3.2.3.1 Default user pre installed with this profile

■ User name "mgpm"

■ Password: "mgpm"

Advice: When using the software for the very first time, only these 3 users can log on. Use mgpa and create the actual users that will use the software.

3.2.4 Administrator level

This level only gives the access to the user management function.

In other words, it only gives access to the "Configuration" menu.

This is the only level which can be used to perform the Configuration function of the *main* menu. This function is intended to manage the users and associated access levels.

3.2.4.1 Default user pre installed with this profile

User name "mgpa"

■ Password: "*mapa*"

Important warning: For the very first use of the system, only the access levels preconfigured upon installation can be used (user name and associated password). It is advisable to modify these access levels and configure the accesses for the persons who will use the system.

3.3 Main screen

The main screen appears after login (DOSICARE icon).

The main screen is made on a main window shown after.

On top of the screen is the main-menu bar.

At the bottom, is displayed the current time.

3.3.1 Functions accessible by shortcuts

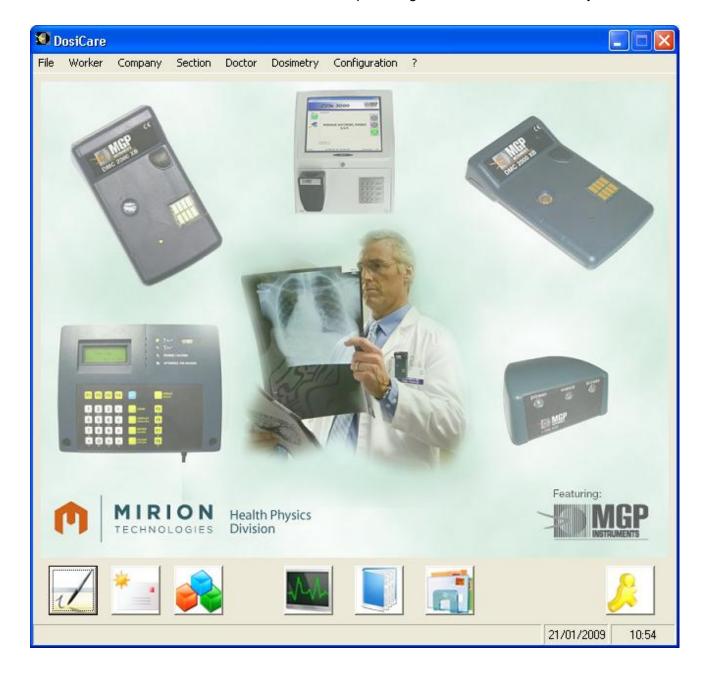
The main screen has shortcut buttons which provide quick access to the following functions:

- add a worker,
- modify a worker,

- display a worker's dosimetry ,
- display the per-task dosimetry report window,
- display the dosimetry report window,
- display the IRSN report window,
- quit the application.

3.3.2 Supervisor mode

All the functions are accessible except adding some more users to the system.



3.3.3 User mode

The dosimetry function is not accessible.



3.3.4 Administrator mode

In this mode only *Configuration/users* are accessible.



3.4 Accessible function from the main menu bar

All the functions of the DOSICARE software can be accessed through the main menu bar, using the mouse or using shortcuts.

Pressing simultaneously "Alt" and the underlined letter of the menu can activate the shortcuts.

Note:some functions depend on the user profile/access level (for more information see § 3.2 Access levels, page 51)

The main functions are listed bellow:

Exiting the application (File menu),

3.4.1 File menu (Alt+F)

The menu allows you to exit DOSICARE.

To quit the software:

- From the main menu choose File
- Click on Exit
- Or type ALT + "F" and "E"

3.4.2 Worker menu (Alt + W)

This menu gives access to the following functions:

- Access to the workers data sheets
- View of the worker list
- View of the dosimetric report of the workers (daily doses)
- View the workers with an activated dosimeter (i.e. assumed to be within a controlled area)

3.4.3 Companies menu (Alt + C)

This menu gives access to the following functions:

- Access to the company data sheets
- View of the company list

3.4.4 Menu Section (Alt + S)

This menu gives access to the following functions:

- Access to the section data sheets
- View of the section list

3.4.5 Doctors menu (Alt + t)

This menu gives access to the following functions:

- Access to the doctor's data sheets
- View of the doctor's list

3.4.6 Dosimetry menu (Alt + D)

This menu gives access to the following functions:

- Edition of the individual data sheet for a worker. This window contains general information on the worker and also the dosimetric accumulations.
- View the list of the transactions (entry and exit), which were made on the reader.
- Edition, for a worker or a group of workers or all of them, of the daily doses between the selected dates.

The edition can be made with more or less details.

- Edition of a daily dose summary for a worker or a group of workers or all sorted by work codes.
- Edition for one (several) work codes, over a given period.
- Edition of dosimeter alarms (according to the user's choice) over a given period.

3.4.7 Configuration menu (Alt + o)

This menu gives access to the following functions:

- Definition of categories of workers, and for every threshold for dose, rate alarms and pre alarms, definition of all the default dosimetric limits.
- Creation/administration of the list of users that can use the software.
- Administration of the list of the work codes and entering of the threshold of the work codes.

3.5 Keyboard definition

The DOSICARE software can be used with the keyboard only.

3.5.1 Conventions

The following section provides a key definition for the following:

DOWN : down arrow,RIGHT : right arrow,

ENTER : validation key "ENTER"

■ *LEFT* : left arrow,

■ *UP* : up arrow,

■ SHIFT : shift key,

■ *TAB* : tab key,

■ ALT : alt key,

■ ESC : escape key.

3.5.2 Starting the software

3.5.2.1 Starting DOSICARE

- Access the start menu using menu key or CTRL+ESC
- Type UP to reach "Program" menu
- Type RIGHT to open the "Program" folder
- Type UP or DOWN to reach DOSICARE folder
- Type RIGHT to open the "DOSICARE" folder.
- Type UP or DOWN to reach "DOSICARE" program

3.5.2.2 Starting LdmMgr

Perform the same sequence as above but tab to the LdmMgr program and press ENTER.

3.5.2.3 Starting Ldmmgr2000

Perform the same sequence as above but tab to the LdmMgr2000 program and press ENTER.

3.5.2.4 Starting Dashboard

Perform the same sequence as above but tab to the dashboard program and press ENTER.

3.5.3 Select a function from the main menu

- Press simultaneously ALT and the letter underlined to open a menu
- Press the underlined letter of the function you want to activate

3.5.4 In a screen

3.5.4.1 Moving

To move from one field to another in a screen:

 Press TAB to move forward from a field to the next one, press SHIFT + TAB to move backward. Press ALT + the underlined letter of any button to highlight it, enter to active the button.

Note: pressing ALT+letter sometimes activates the function

3.5.4.2 Activating an item

To activate the function corresponding to the selected item, press SPACE.

3.5.4.3 Entering a numerical value

 Directly enter the numerical value at the keyboard (for example: 0.001 or 1E-3)

or

Press UP to increment the current value,

or

Press DOWN to decrement the current value.

3.5.4.4 Entering an on/off type value

Press SPACE to change from on to off and vice versa.

3.5.4.5 Choosing an item in a list

- Press DOWN to display the next item of the list
- Press UP to display the previous item of the list.

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Dosicare Initialization of the data

4. Initialization of the data

4.1 Introduction

This section describes how the minimum required data is initialized in order to start the system.

This chapter describes the following:

- Access to the configuration window
- Description of the configuration window
- Access to the company window
- Description of the company window
- Access to the section window
- Description of the section window
- Access to the doctor windows
- Description of the doctor windows
- Access to the worker window
- Description of the worker window

Note: DosiCare is given with example data, it is necessary to create new ones before deleting them.

4.2 Access to the configuration window

After starting DOSICARE, the user should define for each personnel category, the following:

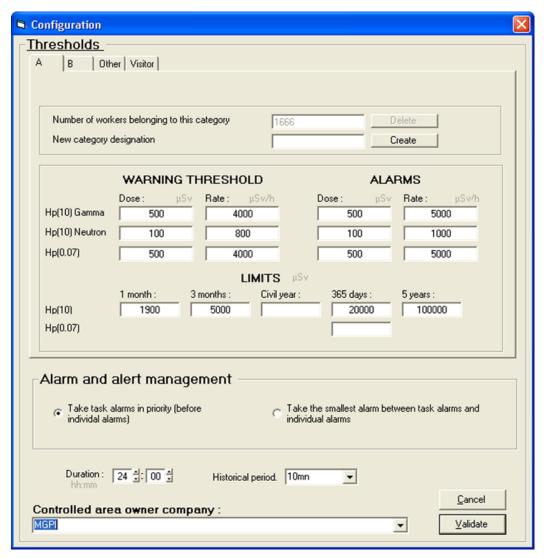
- The dose and rate alarm thresholds
- The time alarm
- The dose and rate pre alarm threshold
- Dose limits for all the managed period of time
- Management of the alarm

All these values are grouped in the same screen.

Proceed as follows.

- From the main menu select Configuration/Threshold
- the following window appears:

Initialization of the data Dosicare



This window is divided into 2 zones.

The first top zone contains information related to each category. Select the various categories using the tabs

- The first zone is itself divided into 2 frames :
- The first frame is used to delete one personnel category (possible only when the number of workers of this category is zero), or create a new one. For the latter operation, enter the name of the new category as well as the values in the second zone.
- The second frame contains the primary and secondary alarm and warning threshold values which will be programmed in the dosimeters. It also contains the limit values of periodic accumulations used to perform access control upon area entry. It should be noted that, as regards use of DMC2000Xb dosimeter, the primary measurement corresponds to the dose termed deep Hp(10) Gamma or Hp(10) Neutron, the secondary measurement corresponds to the dose termed superficial Hp(0.07)
- The second zone contains the configuration parameters which are not dependent on the personnel category.

Dosicare Initialization of the data

The frame for the management of the pre-alarms and alarms is intended to define the thresholds of the pre-alarms and alarms, which are written in the dosimeter at the time of entry in area:

- Choose in priority the alarms of works:
- if the thresholds have been assigned to the selected work, they will be written in the dosimeter at the time of entry in area.
- if no threshold is assigned to the selected work and,
- if specific thresholds have been assigned to the worker, those specific thresholds will be written in the dosimeter at the time of entry in area.

n

- if no specific threshold is assigned is assigned to the worker, the thresholds of the worker's category will be written in the dosimeter at the time of entry in area.
- Choose the littlest alarm: if thresholds have been created for the selected work code
- if thresholds have been assigned to the selected work, and
- if specific thresholds have been assigned to the worker, the littlest of the thresholds between the specific worker's thresholds and the thresholds of the work will be written in the dosimeter at the time of entry in area.

or

- if no specific threshold is assigned is assigned to the worker, the littlest of the thresholds between the threshold of the worker's category and the thresholds of the work will be written in the dosimeter at the time of entry in area.
- if no threshold is assigned to the selected work and,
- if specific thresholds have been assigned to the worker, those specific thresholds will be written in the dosimeter at the time of entry in area.

or

if no specific threshold is assigned is assigned to the worker, the thresholds of the worker's category will be written in the dosimeter at the time of entry in area.

- The zone "Duration " is intended to enter the threshold of the duration alarm, which was written in the dosimeter at the time of entry in area. This threshold is common to all categories.
- □ The zone "History step " is intended to select the step of the history, which was written in the dosimeter at the time of entry in area. This threshold is common to all categories.
- The zone "Owner company of the controlled area" is intended to select the name of the company, which manage the controlled areas. This name is used in the files, which are sent to the IRSN.
 - Terminate the keyboarding by pressing "Validate".
- Use the "Tab" key to move in the mask.
- Once on the desired highlighted field, type the numerical value in the form of an integer and move from one field to another using "Tab".
- Terminate the keyboarding by clicking the "Validate" button.

Initialization of the data Dosicare

Important warning: The values of the different limits will be decisive upon assignment of a dosimeter to a person and upon start-up of the dosimeter since the software will check that the dose accumulations do not exceed the limits entered at this stage.

The limits can be set individually; the values shown in this screen are only the default values that will be assigned to any new worker before customization of its limits.

These values can then be customized in the worker sheet:

- Move to the field to be modified and enter the new value,
- Click the "Validate" button.

Note: History step is not configurable category per category, it is global to the system.

If only applies to configurations using LdmMgr and NOT LdmMgr where history step is given by the reader itself (by configuration).

4.3 Access to the company screen

It is recommended to create the company data prior to creating worker data because the user will have to set the worker's company into the worker sheet.

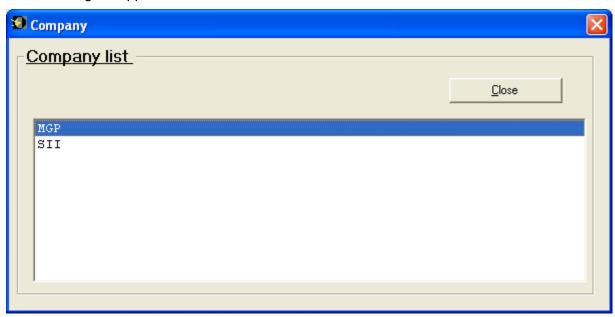
The user can access this function from the main Company menu



4.3.1 How to access an existing company?

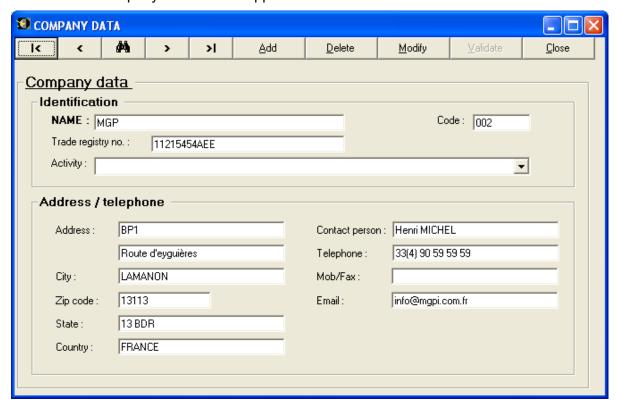
4.3.1.1 1st method: Select Company/list

The following list appears



- Select a company:
- Double click on the company's name or simply click to highlight followed by clicking RETURN.

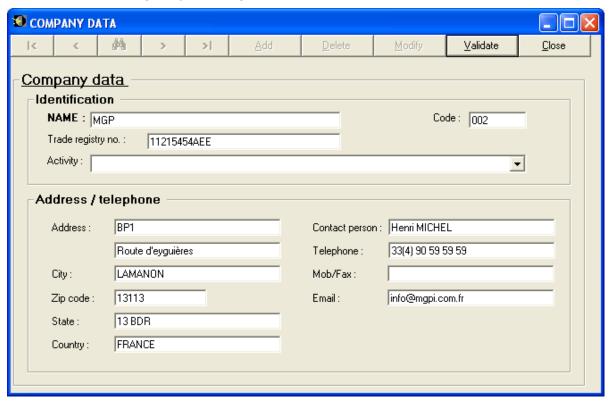
The selected company's data sheet appears on the screen.



Click on "Modify" in order to add or change any of the data.

"Delete" allows the user to suppress the displayed company.

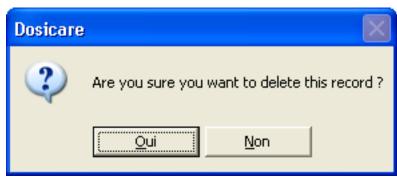
- Modification:
- Click on the "Modify" button
- TAB allows you to move to reach the field you want to change (or use the mouse)
- Commit the changes by pressing the "Validate" button.



"Validate" button to commit the changes.

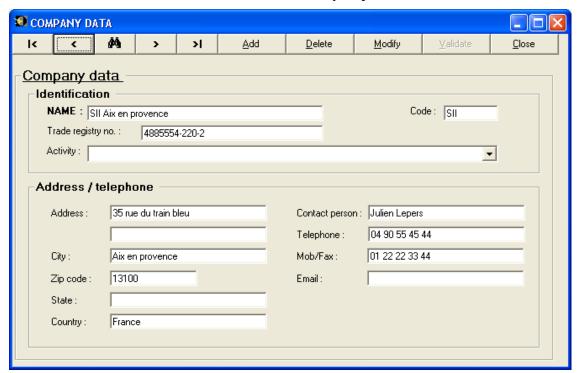
- Suppression:
- Click on the "Delete" button

The user will be asked to confirm the suppression.



- Click on "YES (oui)" to confirm.
- Click on "NO (Non)" to go back.

4.3.1.2 2nd method: Select in the main menu Company/data



Click on the binoculars to start a search on the all the companies.

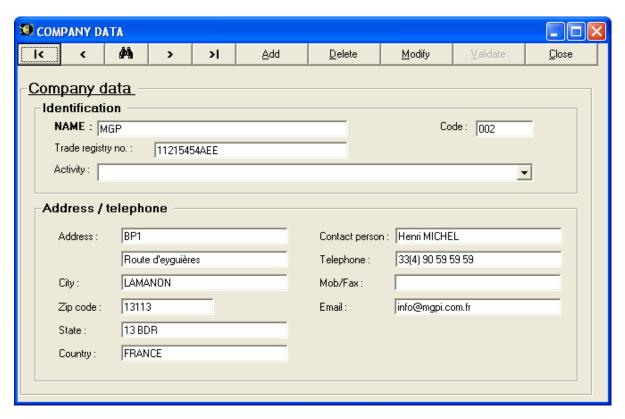


- Field *Name*: type in any part of the name of the company to search
- Click Find: the first company containing a part of the typed name will appear. Other companies with the same portion of name can be accessed by PG DOWN or by clicking one of the arrows.

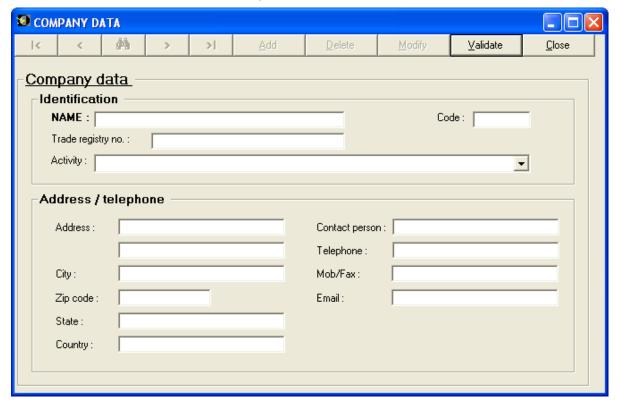
4.3.2 How to create a new company?

Select the Company/data menu

The last modified company appears on the screen



Click on "Add" to obtain blank entry fields



In this new blank data sheet, the bold fields are mandatory (here, only the **NAME** field is mandatory).

When complete, click on "Validate" to save the new company data.

4.4 Access the Section screen

It is recommended to create the sections data sheets prior to create the associated worker data sheets.

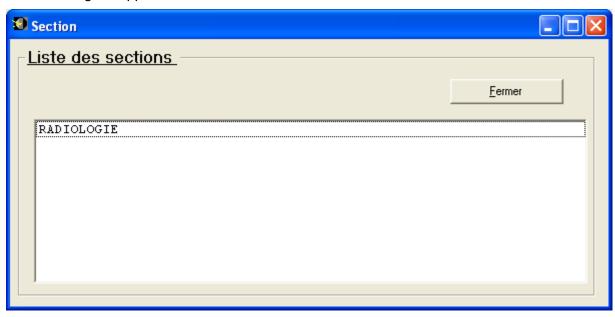
To create, update or delete the section data sheets, use the menu *Section* on the DOSICARE main menu bar.



4.4.1 How to access an existing data sheet?

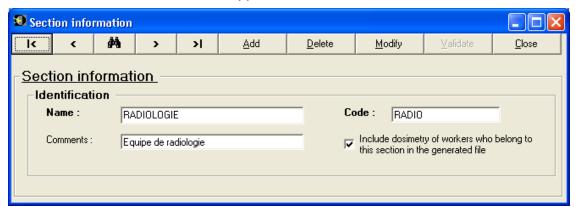
4.4.1.1 1st method: Select the menu Section/list

The following list appears:



- Select a section:
- Double click on the section's name or simply click to highlight followed by clicking RETURN.

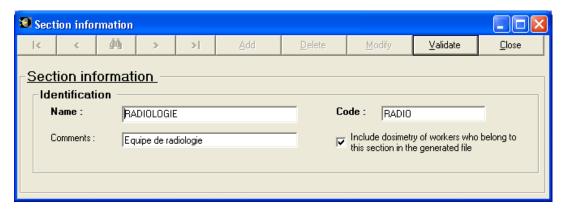
The selected section's data sheet appears on the screen.



Click on "Modify" in order to add or change any of the data.

"Delete" allows the user to suppress the displayed section.

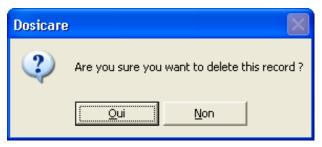
- Modification:
- Click on the "Modify" button
- TAB allows you to move to reach the field you want to change
- Commit the changes by pressing the "Validate" button



"Validate" button to commit the changes.

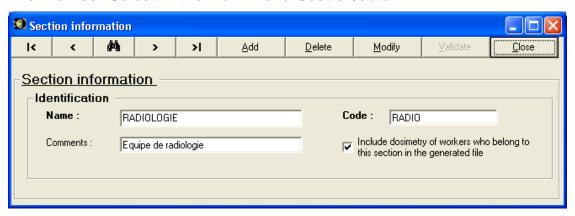
- Suppression:
- Click on the "Delete" button

The user will be asked to confirm the suppression.



- Click on "YES (oui)" to confirm.
- Click on "NO (non)" to cancel.

4.4.1.2 2nd method: Select in the main menu Section/data



Click on the binoculars to start a search on the all the sections.



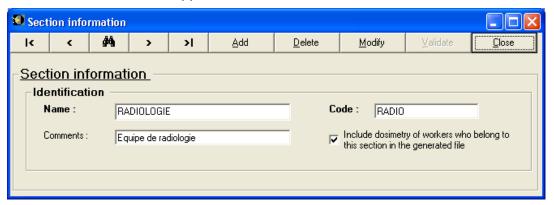
Field *Name*: type the name of the section to search.

Click on the Search button: the section with the typed name will appear.

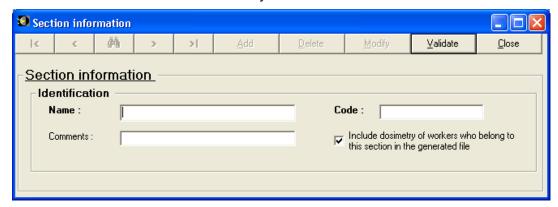
4.4.2 How to create a new section?

Select the Section/data menu.

The last modified section appears on the screen.



Click on "Add" to obtain blank entry fields.



In this new blank data sheet, the bold fields are mandatory (here, only the **NAME** field is mandatory).

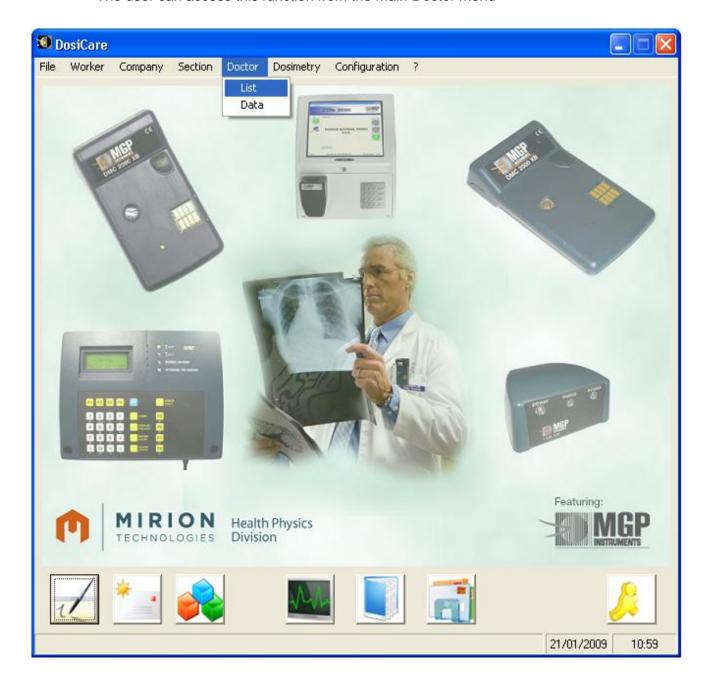
When complete, click on "Validate" to save the new section data.

4.5 Access to the doctor screen

If the system has been configured to handle doctor data, then the information referring to the worker's physician will be available.

It is recommended that the user create the doctor data prior to creating worker data. This allows the user to select the worker's doctor on the worker data sheet.

The user can access this function from the main Doctor menu



4.5.1 How to access to an existing doctor?

4.5.1.1 1st method: Select Doctor/list

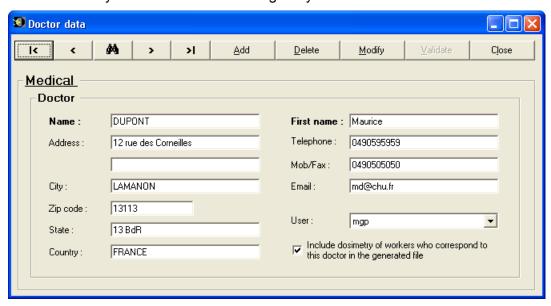
The following list appears:



Select a doctor:

Double click on the doctor's name or simply click (highlight) followed by ENTER The selected doctor's data sheet appears on the screen.

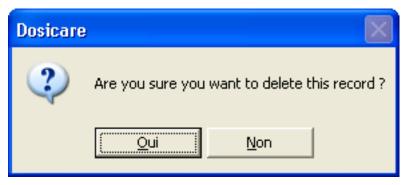
Click on "Modify" in order to add or change any of the data.



"Delete" allows the user to suppress the displayed doctor

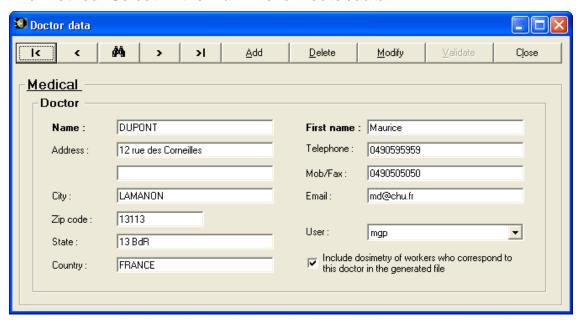
- Modification:
- Click on the "Modify" button
- TAB allows you to move to reach the field you want to change (or use the mouse)
- Commit the changes by pressing the "Validate" button.
- Suppression:
- Click on the "Delete" button

The user will be asked to confirm the suppression.



- Click on "YES (oui)" to confirm.
- Click on "NO (non)" to go back.

4.5.1.2 2nd method: Select in the main menu Doctor/data



Click on the binoculars to display the Find doctor screen.

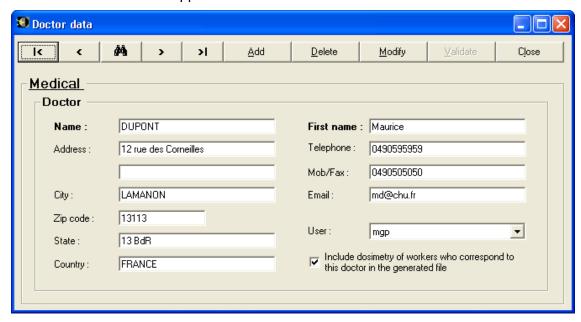


- Field Name: type in any part of the name of the doctor to search
- Click Find/ allows to reveal the selected doctor

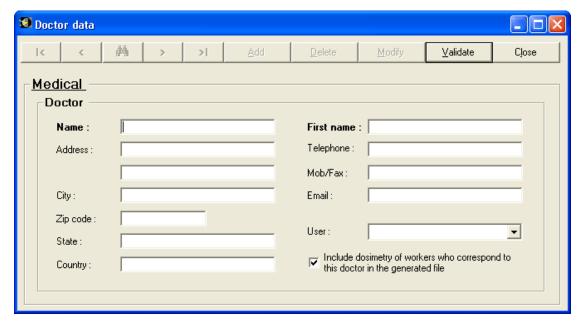
4.5.2 How to create a new doctor?

Select the Doctor/data menu

The last modified doctor appears on the screen



Click on "Add" to obtain a blank doctor sheet.



In this new blank data sheet, the bold fields are mandatory.

When done, click on "Validate" to save the new doctor data.

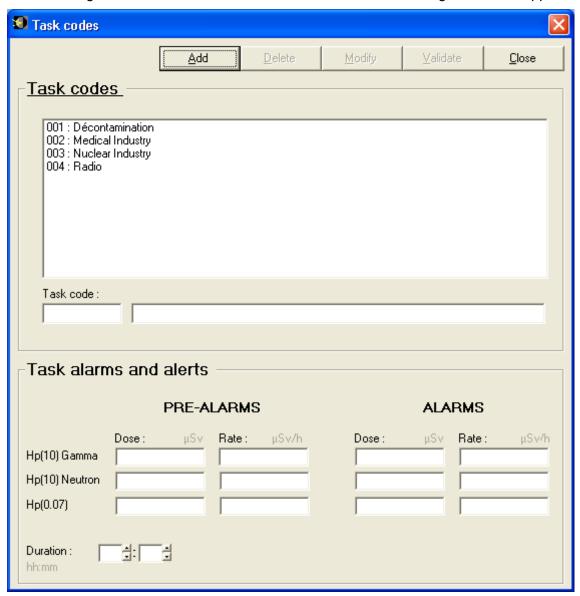
4.6 Access to the task codes window

From the configuration menu, the user can add new task codes or change the pre-defined task codes in the DOSICARE database.

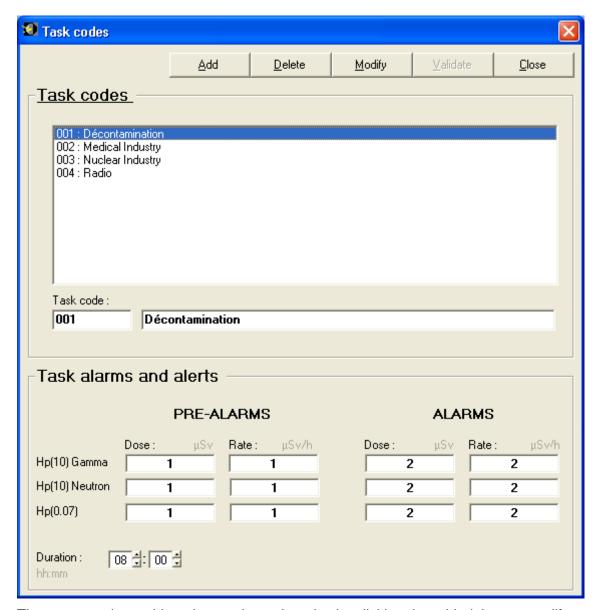
Access to this screen using the Configuration menu.

4.6.1 How to add/change a task codes?

Select Configuration/Task codes, from the main menu, the following screen will appear.



Using the mouse pointer, click a task codes. The selected entry will appear in the field at the bottom of the screen.



The user can then add or change the task codes by clicking the add, delete or modify buttons. A task codes is defined by a code (from 000 to 999) and a caption.

4.7 Access to the worker screen

The available functions from the Worker menu are:

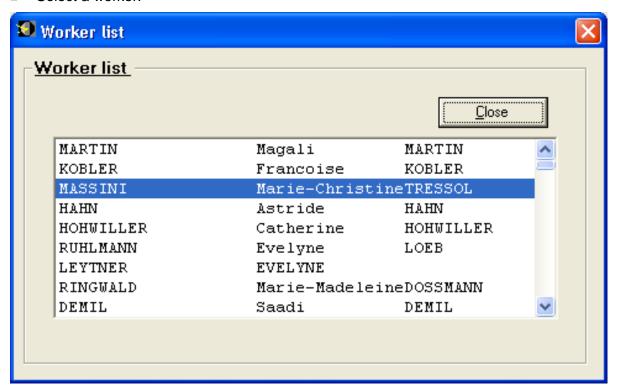
- List
- Data
- Dosimetry
- Worker in the RCA



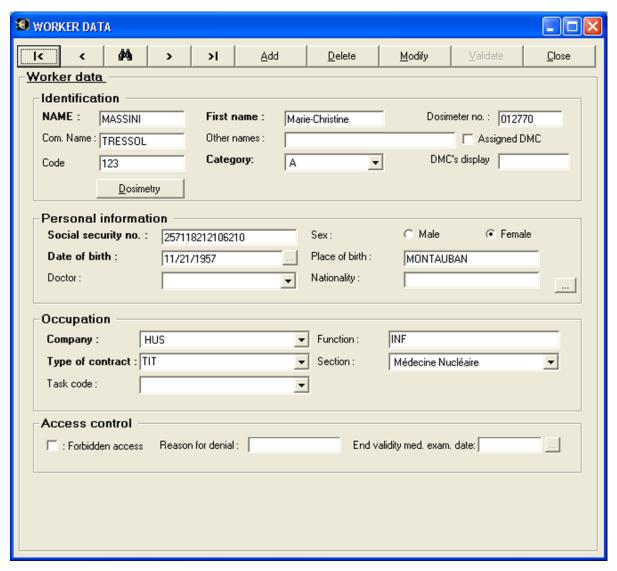
4.7.1 How to access to an existing worker?

4.7.1.1 1st method: Select Worker/list

Select a worker:



Double-click upon selection or "RETURN" after selection, the window associated with the worker sheet appears.

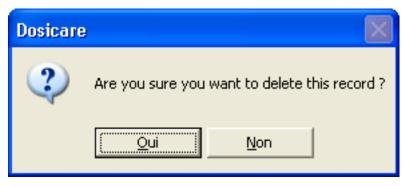


Click on "Modify" in order to change any of the data.

"Delete" allows the user to (suppress) remove the displayed worker from the database.

- Modification:
- Click on the "Modify" button
- TAB allows the user to move to reach the desired field for changes (or use the mouse)
- Commit the changes by pressing the "Validate" button.
- Suppression:
- Click on the "Delete" button

You will, of course be asked to confirm the suppression.

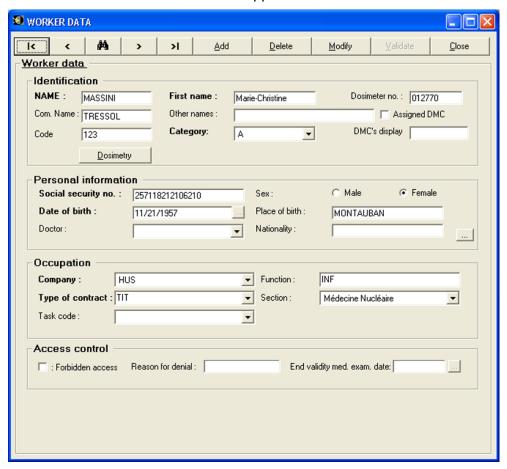


- Click on "Yes (oui)" to confirm.
- Click on "No (non)" to go back.

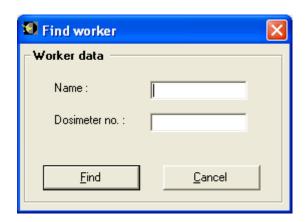
Note: deleting a worker will also delete ALL its dosimetric information.

4.7.1.2 2nd method: Select in the main menu Worker/data

The last used worker data sheet will appear on the screen.



Click on the binoculars
 to start a search on the all the workers.



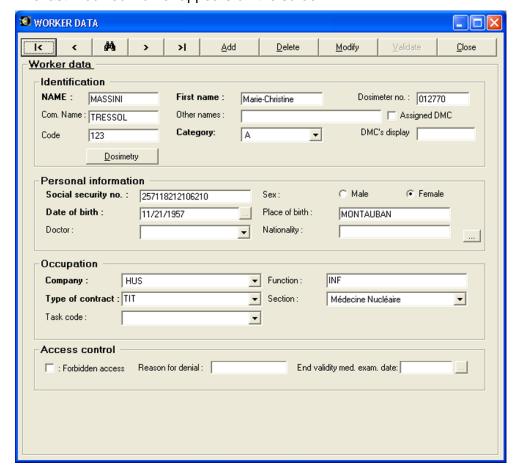
- Enter the name of the worker to be found and his dosimeter number if applicable (Dosimeter no. field).
- Click on "Find" to obtain the worker data.

4.7.2 How to create a new worker?

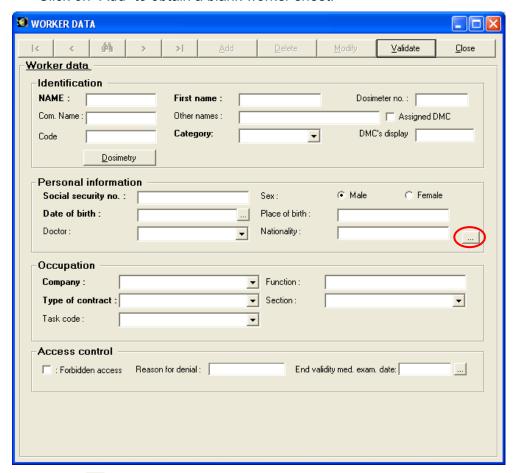
Advise: make sure that the company and the doctor for this newly created worker already exists in the database. Create them otherwise (see Access to companies and Access to doctors)

Select the Worker/data menu

The last modified worker appears on the screen



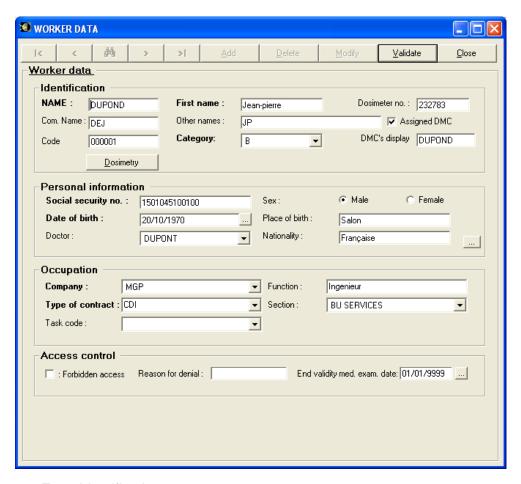
Click on "Add" to obtain a blank worker sheet.



The button allows the user to access to more information on the worker.

Note: the bold fields are mandatory.

After typing the data sheet should appear as follows:



- Zone Identification:
- Field NAME:

This field is mandatory. The name is forced in uppercases; maximum length is 30 characters.

Field First name:

This field is mandatory. Maximum length is 30 characters.

Field Dosimeter no.

Numeric field, 6 characters. This is the dosimeter serial number used by the worker. This field is not mandatory. However, if used, then the "Assigned DMC" can be checked. If the dosimeter is inserted in the LDM reader, the worker will not have to identify himself on the screen to enter the zone.

Field Com. name (Common name):

Not mandatory, it can be used to distinguish between two namesakes.

- Field other names: This field is not mandatory.
- Field Assigned DMC:

If the box is checked, the worker still works with the same dosimeter.

Field DMC's display:

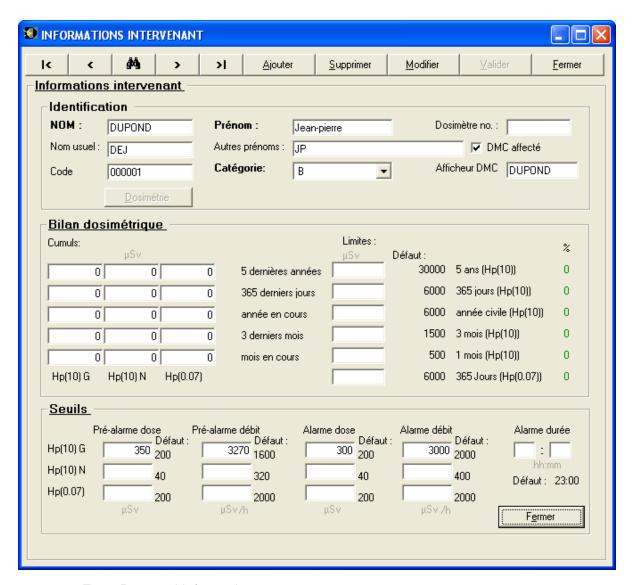
In the case of an Assigned DMC, this is the text which is on the screen of the dosimeter when the latter is at "pause" (outside area).

Field Code:

It is the identifier that the worker will have to type in at entry time when using a LDM2000 or a LDM210, LDM220, LDM230 reader with LDM3000.

Field Category:

This field is mandatory. Worker category to which the worker belongs. This information gives the threshold and limit values for the worker. These default values can be modified by clicking the Dosimetry button.



- Zone Personal information:
- Field Social security number:
 Mandatory, this field will by printed in the dosimetric reports;
- Date of birth:
 Mandatory, format is MM/DD/YY.
- Place of birth not mandatory.
- Doctor:

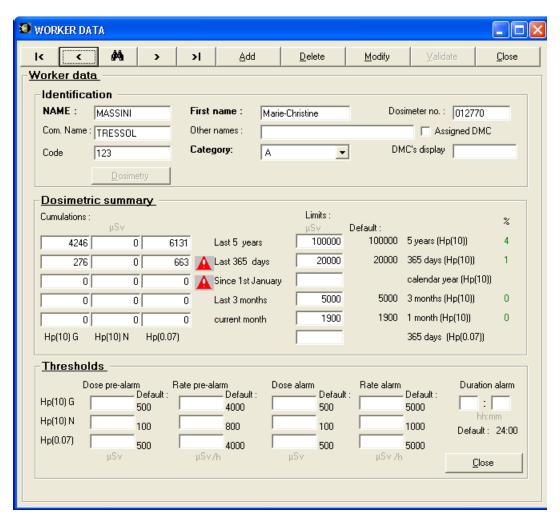
Not mandatory field, this field identifies the doctor that monitors the worker. It has to be chosen in the doctor list of the system. Press the "Delete" button to remove this information.

- Nationality:
 - Not mandatory 20 characters maximum.
- Zone Occupation:
- Field Company:

Mandatory field - it has to be selected in the company list of the system.

- Field Section:
 - Not mandatory. The tab on the right side of the field allows the access to the list of the recorded sections.
- Field Function:
 - Not mandatory.
- Field Type of contract:
 - Not mandatory Press the "Delete" button to remove this information. The tab on the right part of the field allows for access to the list of contract types.
- Field Section:
 - Not mandatory field with a name of 50 characters maximum.
- Field task code:
 - Not mandatory Press the "Delete" button to remove this information. IF the task code is NOT SELECTED there, then the worker will have to choose a task code prior to entering the RCA.
- Zone Access control:
- The fields of this zone are used to forbid the dosimeter assignment/activation.
- This forbidding can be unconditional by checking the "Forbidden access" box (a 50-character comment zone is used to specify the reason for denial which appears when the person attempts to activate his dosimeter), it can be conditional with reference to an end validity med. exam. date (in the form: DD/MM/YY).
- Beyond the specified date, the dosimeter activation will be denied.

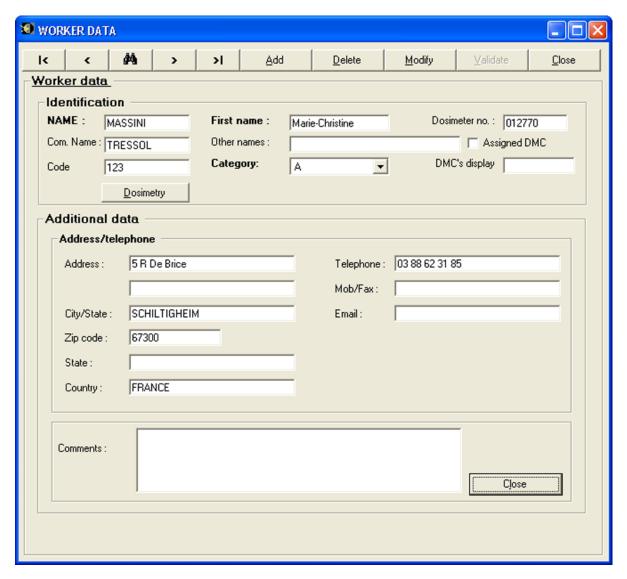
Note: in DosiCare, there is no absolute forbidding for use of the dosimeter. It should be understood by "denial" the fact that, upon assignment of the dosimeter to a person, the system will display alerts dependent on this area. It will always be possible to acknowledge these alerts and proceed with the dosimeter assignment procedure.



 For example, on this screen capture, some dose pre-alarm and alarm thresholds are modified for this worker.

Note: the default values are those of the category of the worker.

Additional data screen



- Zone "Additional data": allows the user to type in the address of the worker.
- Comments:255-character zone.

When all data entries are completed, click on the "validate" button to commit the changes

Note: At his point the worker can enter the RCA, have his dosimeter turned on, and the dose will be recorded when exiting the RCA.

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5. Assigning a dosimeter

5.1 Introduction

This chapter describes the necessary operations in order to assign a dosimeter to a worker. It also describes how to view the list of activated dosimeters. It finally describes the operation mode to deactivate (go to "pause") a dosimeter when exiting the RCA.

This method is applicable only when using LdmMgr, it varies when LdmMgr2000 with LDM2000/3000 is used.

5.2 Assignment

The dosimeter's assignment is performed at the time of activation. This assignment can be temporary or definitively.

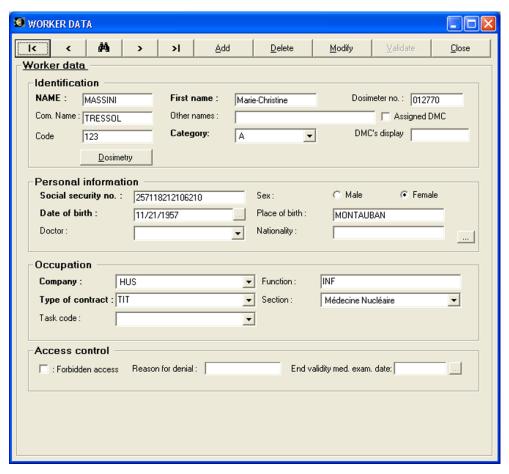
5.2.1 Definitive assignment

If the worker uses the same dosimeter for all RCA entries, then it will not be necessary for the worker to identify himself when activating the dosimeter.

In this case, it is just necessary to fill in the worker sheet once with the dosimeter number and check the "Assigned DMC" box.

Each time the dosimeter is presented at the reader, the information associated with this person will be used to check the access and program the dosimeter.

Assigning a dosimeter Dosicare



"Assigned DMC" box checked = dosimeter assigned. E.g.: dosimeter 154123 will be considered as definitively assigned to worker BEADES

5.2.2 Temporary assignment

If a worker chooses any dosimeter for entry, the worker will have to identify himself prior to entering the RCA. LdmMgr will make the assignment at entry time. The link between dosimeter and worker will be broken at exit time (after allocating the dose to the worker).

When the dosimeter is put in front of the reader, a list of workers appears on the PC's screen.

The button "Workers management" will enable the user to start DOSICARE (if not yet started), in order to update this list by adding or suppressing workers.

Once all the modification has been recorded in the database, click on "Reload list" before selecting a worker, to prevent any bad results.

A double click on a worker in the list will allocate the dosimeter to this worker. Subsequently, the user can then permanently allocate this dosimeter to this worker by modifying his data sheet and checking the "Assigned DMC" check box.

When completed, the dosimeter will be turned on if the criteria are fulfilled.

- No access forbidden in the "access control" zone of the worker data sheet.
- No dose limit exceeded

The PC's user can bypass a warning THAT will appear if one of the access control condition is not fulfilled, AND the answer given will be logged.

When being activated, the alarm defined in the zone "threshold" of the worker data sheet will be programmed into the dosimeter.

5.3 List of activated dosimeters

The list of activated dosimeters can also be provided by DOSICARE. This list includes workers who are, from the system point of view, within controlled area. This list can be accessed from Workers menu / Workers in area.

5.4 Deactivate

Deactivate a dosimeter consists in reading the dose when exiting the controlled area in order to:

- read the dose received during the on-area stay, as well as any alarms stored in the dosimeter;
- enable access to the on-controlled area stay histogram, when alarms have been triggered;
- set the dosimeter to "Pause" and unassign it, in the case of a temporary assignment.

This operation is performed by simply presenting the dosimeter switched on at the reader and waiting for dosimeter status change (switching to "Pause").

Note:

1) Activation/deactivation is made when the dosimeter is presented at the reader. This is performed by the LdmMqr software which must be run on the PC.

2) The worker id is the dosimeter serial number when using LdmMgr and code when using LdmMgr2000

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6. Displaying, editing the dosimetric summaries

6.1 Presentation

This chapter describes all the available functions in order to view/print dosimetry summaries/reports.

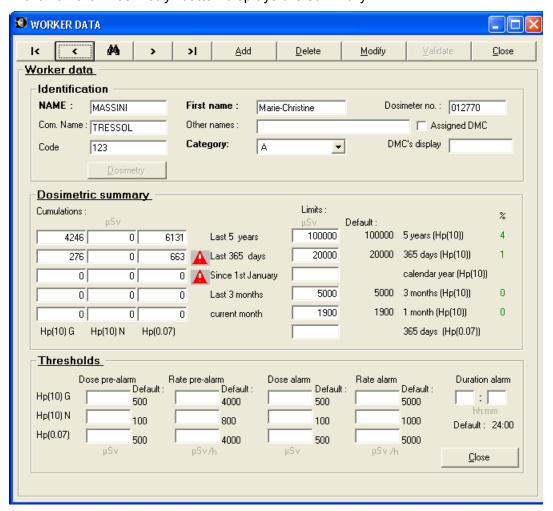
These functions are:

- Display of the dosimetry summary of any worker.
- Display of all the daily doses for a worker.
- Display of any transaction of the system (entries and exit)
- Edition of a dosimetry summary sorted by task codes, grouping together for each task code, daily doses of each worker over a given period. Detailed information concerning workers and days can be hided
- Edition of the daily dose accumulations between 2 dates for one, several or all the workers.
- Edition of the worker data sheet grouping all the administrative data as well as the dosimetric data of a worker, a group of workers or all the workers.
- Edition of alarms summary

Note: in the paper prints, the primary and secondary doses are separated by character "/". A zero means a dose equal to zero whereas «-" means that the dose has not been measured. This is a typical case of use of the software with X-dosimeters which do not measure the secondary dose.

6.2 Displaying of the dosimetry summary

It is possible from the worker data sheet to display the worker's dosimetric summary. A click on the "Dosimetry" button displays the summary



In the above case, call for the dosimetric summary screen of worker MASSINI This screen displays:

- in the "Dosimetric summary" zone, for each managed period, the following information:
- primary Hp(10)G (Gamma) dose accumulation
- primary Hp(10)N (Neutron) dose accumulation
- primary Hp(0.07) (Beta) dose accumulation
- limits defined for the worker
- accumulation percentage with respect to the limit.

If a limit is exceeded the A warning will be displayed on the period's line.

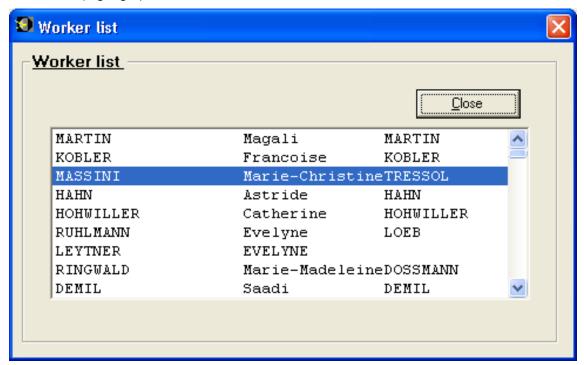
Important warning: Hp(10) are the one that we fix for the SUM of Hp(10)G and Hp(10)N accumulation.

■ in the "Thresholds" zone provides, the values of the Hp(10)G, Hp(10)N and Hp(0,07) alarms and thresholds and the time alarm to be loaded in the dosimeter upon area entry.

6.3 Displaying the daily dose accumulations

In order to view the daily dose accumulations, use the *Worker/Dosimetry* item from the main menu. The Worker list appears.

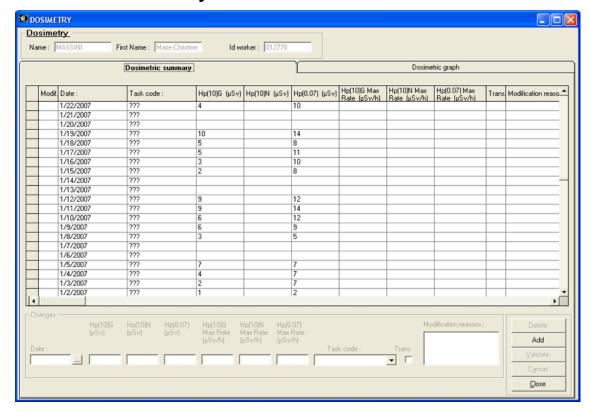
Select (highlight) the worker, click return or enter, or double click on the worker;



In the above case, selection of worker: MASSINI Marie-Christine

Display of all the daily dose accumulations of the worker

6.3.1 "Dosimetric summary" tab



This window will allow the user to:

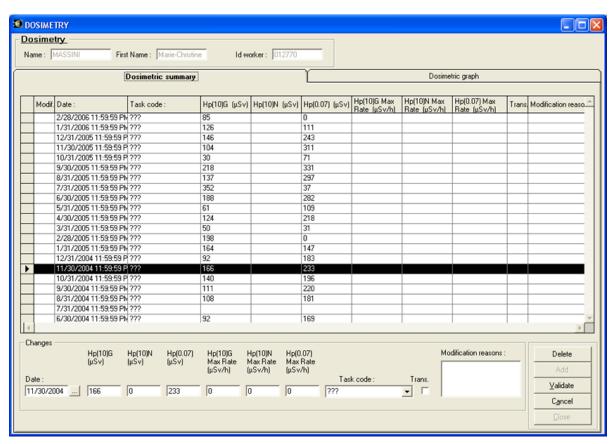
- Display the daily dose accumulations for any available measurement.
- Display for each type of measure the max rate encountered that day (move through the list with the arrow to the left of each line.)
- Modify the data of a record, add or delete records.
- See the accumulated dose for all the days and all the tasks
- Display the daily dose accumulations per job code.
- Date, Dose HP(10)G, Dose HP(10)N et Dose HP(0.07):
 Date and accumulation of primary and secondary doses for this day and this task code.
- Max rate HP(10)G, max rate HP(10)N, max rate HP(0.07): Max rates observed for that particular day and task code.
- u task code: The task code mentioned in the worker's data sheet,
- Transmitted: this record has been printed/transmitted
- Change Raisons:
- Change raisons is an mandatory field.
- A comment to explain why a dose would have been manual changed.

Note: Use the "Up", "Down" or page skip arrows to move in the records.

Modify the data of a record:

- Select the record by clicking with the arrow on the very left column. An arrow will display the selected record.
- Another click will transfer records information's into the "changes" area.
- Modify the "Dose" field with the new value,
- Click on "validate" to commit the modifications.

Note: All the record fields can be modified. Any changed line will by identified with a check in the "Modif." column.



- Changes: Modification zone for a record. In this example, the new secondary dose will be 30 for the 08/01/2002
- Terminate by clicking the "Validate" button
- Deletions: When a record has been selected, it can be deleted by pressing the "Delete" button to the right of the window.
- Additions: The addition of a new record is possible only when no line is being edited.
 Click the Add button, enter the data for the new line and validate.

Note: If you enter a date or task code corresponding to an existing record, the new data will be cumulated.

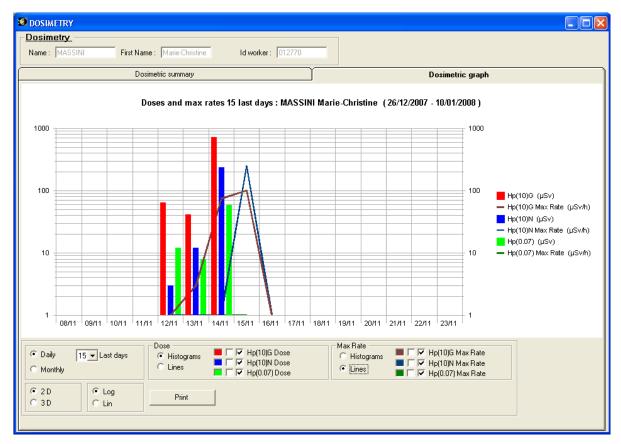
See whether a daily dose cumulation has been sent to the IRSN

When editing the summary to be sent to the IRSN (see §6.3.6 Editing the IRSN summary, page 107), it is possible to confirm transmission to the IRSN.

Confirmation of transmission will be indicated by a check opposite each record.

This indication can be modified. In the case of a movement which has been signed off being modified so as to cancel the transmission, it will be edited again on the IRSN summary.

6.3.2 "Graphic" tab

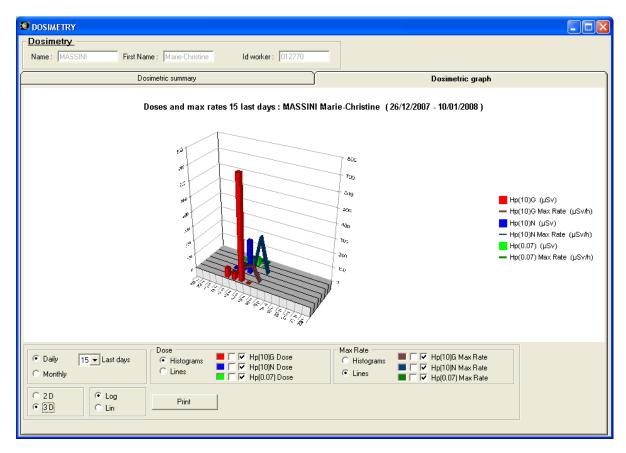


This dialog box allows to:

 See the graphic of the past daily doses or monthly doses for each available measurements and their associated rates.

The lower part of the windows will allow

- To choose the number a day to display from today.
- For dose and rate measurements
- to choose graphic form : Bar graph or curves
- to choose which measure to display
- tell if values have to be displayed
- to choose colours (by clicking on colours themselves)
- to choose scale to use (log or linear)
- to choose what type of graphic to use 2D or 3D
- to print the currently displayed graphic.



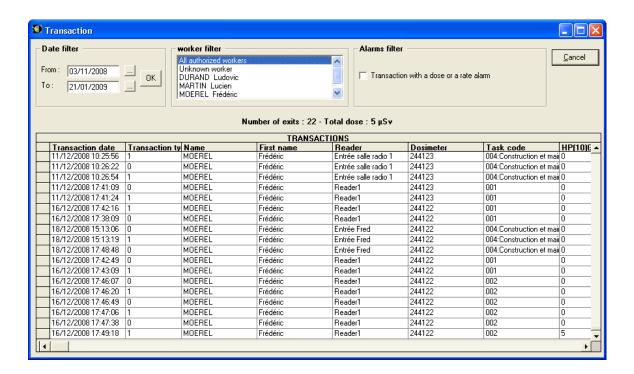
During 3D display the angle can be changed by pressing Ctrl and moving the mouse.

6.3.3 Editing the transactions

The screen of the transactions displays a list of all entries and exit registered by the system. These transactions can be filtered depending on:

- the date of the transaction
- the worker
- the character of the transaction as in rate or dose alarm.

Filtering by worker can be used to display transactions for "unknown workers". There may be some transactions which cannot be attached to a worker.

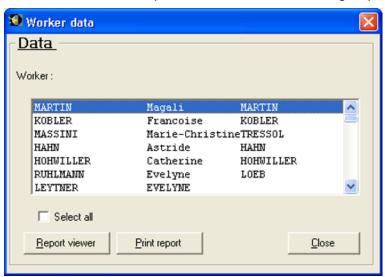


6.3.4 Editing worker data sheet

From the DosiCare main menu by using Dosimetry/Data the following window appears.

The worker data sheet report summarizes all the administrative information about the worker, and also its dosimetry information.

The data sheet can be printed for one worker, for a group of workers or for all the workers.



- Worker: Same type of selection (one or more) as the previous report.
- Select all: Check to select all the workers.

INF

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24 R Jean Cocteau

57730 MACHEREN

FRANCE

INDIVIDUAL REPORT

Name: MARTIN First Name: Magali

Usual Name: MARTIN Other first name

Address: 24 R Jean Cocteau

Zip code: 57730

Phone: 03.88.31.66.85

City/State: MACHEREN

Country: FRANCE

Date of birth: 28/06/1978 City/state of birth: SAINT AVOLD

Social security no.: 278065760607647 Nationality:

Sex: Female

Company: HUS

Section: Médecine Nucléaire Category:

Working code: 001:Task one Type of contract: CDI

Doctor: Validity med. exam.: 01/01/9999

Function:

Forbidden access: No Reason for denial:

DOSIMETRIC SUMMARY

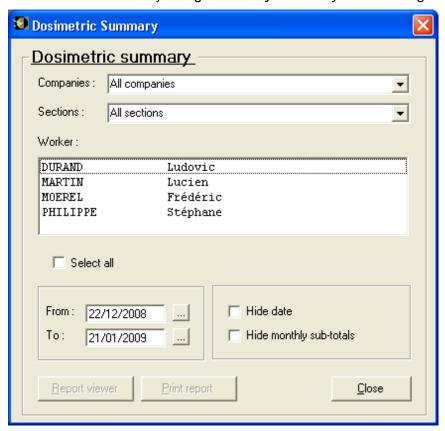
	Hp(10) Hp(0).07)		Hp(10)G	Hp(10)N	Hp(0.07)	
5 years limit :	100000	μSν	5 years :	325000/	0/	108000	μSv
365 days limits	20000 / 0	μSν	365 days :	325000/	0/	108000	μSv
Year limit :	20000	μSν	Year:	325000/	0/	108000	μSv
3 months limit :	5000	μSν	3 months :	325000/	0/	108000	μSv
Month limit :	1900	μSv	Month:	115000/	0/	108000	μSv

- INDIVIDUAL REPORT: administrative data area
- DOSIMETRIC SUMMARY: dosimetry data

Note: Indication (P/S) means: Primary / Secondary.

6.3.5 Editing the dose accumulations

From the main menu by using *Dosimetry/Summary* the following window appears.



Selections:

- Select one Worker:
- Use the arrows or page UP and DOWN keys to navigate in the list.
- Click on the desired worker.
- Select several workers:
- Use the arrows or page UP and DOWN keys to navigate in the list.
- Click on each worker you want to select and press the CTRL key simultaneously.
- Select all the workers:
- Check the "select all" check box
- Selection the period of time:
- In the "From" and "To" zones indicate the selected dates by typing the desired dates or use the "..." box to view the calendar.
- Selection of the detail level:

- If no box is checked, the printed information will be:
 - Days with doses for the days.
 - Monthly accumulations. (if the period of time covers several months)
 - Accumulation for all the selected period of time.
- If "hide date" is checked, the printed information will be:
 - Daily dose
- Monthly accumulations. (if the period of time covers several months)
- Accumulation for all the selected period of time.
- If "hide monthly sub-totals" is checked, the printed information will be:
 - Accumulation for all the selected period of time.

6.3.5.1 Detailed dosimetric summary



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MARTIN Magali 24 R Jean Cocteau

MACHEREN 57730 FRANCE

DOSIMETRIC SUMMARY

Name : First Name :	MARTIN Magali	From:	12/12/2	2007 to	:	11/01/20	008
Year:	2007	Dose Hp((10)G /	Hp(10)N	1	Hp(0.07)	
	Total dose for year: 20	107	ſ		1		μSv
Year:	2008	Dose Hpt	(10)G /	Hp(10)N	1	Hp(0.07)	
Mont	h: 1						
	10/01/200	08	0 /	0	1	0	μSv
	11/01/200	08 ;	70000 /	0	1	84000	μSv
	11/01/200	08 :	35000 /	0	1	12000	μSv
	11/01/200	08 ·	10000 /	0	1	12000	μSv
		Sum: 11	5000 /	0	/	108000	μSv
	Total dose for month: 1	11	5000 /	0	1	108000	μSv
	Total dose for year: 20	008 32	5000 /	0	1	108000	μSv
MARTIN Magali	Total dose for request	ed 11	5000 /	0	1	108000	μSv

- The following information can be found:
- Reminder of the selected period of time
- For each row the daily dose accumulation
- Monthly dose accumulations
- Month number
- Accumulation for the year
- Accumulation for the selected period of time

6.3.5.2 Hide date



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MARTIN

Magali

57730 FRANCE

DOSIMETRIC SUMMARY

MARTIN Name: First Name: Magali From: 12/12/2007 to: 11/01/2008 2007 Dose Hp(10)G / Hp(10)N / Year: Hp(0.07)Total dose for year: Dose Hp(10)G / Hp(10)N / Year: 2008 Hp(0.07)Total dose for month: 115000 / 0 / 108000 µSv Total dose for year: 2008 325000 / 108000 µSv 0 / MARTIN 115000 / 108000 µSv Total dose for requested $\mathbf{n} = t$ Magali

Total dose for month of. Monthly dose accumulations of the month included in the selected period of time.

- Total dose for year: Annually dose accumulation for the year included in the selected period of time.
- Total dose for the requested period of time: Total amount of dose for the worker and for the selected period of time.

6.3.5.3 Hide monthly sub-totals



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DOSIMETRIC SUMMARY

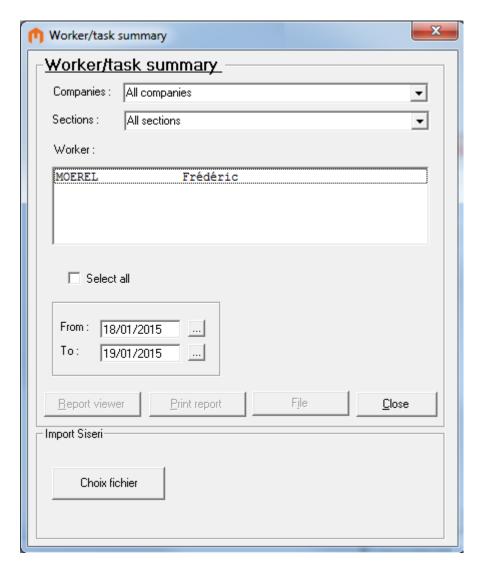
MARTIN Name: First Name: Magali From: 12/12/2007 to: 11/01/2008 Year: 2007 Dose Hp(10)G / Hp(10)N / Hp(0.07)2007 Total dose for year: μSv Year: 2008 Dose Hp(10)G / Hp(10)N / Hp(0.07) 2008 Total dose for year: 325000 / 0 / 108000 µSv MARTIN Total dose for requested 115000 / 0 / 108000 µSv Magali

Note: If the entered period of time does not cover the year the dose for the year may not be exact.

6.3.6 Editing the IRSN report

The dialogue box used to edit the SISERI report is accessed from the general DosiCare menu bar Dosimetry/Display SISERI Transfer.

6.3.6.1 IRSN report



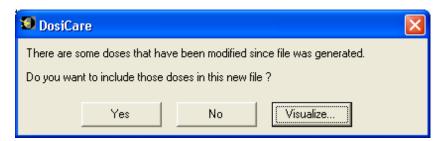
- Worker: Select one or more workers.
- Select all: Select all workers.
- From ... To ...: Select the period for movements to be sent.

In accordance with the IRSN's recommendations, daily cumulative doses are grouped by type of "work code". A general cumulative dose for the selected period is indicated.

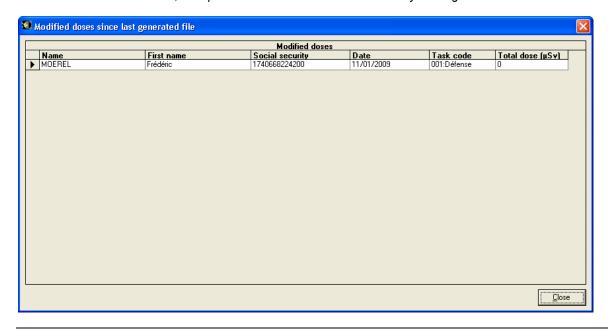
Note: The system only allows one daily cumulative dose per work code. If a worker has entered a controlled zone several times during the day with the same work code, the cumulated daily dose is allocated to this work code.

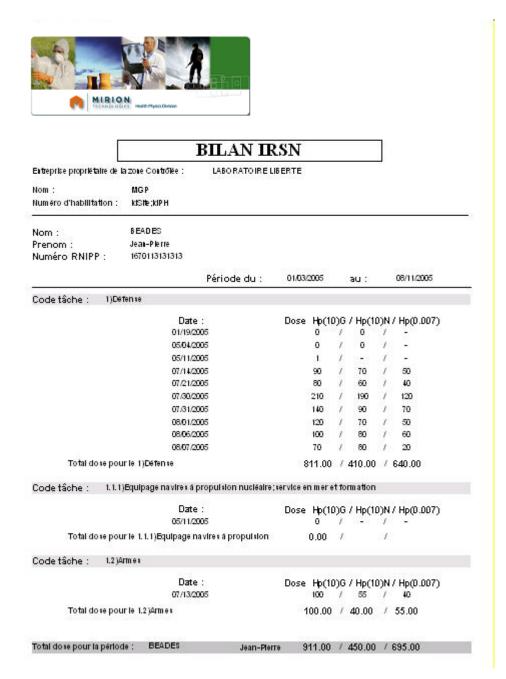
Note: From this screen you can also choose to generate the computer file to be sent to the IRSN. This file can be sent in place of the report. If you select "IRSN File", the system will ask you to choose a filename (extension .csv), and will then save the dosimetry data in this file using the same criteria as for printing the report. This file must then be sent to the IRSN.

When generating the IRSN file, if doses which already been sent have been changed, a message informs the operator of this and asks whether he wants to include the modified doses in the file.



In order to make this decision, the operator can view the modified doses by clicking the button "Visualize...":





- Dose total for the task code:
 Daily cumulative doses grouped by task code.
- Dose total for requested periode:
 Cumulative dose over the selected period

When editing is complete, the system offers to "mark" the printed daily doses as "sent":

This will enable the system to offer the date of the last unsent daily total as the default start date when this summary is next requested.

Important note: For the IRSN file to be sent automatically by Internet, and the user authorisation number must be entered as follows: Sender ID;PCR ID.

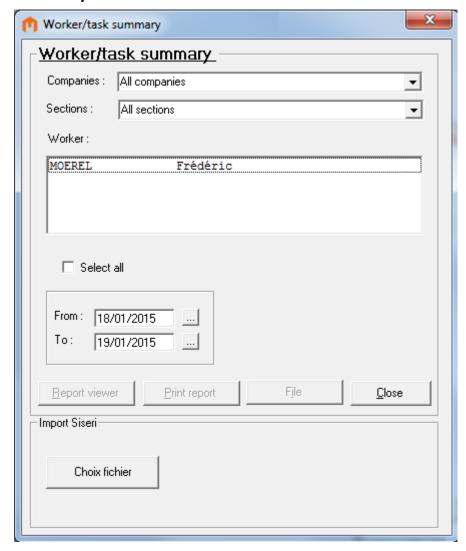
The user authorisation number can be modified via the Configuration/Users menu.

The Sender ID and PCR ID codes are supplied by the IRSN. It is imperative that they are entered in the right order, separated by a semicolon (";").

Example: 1235;9876

Note: All doses are displayed, even those with a value of 0. Only null doses are not displayed.

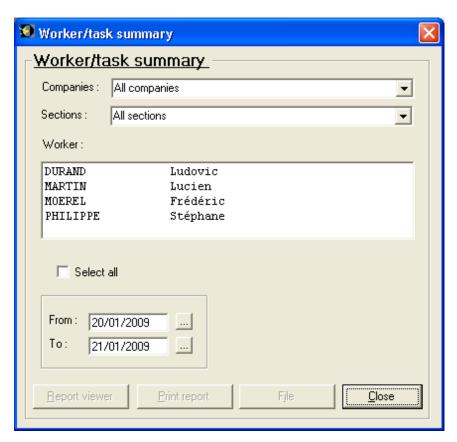
6.3.6.2 Siseri import



Select the SISERI file to import (.cvs file) by clicking on the « Choix fichier » button in the « Import Siseri » frame.

6.3.7 Editing the summary by task

The dosimetric summary by Worker/day/task can be called from the main menu using "Dosimetry/Task summary" option.

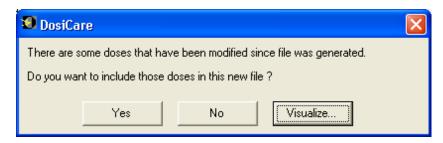


- Worker. Same type of selection (one or more) as the previous report.
- Select all: Check to select all the workers.
- **From** ... to ...: date for daily doses selection. The default is from the last "not transmitted" dose to "Yesterday".

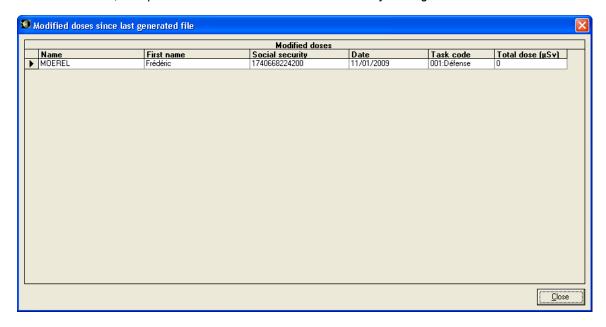
Note: The system authorizes only one daily dose accumulation per task code.

If a worker has entered an area several times in a day with the same task code, the daily accumulated dose is assigned to this task code.

During the generation of the file, if the rates already sended have been modified, a message informs the operator and ask him if he wants to include the modified rates in the file.



To take a decision, the operator can visualize those modified rates by clicking on the button "Visualize...":





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Worker/task summary

Controlled area owner company: MGP

Name: mgp

Habilitation # IdSite;IdPHtest

Name: MARTIN
First Name: Magali
Social security no.: 45454505045

From: 10/01/2008 to: 11/01/2008

Task code: ???

Date: Dose Hp(10)G / Hp(10)N / Hp(0.07) μSv

11/01/2008 50000 / 0/ 60000

Total dose for Task ??? 50000 / 0 / 60000 μSv

Task code: 001:Décontamination

Date: Dose Hp(10)G / Hp(10)N / Hp(0.07)

11/01/2008 10000 / 0/ 12000

Total dose for Task 001:Décontamination 10000 / 0 / 12000 µSv

Task code: 002:Medical Industry

Date: Dose Hp(10)G / Hp(10)N / Hp(0.07)

11/01/2008 10000 / 0 / 12000

Total dose for Task 002:Medical Industry 10000 / 0 / 12000 μSv

Task code: 003:Nuclear Industry

Total dose for Task 004:Radio

Date: Dose Hp(10)G / Hp(10)N / Hp(0.07) μSv 11/01/2008 10000 / 0 / 12000

Total dose for Task 003:Nuclear Industry 10000 / 0 / 12000 µSv

Task code: 004:Radio

Date : Dose Hp(10)G / Hp(10)N / Hp(0.07)

10000 /

 $\mathbf{0}$ /

12000

11/01/2008 10000 / 0/ 12000

MARTIN Magali Total dose for requested time : 90000 / 0 / 108000 μSV

μSv

μSv

μSv

μSv

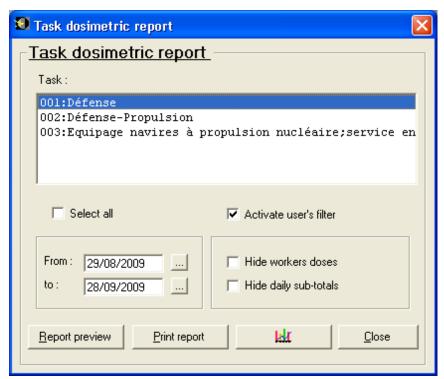
- **Total dose for work code:** Total amount of dose for the work code for the selected period of time.
- **Total dose for requested time**: Total amount dose for the worker for the selected period of time for all the work codes the worker has used.

At the end of editing/printing, DOSICARE will ask the user to mark the dose that has been "transmitted". Refer to the section describing "transmitted" information.

This will enable the system, upon the next request for this summary, to propose the date of the last daily dose accumulation not transmitted yet as the default start date.

6.3.8 Editing accumulations by task code

In order to edit the accumulations by task code, use the *Worker/Task summary* item from the DosiCare main menu.



- Task: Selection of one or several task codes
- Note: only task codes used during an on-area stay by a worker are listed
- Select all: Selection of all the task codes
- Activate user's filter: activation/deactivation of the filter on sections and companies for this profile.
- From... to ...: Selection of the period during which on-area stays have to be taken in account.
- Hide workers doses: workers detailed information does not appear.
- Hide daily sub-totals: daily detailed information does not appear.

6.3.8.1 Complete summary



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Task dosimetry report (user's filter activated)

Name: mgp
Habilitation # IdSite;IdPHtest
Owner company of the RCA: MGP

From: 29/08/2009 to: 28/09/2009

Task code:	001:Défense		Dose Hp(10)	G / Hp(10)N / H	p(0.07)
Date:	30/08/2009				
	MARTIN	Pierre	4/	4/	4
	Total dos	4/	4/	4 μSυ	
Total:	001:Défense		4/	4/	4 μSυ
Task code :	002:Défense-Propuls	Dose Hp(10)G / Hp(10)N / Hp(0.07)			
Date:	30/08/2009				
Date:	30/08/2009 DUPOND	Nicolas	6/	6/	6
Date :		Nicolas Yves	6 <i>1</i> 8 <i>1</i>	6 <i>1</i> 8 <i>1</i>	6 8
Date :	DUPOND	Yves			

6.3.8.2 Summary without workers details:



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Task dosimetry report (user's filter desactivated)

Name: mgp

Habilitation # IdSite;IdPHtest

Owner company of the RCA: MGP

From: 29/08/2009 to: 28/09/2009

Task code :	001:Défense		Dose Hp(10)G / Hp(10)N / Hp(0.07)			
		30/08/2009	9/	97	9 μSν	
Total :	001:Défense		9/	9/	9 μSv	
Task code :	002:Défense-Propulsion	1	Dose Hp(10)G / Hp(10)N / Hp(0.07)			
		30/08/2009	32/	32/	32 μSυ	
Total:	002:Défense-Propuls	ion	32 /	32 /	32 μSv	
Task code :	003:Equipage navires à p	propulsion	Dose Hp(10)	G / Hp(10)N / H	p(0.07)	
		30/08/2009	3/	3/	3 μSv	
Total :	003:Equipage navires à propulsion		3/	3/	3 µSv	

6.3.8.3 Summary without daily sub-totals



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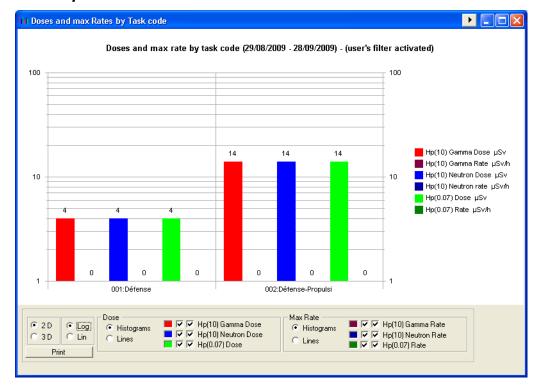
Task dosimetry report (user's filter desactivated)

Name: mgp Habilitation # ldSite;ldPHtest Owner company of the RCA : MGP

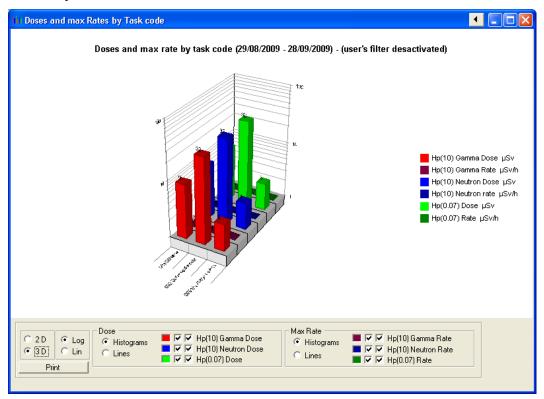
From: 29/08/2009 to: 28/09/2009

	Dose Hp(10)0	6 / Hp(10)N / H	p(0.07)
001:Défense	9/	9/	9 µSv
002:Défense-Propulsion	32 /	32 /	32 µSv
M3:Fauinage navires à propulsion	3/	3/	3 nSv

6.3.8.4 2 D Graphics

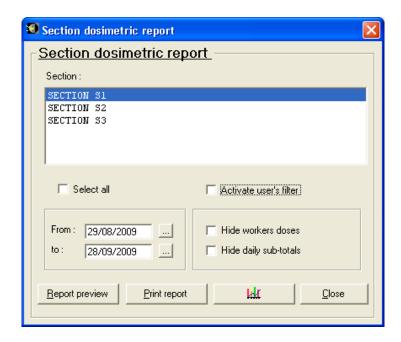


6.3.8.5 3 D Graphics



6.3.9 Editing the summary by section

To open the dialog box which allows the edition the dose accumulations Go to the main menu Dosicare Dosimetry / dosimetric report by sections:



- Section : Selection of one or several sections sélection d'une section ou de plusieurs,
- Select All : Selection of all the sections,
- Activate use's filter: activation/deactivation of the filter on sections and company for this
 profiles
- From ... To ...: Selection of the period during which on-area stays have to be taken in account.
- Hide workers doses: workers detailed information does not appear.
- Hide daily sub-totals: daily detailed information does not appear.

6.3.9.1 Complete summary



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Section dosimetry report (user's filter desactivated)

Name: mgp
Habilitation # IdSite;IdPHtest
Owner company of the RCA: MGP

From: 29/08/2009 to: 28/09/2009

Section:	SECTION S1 Dose Hp(10)G / Hp(10)N / Hp(0.07)			p(0.07)		
Date:	30/08/2009					
		-	-	14/	147	14
		DUPOND	Nicolas	6/	6/	6
		MICHEL	Yves	8/	8/	8
	Total dose :			28/	28/	28 μSν
Total :	SEC.	TION S1		28 /	28/	28 μSv

Section:	SECTION S2		Dose Hp(10)	Dose Hp(10)G / Hp(10)N / Hp(0.07)		
Date:	30/08/2009					
	-	-	12/	12/	12	
	MARTIN	Pierre	4/	4/	4	
	Total dos	e:	16/	16/	16 μSν	
Total:	SECTION S2		16/	16/	16 μSv	

6.3.9.2 Summary without workers details



MGP Instruments

BP 1 - F-13113 Lamanon France Té I + 33 (0)4 90 59 59 59 Fax + 33 (0)4 90 59 55 18

Fax + 33 (0)4 90 59 55 18 E-mail : info@mgpi.com

Section dosimetry report (user's filter activated)

Name: mgp
Habilitation # IdSite;IdPHtest
Owner company of the RCA: MGP

From: 29/08/2009 to: 28/09/2009

Section:	SECTION S1		Dose Hp(10)G / Hp(10)N / Hp(0.07)			
		30/08/2009	14/	14/	14 μSν	
Total :	SECTION S1		14/	14/	14 μSυ	
Section:	SECTION S2		Dose Hp(10)G / Hp(10)N / Hp(0.07)			
		30/08/2009	4/	4/	4 μSν	
Total:	SECTION S2		4/	4/	4 μSv	

6.3.9.3 Summary without workers details »:



MGP Instruments

BP 1 - F-13113 Lamanon France

Té I + 33 (0)4 90 59 59 59 Fax + 33 (0)4 90 59 55 18

E-mail : info@mgpi.com

Section dosimetry report (user's filter desactivated)

Name: mgp
Habilitation # IdSite;IdPHtest
Owner company of the RCA: MGP

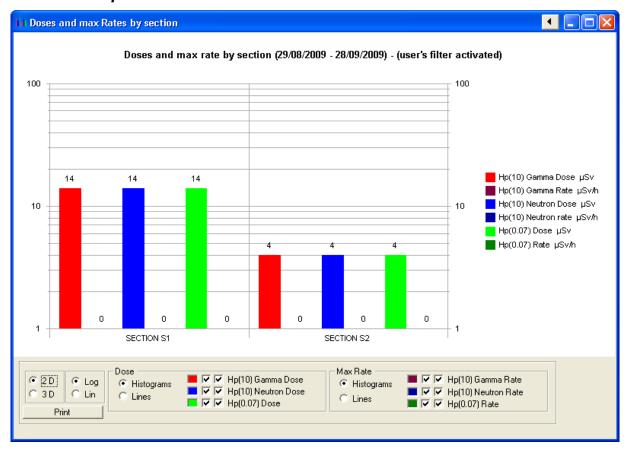
From: 29/08/2009 to: 28/09/2009

 Dose Hp(10)G / Hp(10)N / Hp(0.07)

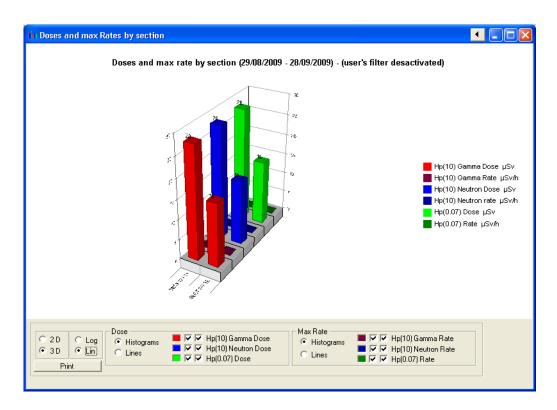
 SECTION S1
 28 / 28 / 28 / 28 μSυ

 SECTION S2
 16 / 16 / 16 μSυ

6.3.9.4 2 D Graphics

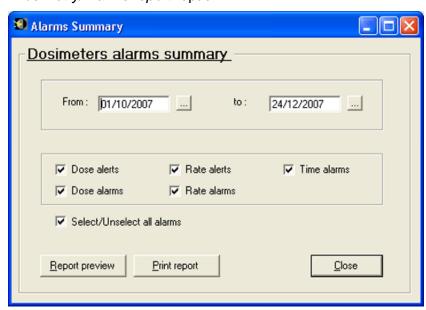


6.3.9.5 3 D Graphics



6.3.10 Editing alarms summary

The alarms summary edition can be called from the DosiCare main menu using "Dosimetry/Alarms report" option.



■ From ... to ...: Selection of the period during which alarms have to be taken into account.

Alarms: Selection of alarms to display in the summary

Note: This choice enables the user to select workers passages to display in the summary. If the same passage includes several alarms, they all will be displayed, even if these alarms were not selected. The summary head includes alarms selected.



MGP Instruments

BP 1 - F-13113 Lamanon France

Té I + 33 (0)4 90 59 59 59 Fax + 33 (0)4 90 59 55 18 E-mail : info@mgpi.com Name:

mgp

Habilitation #

123;4567

This is a report for the following alarms:

Dose alert Dose alarm Time alarm

Rate alert Rate alarm

Dosimeters alarms report

From: 12/12/2007 to: 11/01/2008

Date:		Rate alert							
Name		Task code :	D	ose ala	ırm		Rate	alarm	
	First name	HP(10)/HP(0.07) Dose:	Dose ale	ert				Time alarm	
30/12/2007 JACQUOT	5002			ı				I	
Xavier		100 / 20	μSv	Х	X	Х	X	Х	

Dosicare DosiCare Web

7. DosiCare Web

7.1 Presentation

The module DosiCare Web allows the user to display and modify the workers data sheets via a web browser.

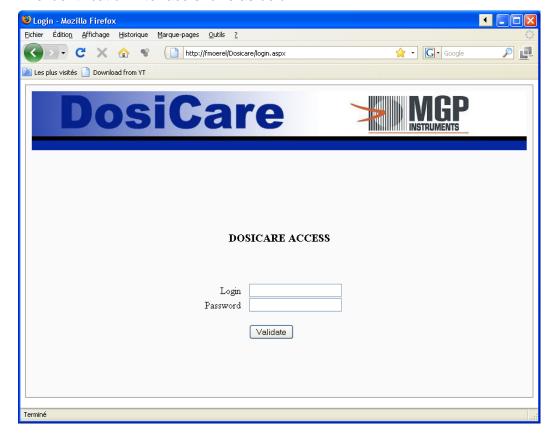
The fields and the entering rules are similar to those ones of the worker data sheet of the para. 4.7.1.2.

Address of the web site: http://localhost/Dosicare

7.2 Identification

The first screen is intended to identify. Only doctors and PCR (supervisors) are able to log in with this interface.

The identification interface shows as below:



DosiCare Web Dosicare

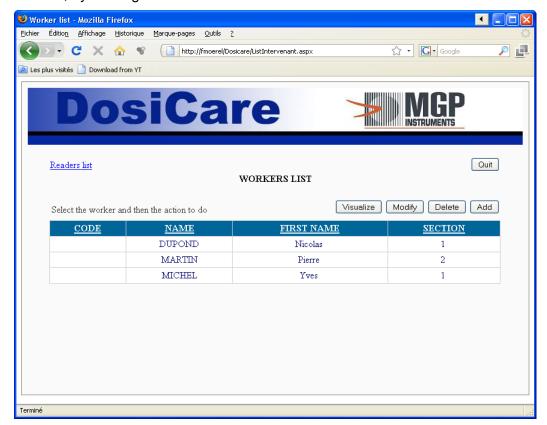
7.3 Workers list

This screen enables to display the list of the workers and to sort it in alphabetical order.

Furthermore, it allows to select one row and to choose the action you want to perform on this row:

- Display
- Modify
- Delete
- The action "Add" is valid independently of the selected or unselected row.
- With the Quit button, you return to the identification page.

From this screen, you can also access the screen showing the connection status of the readers, by clicking on the link "Readers list":



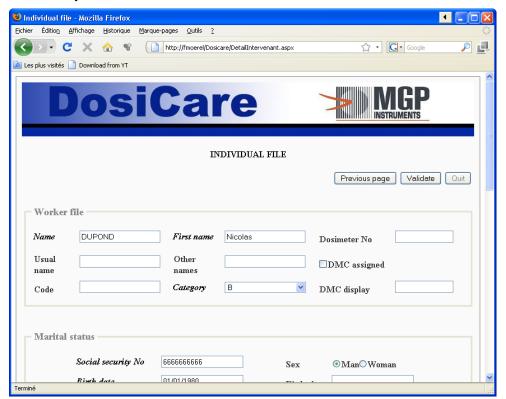
DosiCare Web

7.4 Workers detail

If the user select "visualize", "Modify", "Delete" or "Add", the detail screen of a user appears with the fields greyed, free for type or blank depending on the login profile.

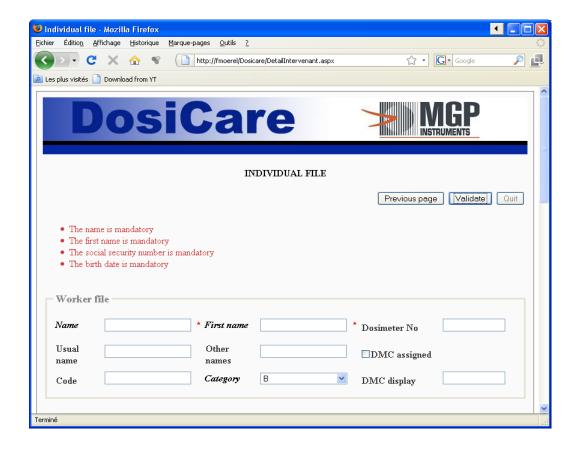
Example: in modify mode a doctor can only modify the date of the medical visit, but he will be able to display the entire dosimetry data of the worker he is in charge of.

The modify mode is shown below:



In case of an omission or an error of data capture, the problematic fields are red asterisked and a reminder of the problems appears on the **top** of the page

DosiCare Web Dosicare

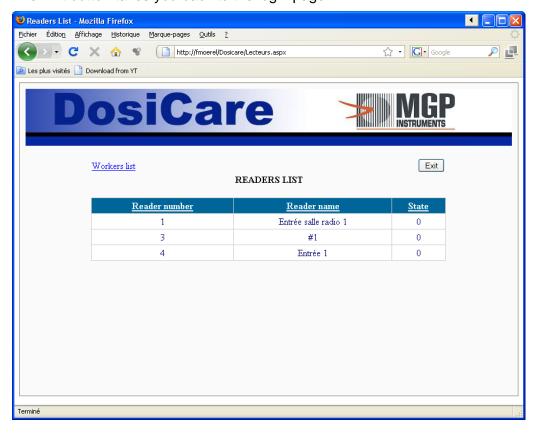


DosiCare Web

7.5 Readers List

This screen enables you to browse the list of readers, and in particular their connection status.

The Exit button takes you back to the login page.



DosiCare Web Dosicare

Blank page

Dosicare SiseriWebReport

8. SiseriWebReport

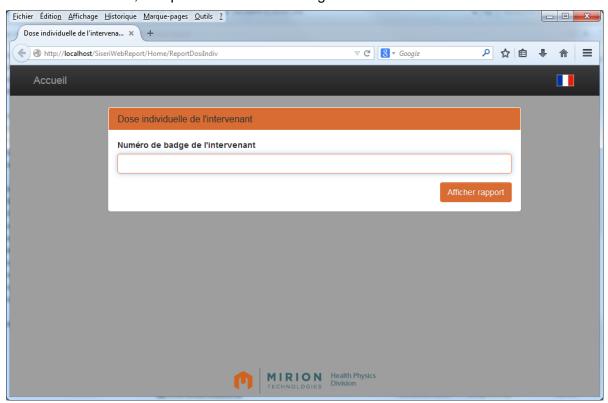
8.1 Introduction

The SiseriReportWeb module allows each operator to check their dosimetric results by entering their agent code. The displayed dosimetric results correspond to the sliding cumulations of Gamma, Neutron and Hp(0,07) dose measured by the operator during time periods of 1 month, 3 months, 1 year and 5 years.

URL of the website: http://ServeurWebInstallation/SiseriWebReport

8.2 Operator log

On the main screen, an operator can enter his agent code:

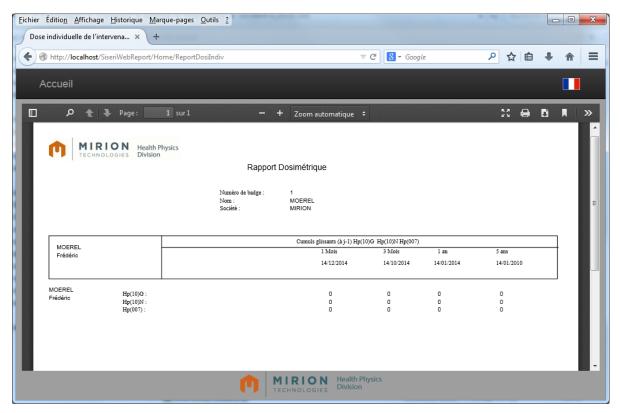


Click on the « Afficher rapport » button to read the dosimetric report.

8.3 Dosimetric Report

This screen displays the dosimetric report of the operator:

SiseriWebReport Dosicare



The PDF visualization plugin is built with several features like zoom, navigation and search. The « Accueil » button is used to go back to the main screen.

Dosicare The Dashboard

9. The Dashboard

9.1 Presentation

The dashboard is an independent module, which allows informing in real time about any problems in the system.

9.2 Identification

The first screen enables to log in and to select the language to use for the user interface.



Once logged in, the dashboard will be hided but maintains accessible via an icon right on the bottom of the screen. You only need to double click on this icon in order to display the dashboard.



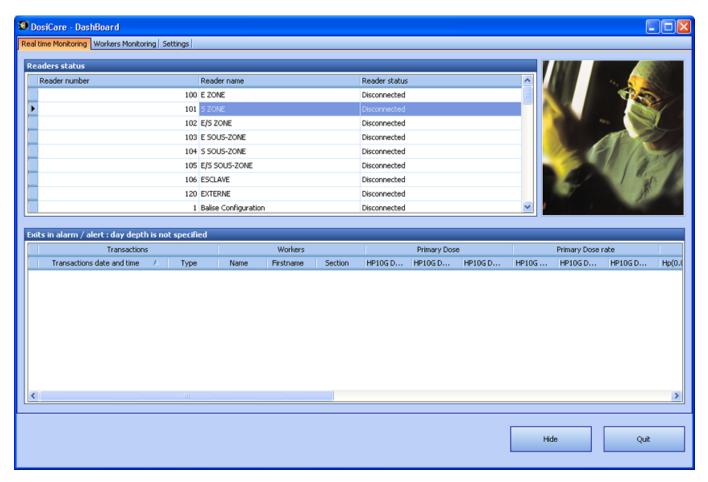
9.3 Watching the indicators

The dashboard provides three tabs.

On the first tab you can display:

- If the watched readers are linked or not linked.
- The exit with warning/alarm of dose or rate on the watched readers.
- The forced entries despite the entry is forbidden on the watched readers.

The Dashboard Dosicare

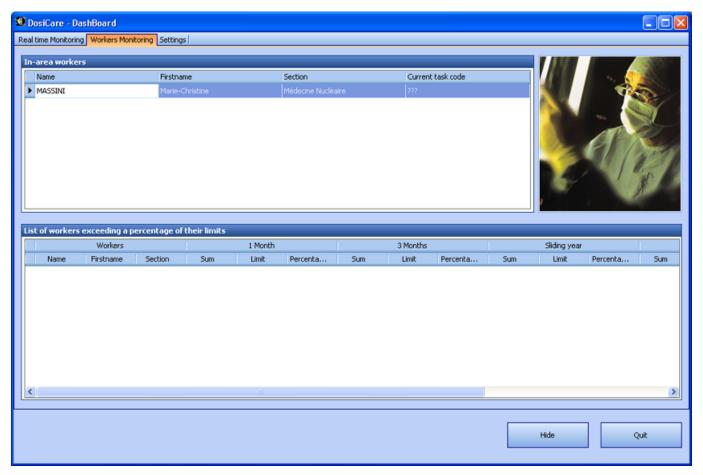


On the second tab you can display:

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- The list of the workers staying in area
- The list of the workers, whose one of the dose accumulations exceeds a certain percentage of the limit of the worker or the category.

Dosicare The Dashboard



The third tab enables to configure the behaviour of the dashboard.

The first zone allows the user to set:

- The "depth of the alarms". It is the number of days the entries and exit with problems are displayed on the first tab.
- The choice of waking up the dashboard on a dose alarm
- The choice of waking up the dashboard on a rate alarm
- The choice of waking up the dashboard on a dose warning
- The choice of waking up the dashboard on a rate warning
- The choice of sending an email on rate warning
- The choice of sending an email on dose warning
- The choice of sending an email on dose alarm
- The choice of sending an email on rate alarm

The second zone allows the user:

To select the readers he wants to watch or not.

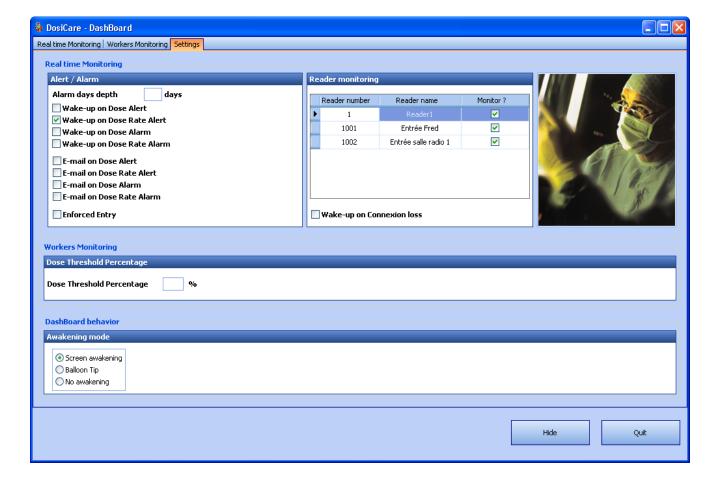
The Dashboard Dosicare

To choose the waking up of the dashboard on a link loss

The third zone allows the user to fix the percentage of the worker's dose accumulations that will wake up the dashboard when exceeded.

The forth frame enables the user to choose the mode of the dashboard's waking up:

- Active on the screen. The dashboard will be active and displayed on the screen.
- Info-bubble. The dashboard will be active and displays only an info-bubble on the icon right on the bottom of the screen.
- No wake-up. The dashboard don't activate automatically.



10. Monitoring the system

10.1 Presentation

Monitoring the system consists of:

- Checking that the LDM101, LDM210, LDM220 or LDM230 Reader is working adequately
- Checking access authorization when activating a dosimeter.

The process that is performing the TASK is "LdmMgr" ("LdmMgr" stands for LDM Manager).

10.2 Checking that the LDM Reader is working adequately

10.2.1 LDM110, LDM210, LDM220, LDM230

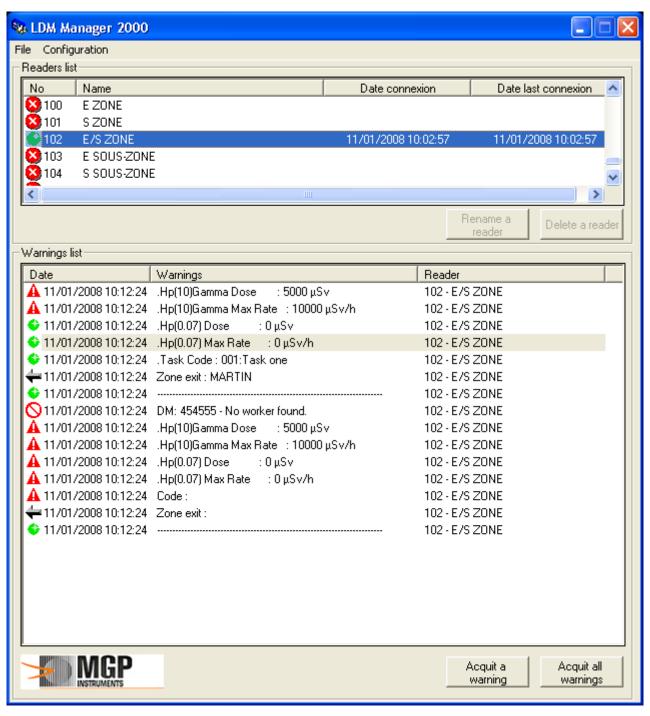
LDM's state	e (communication) is shown by LdmMgr's ico	on located on the bottom right part of
	×	
the screen		

When the reader is not communicating with the PC, the LdmMgr symbol is red crossed.

10.2.2 Ldm2000 / 3000

LdmMgr 2000 is shown by LdmMgr's icon located	d on the bottom right part of the screen
×	
	I _e

As more LdmMgr2000 handles ALL the readers, readers states are shown inside its windows. LdmMgr2000windows opens when clicked.



LdmMgr2000 is divided in 2 parts.

Upper part shows all the connected and disconnected readers since SW installation. In our example reader 1 is on line and reader number 8 has been on line once.

Lower part shows system activity.

3 types of events/alarms/warning are can appear they have to be acknowledged regularly.

💠 11/01/2008 10:12:24 .Hp(0.07) Dose : 0 μSv 102 - E/S ZONE

Correspond to a "normal" event

🛕 11/01/2008 10:12:24 .Hp(10)Gamma Dose : 5000 μSv 102 - E/S ZONE

Correspond to an alarm that occurred during activation of a DMC

Correspond to a system malfunction

Note: DosiCare never denies access. When a problem is found with the worker during access control it will "fire" an event in the list.

Therefore this list has to be checked on a regular basis, event have to be acknowledged and appropriate actions to be taken.

10.3 Checking access authorization (LDM110, LDM210, LDM220, LDM230)

Double-clicking on the LdmMgr symbol brings up the following full-screen window.

A dosimeter is present in the reader, and is in the process of being checked.

The file menu can be used to quit the "LdmMgr" window.

The Configuration menu is used to configure the connected reader.

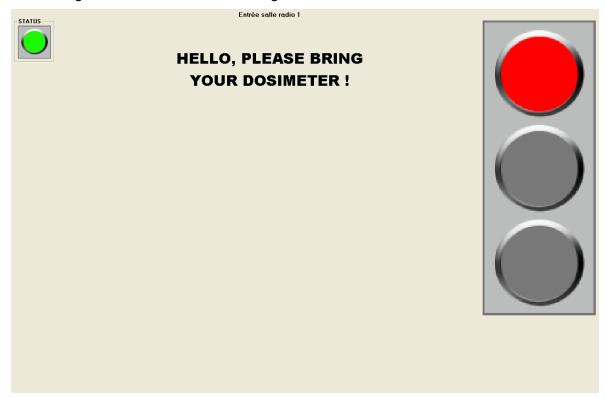


Figure 1: Present your dosimeter, normal mode

The traffic light along the right-hand edge of the screen indicates the access status.

- Before a dosimeter is presented, the light is **red**.
- During the access check, it goes to **orange**.

When access is authorised, the light goes to green.

The "Status" button at the top left of the screen shows whether the reader is connected or not.

- Green for connected,
- red for disconnected.

Note: The display mode of the screen above (in the notification area or permanent full-screen display) can be managed by editing the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

AutoHide

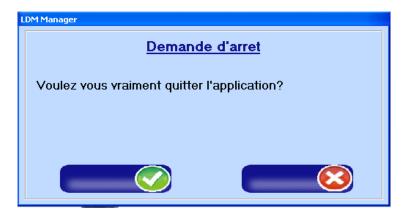
- ; To leave the window open = 0
- ; To automatically hide the program when the dosimiter is removed = 1

AutoHideWindow = 1

In touchscreen mode, the application can not be hidden automatically, and remains in full screen mode.

The menus are not displayed, but are accessible using key combinations.

For instance, to stop the application, used the key combination CTRL + Q, and the following screen appears



The key combination **CTRL** + **P** displays the Configuration menu, it used to configure the connected reader (see figure below).





The traffic light along the right-hand edge of the screen indicates the access status.

Before a dosimeter is presented, the light is red and an image of a dosimeter with a flashing arrow shows the required action "Present your dosimeter" Figure 1: in normal mode Figure 2: in touchscreen mode

During the access check, it goes to orange.

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When access is authorised, the light goes to green.

An image of a dosimeter with a flashing arrow shows the required action (Figure 5 : remove your dosimeter)

the date and time are displayed at the bottom left of the screen (Figure 3 : Date – Time)



Figure 2: Present your dosimeter, touchscreen

If the reader is not detected, or incorrectly configured, the following screen indicates that the application is not operating normally.



Figure 3: Date - Time

Note: It is possible to display or hide the date and time by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

- ; Clock display
- ;0 = Hide date and time
- ;1 = Display date and time
- DisplayClock=1

Several modes are available:

- Master mode (connected)
- the application is configured to work with a remote master database, i.e. hosted on anothet machine on the network. When the network is operating normally the disconnection indicator is not displayed.
- Master mode (disconnected)

When the application is configured to work with a remote master database but the connection is broken. A network disconnection indicator is diplayed (see Figure 2: Status and network indicators). The application works in standalone mode, and resynchronises automatically when the network connection is back.

- Normal mode
- The application is configured to work with a local database or with a remote database but without network disconnection handling: no indicator appears if the network goes down and the "Master" database is located on another machine on the network. The application stops. (operation identical to versions prior to V3.xxx)

Note:

It is possible to manage the applications mode of use by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows: ModeReplicationAuto: Allows the application to work standalone using a single local or remote database (operation prior to V3.xxx), with automatic replication (local and master databases)

Normal mode:

ModeReplicationAuto = 0 (use normal "single database" mode; indicate connection chain in [Connection_Distante] section

Master mode:

ModeReplicationAuto = 1

Use local database with automatic replication to a master database; indicate connection chain in [Connection] section

In touchscreen mode, cursor display can be disabled as follows:

Cursor display in touchscreen mode

; 0 = Hidden

; 1 = Displayed

DisplayCursorOnTactile=1

Application header image can be customised as follows:

Copy/paste an image in BMP or GIF format into the application directory

Specify the image name in the configuration file: EnTeteLDMManager= MYIMAGE.BMP

WARNING:

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The MIRION logo remains fixed regardless of the image chosen for the banner. Accordingly an image with a blank right order must be used.

If no value is provided, the original banner is displayed

LDW MGR



Note: The input windows may be automatically closed after an interval defined in seconds.

To set this, edit the configuration file as follows:

; Close input window timer, in seconds

ValeurTimerFermerInterfaceUtilisateur=60

The "Status" button at the top left of the screen indicates whether the reader is connected or not. Green for connected, ready for disconnected (see. Figure 4: Status and network indicators)

Dosicare Monitoring the system

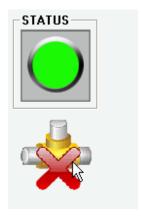


Figure 4: Status and network indicators



Figure 5: remove your dosimeter

Note: The mode of opening of the screen above (in the notification area or permanent full-screen display) and can be set by changing the parameters in the file Ldm1.ini in the LdmMgr installation directory.

When the access checks are in progress, the traffic light on the right of the screen is orange.

At the bottom of the screen, the current worker's current dosage is displayed in the form of a progress bar. The bar is green when the cumulative level is below the threshold; it turns red when this threshold is exceeded (see Figure 6: Access controls, below).



Figure 6: : Access controls

If the cumulative dose has been exceeded, the following screen is displayed:



Select "Confirm" to continue or "Cancel" to cancel entering the controlled zone.

Note: It is possible to select the cumulative dose to display in the progress bar at the bottom of the screen below:

The parameters in the file Ldm1.ini in the LdmMgr installation directory need to be edited as follows: Choice of period for the dose/limit percentage:

;lim5ans = 1 (5 years)

: lim365 iours = 2 (365 days)

;limAnnuelle = 3 (annual)

;lim3mois = 4 (3 months)

; lim1mois = 5 (1 month)

 $;lim365jours\ hp007 = 6\ (365\ days\ hp007)$

DureeCumulLimite=3

10.3.1 Touchscreen mode

10.3.1.1 Selecting a worker:

If the worker has an unallocated dosimeter, select the name of the worker who is to where the dosimeter, from a list (see Figure 7 : Selecting a worker from a list) or enter their code (see Figure 8 : Selecting a worker by code).

The system will activate the dosimeter.

Note: if the person selected, all the person to whom the dosimeter is allocated, does not have a task code on their file, a task code will need to be selected.



Figure 7: Selecting a worker from a list



Figure 8: Selecting a worker by code

Note: In non-touchscreen mode, the numeric and alphanumeric keyboards are not shown on the interface screens.

It is possible to manage the mode of selecting workers by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

Select staff member by drop-down list or by code

By Code = 0

By List = 1

SelectAgentParListe=0

It is also possible to display the staff member's code in clear text or hidden, by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

- ; Hidden = 0
- ; Cleartext = 1

CodeAgentEnClair=1 (see following figures)



Entering a worker code in cleartext



Entering a hidden worker code

10.3.1.2 Selecting a worker from a list:

The user can filter the list by entering the first few letters of their name.

The list is refreshed as the name is entered (see Figure 9: Filter by typing).

- The "←" key is used to delete the last character entered.
- The "Clear" key is used to delete the whole entry.

(see Figure 10: Modifying alphanumeric entry)

Arrows to the right of the list can be used to navigate between the different items. (see Figure 11: Navigating between items).

After selecting your name in the list, you can confirm or cancel the action using the buttons located at the bottom of screen (see Figure 12 : Confirm – Cancel)

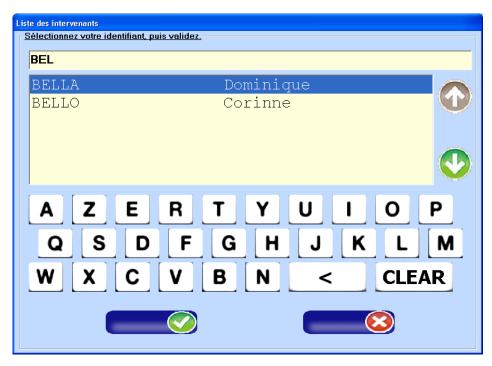


Figure 9: Filter by typing



Figure 10: Figure 12: Modifying alphanumeric entry

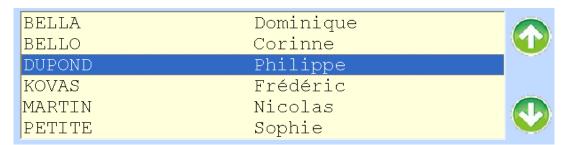


Figure 11: Navigating between items



Figure 12: Confirm – Cancel

10.3.1.3 Selecting a worker by code:

If the method of selecting a worker has been set to entering the worker's code, you have two type your codes directly using the numeric keyboard in the window (see figure 8: Selecting a worker by code)

■ The "C" key is used to delete the last character entered.

■ The "CLR" key is used to delete the whole entry.

(see Figure 13: Modifying alphanumeric entry)

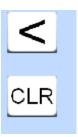
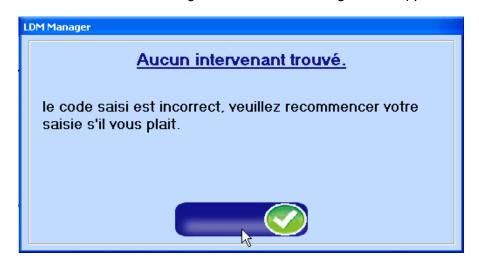


Figure 13: Modifying numeric entry

You can then confirm or cancel your entry (see Figure 12 : Confirm – Cancel) If you make a mistake in entering the code, the following screen appears:



10.3.1.4 Selecting the Task code

If the dosimeter does not have a current allocated task code, you must select (see Figure 14: Selecting a code from a list) or enter one (see Figure 15: Entering a task code).

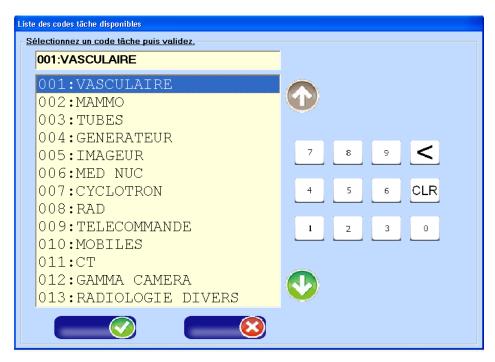


Figure 14: Selecting a code from a list

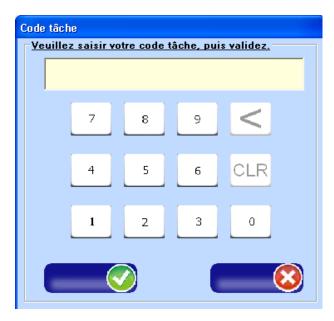


Figure 15: Entering a task code

Note: It is possible to manage the mode of selecting task codes by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

- ; Test code selection by list or by code
- ; ByCode = 0
- ; By List = 1
- SelectCodeParListe=0

10.3.1.5 Selecting a task code from a list

When a code is entered, the system automatically looks up and preselects the corresponding task code.

- The "C" key is used to delete the last character entered.
- The "CLR" key is used to delete the whole entry.

(see Figure 13: Modifying alphanumeric entry)

Arrows to the right of the list can be used to navigate between the different items. (see Figure 16: Navigating between items).

If no item is selected, the navigation and confirmation buttons are greyed out: (see Figure 17: No item selected).

After selecting your name in the list, you can confirm or cancel the action using the buttons located at the bottom of screen (see Figure 12 : Confirm – Cancel)



Figure 16: Navigating between items

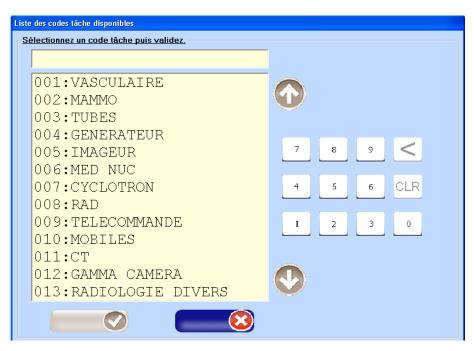


Figure 17: No item selected

10.3.2 Normal mode

10.3.2.1 Selecting a worker from a list

After you have presented your dosimeter, if it is not preconfigured, you must select the name of the worker who is to carry the dosimeter, by double-clicking in the list below (see Figure 18: Worker list " non-touchscreen mode" and Figure 19: Selecting a worker "non-touchscreen mode")

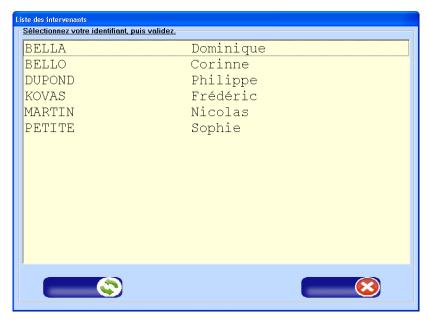


Figure 18: Worker list (non-touchscreen mode)

BELLO	Corinne	
DUPOND	Philippe	
KOVAS	Frédéric	
MARTIN	Nicolas	
PETITE	Sophie	
	-	

Figure 19: Selecting a worker (non-touchscreen mode)

The "refresh" button at bottom left (see Figure 18: Worker list "non-touchscreen mode") of the list of workers, fetches the most recent data from the database.

10.3.2.2 Selecting a worker by code

Depending on the configuration of the application you may be required to enter your ID code directly in the window below:



Figure 20: Entering the worker code (hidden), normal mode



Figure 21: Entering the worker code (clear text), normal mode

Note: It is possible to manage the mode of selecting workers by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

Select staff member by drop-down list or by code

By Code = 0

By List = 1

SelectAgentParListe=0

It is also possible to display the staff member's code in clear text or hidden, by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

- ; Hidden = 0
- ; Cleartext = 1

CodeAgentEnClair=1 (see Figure 20-21)

After selecting and confirming the worker code, if the worker's dosimeter has not been preconfigured, you have to do is select a task code from a list (see Figure 22 : Selecting a task code from a list (non-touchscreen)) or by code (see Figure 15 : entering a task code)

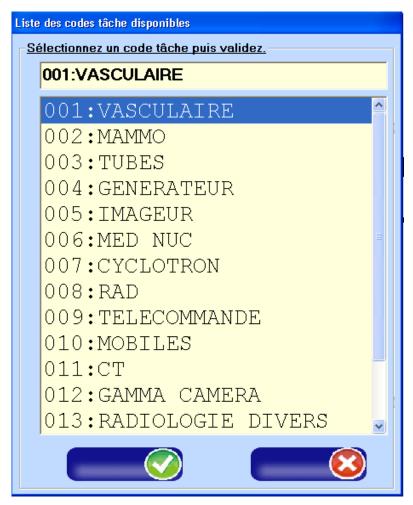


Figure 22: Selecting a task code from a list (non-touchscreen)

After the task code is confirmed, the following screen is displayed:

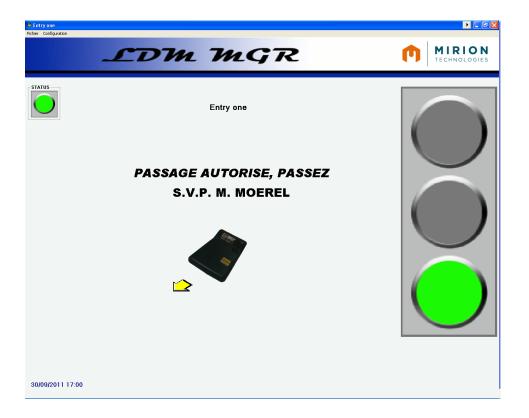


A message indicates that you should wait, and not to remove the dosimeter during the access check.

Entry to the controlled zone is permitted.

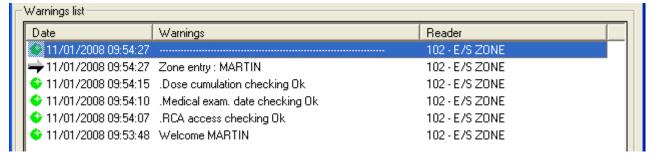
The traffic light goes to green and the dosimeter may be removed.

It is configured and ready to be set running by pressing the pushbutton



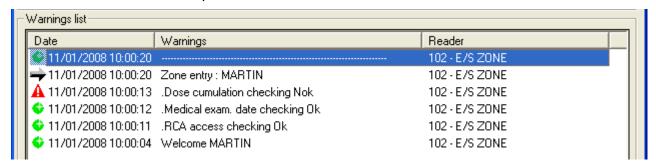
10.4 Checking access authorization (LDM 2000/3000)

When looking to the event windows ALL transactions can be found the good ones



and ones that encountered a problem

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10.5 Access management (LDM 2000/3000)

In normal mode, DosiCare never denies access. When a problem is found with the worker during access control it will "fire" an event in the list.

Therefore this list has to be checked on a regular basis, event have to be acknowledged and appropriate actions to be taken.

Note: It is possible to manage Access control by modifying parameters (or adding them, if not existing) in the ini file: Ldm200001.ini in the LdmMgr2000 folder.

- GererInterdictionZone = 0 or 1
- 0 even if the worker is forbidden in RCA, access will be granted
- 1 if the worker is forbidden in RCA, access will be denied, a message will be displayed on the LDM2000/3000 reader
- GererInterdictionVisite = 0 or 1
- 0 even if the worker has his medical visit date exceeded, access will be granted
- 1 if the worker has his medical visit date exceeded, access will be denied, a message will be displayed on the LDM2000/3000 reader
- GererInterdictionCumul = 0 or 1
- 0 even if the worker has one of his dose limits exceeded, access will be granted, but a message will be displayed on the LDM2000/3000 reader
- 1 if the worker has one of his dose limits exceeded, access will be denied, a message will be displayed on the LDM2000/3000 reader.

11. Entering the zone/exiting the zone

11.1 Presentation

The chapter summarizes the procedure to quickly configure a dosimeter for use with the 2 readers families.

Rappel: LdmMgr is connected to the LDM readers (LDM110, LDM210, LDM220, LDM230) and performs ITSELF the necessary actions (worker checking's, dose alarms definitions), it is DIRECTLY connected to the DosiCare database.

LdmMgr2000 does the access control checking's, define alarms set points but does not turns on and off the dosimeters. It give some answers to the reader request that will itself turn on and of the dosimeters.

11.2 LdmMgr/ LDM110, LDM210, LDM220, LDM230

11.2.1 Entering the zone

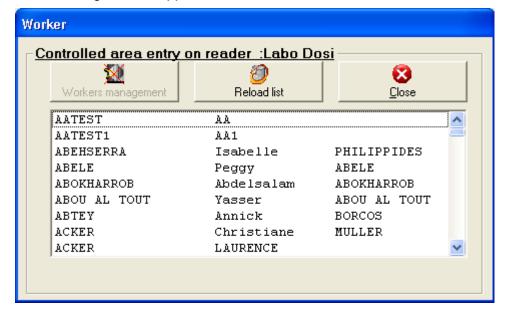
This function allows, when entering the zone to:

- Activate (run mode) the dosimeter.
- Configure the dosimeter with new alarms:
- Dose alarm
- Rate alarm
- Time alarm

The procedure is described below.

Present the dosimeter at the reader

The following window appears on the PC's screen:



- Select the name of the worker who will wear the dosimeter, the system will activate the dosimeter:
 - If the dosimeter is allocated, the system will activate the dosimeter without displaying the previous screen.
 - If DOSICARE is installed on the PC, "Workers management" button will be active. A click on this button will allow the user to access to the DOSICARE workers management function Once all the modifications have been done quit DOSICARE software and return to the screen enabling to choose the worker entering an area. Click on "Reload list" before to go on.
- The LDM will activate the dosimeter, the green led will illuminate, indicating that the dosimeter is activated.

Note: If the SELECTED worker has no work code in its data sheet, the system will then prompt the user to select a work code.

Once a dosimeter has been detected the worker will be prompted to enter its identification.



Please note this code must match the field "code" of the workers information screen.

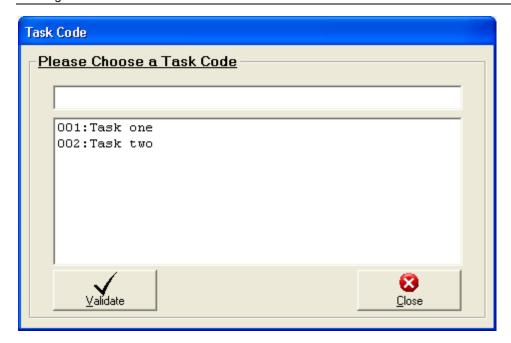
The input of the code can be set into the confidential mode:

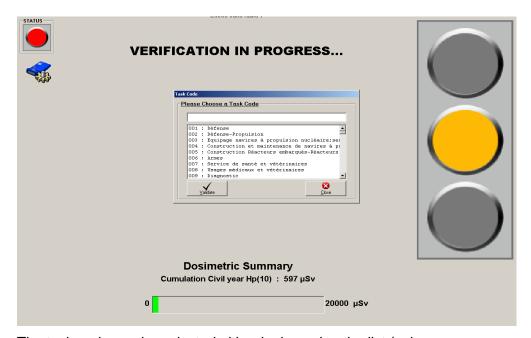


Note: The confidential mode is set in the:"Ldm1.ini" file located into the installation folder of LdmMgr

- ; Code Agent en clair ou masqué
- ; Confidential → = 0
- ; Clear code → = 1

CodeAgentEnClair=0





The task code can be selected either by browsing the list (using mouse or arrow keys) or by typing in the task number. During the verifications, (access control), the traffic light is showing orange and the status light in the top left corner is red.

The bottom of the screen will show the dosimetric status of the worker (cumulated dose versus the limit)

It will turn to red of the dose limit is over passed.

Note: It is possible to define which dosimetric accumulation to display in the progress bar in the "Ldm1.ini" file located in the installation folder:

Choice of the dosimetric summary to display at entry time:

; lim5ans = 1

;lim365jours = 2

;limAnnuelle = 3

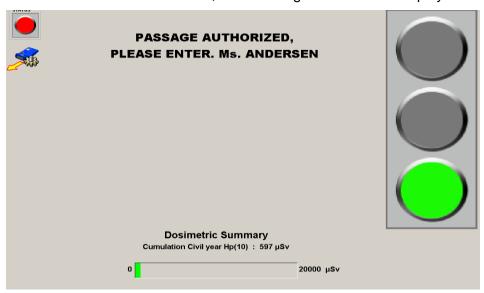
;lim3mois = 4

; lim1mois = 5

; $lim365jours\ hp007 = 6$

DureeCumulLimite=3

When access control is finished, the following screen will be displayed:



Access is granted, the traffic light turns to green, the dosimeter can be taken. It has been configured and is turned on or is ready to be turned on by pressing the push button.

11.2.2 Exiting the zone

This function allows a worker, when exiting the zone, to:

- deactivate his dosimeter,
- consult the on-area stay histogram, when an alarm has been triggered.
- save the alarms related to his on-area stay:
- dose alarm
- rate alarm
- duration alarm
- save the values of the main measurements related to his on-area stay:
- dose equivalent
- dose equivalent rate
- duration

The procedure is described below.

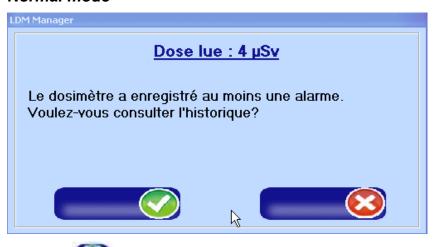
Present the dosimeter at the reader.

Wait for the green "ACCESS" light at the reader and then remove the dosimeter: the dose has been recorded and the dosimeter is set to pause.

In normal mode only

If an alarm has been triggered during the on-area stay, the software prompts you to consult the stay histogram.

11.2.2.1 Normal mode



"Confirm" to go to the next screen.

Note: if you choose you will no longer be able to browse this log using Dosicare. In this case you will need to use other software, not provided.

The screen showing the historical log of doses received is displayed:

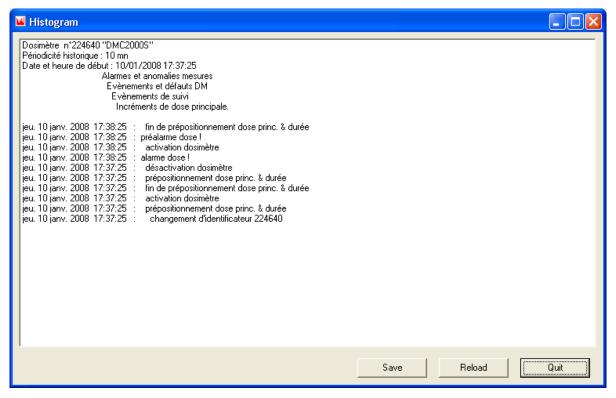


Figure 23: Log of dose increments received

- Save: Saves this log in a file for later use.
- Refresh: Interrogates the DMC again.
- Close: Closes this screen and ends exiting from controlled zone.

Note: The log period, that is the maximum time between two events, can be configured in the threshold configuration screen. The possible values are: 10 seconds; 1 minute; 10 minutes; 1 hour; 24 hours. It is possible to manage the display of this screen by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

```
; Log
; 0 => no log
; 1 => Request to display log, log displayed for 5 seconds
; 2 => Request to display log, wait until window closed by user.
```

EnableHistorical=2

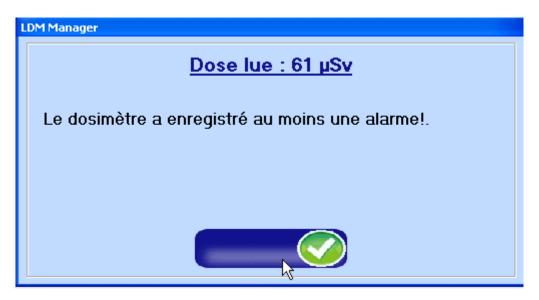
Note: after the window opens, click on "Refresh" to display the log

Choose a location to save your log, enter the filename, then click on "save".

11.2.3 Touchscreen mode

If the dosimeter has recorded an alarm, the following window is displayed.

For more information, ask a Dosicare administrator or consult the graph of doses received which appears after this step (depending on configuration)



<u>Display of the graph showing dose increments and rates</u> received

Depending on the application configuration, a graph showing the dose increments received, and maximum rates, is displayed

Note: It is possible to manage the display mode of the graph by modifying the parameters in the file Ldm1.ini in the LdmMgr installation directory as follows:

Display of daily log on alert and/or alarm even if the daily log is disabled

; 0 = on alert

; 1 = on alarm

; 2 = on alert and alarm

; 3 = on alerte or alarm

; 4 = do not display on alert and/or alarm

HistoDayOnAlerteOrAlarme=3

Never display any log (daily or monthly)

0 = Display log

1 = Never display log

NeverDisplayHistoric=0

Display of daily log

0 = Display of monthly log

1 = Display of daily log (configuration below)

HistoDay=1

Daily log detail:

This relates to the grouping of the detail of dose increments received, between two recording intervals. Example: if I have received 5 doses in 60 minutes and the detail level is configured at 60 minutes, then a single value will be displayed representing the 5 doses.

Configuration of daily log graph detail (in minutes)

The maximum value is 60 minutes and the minimum value is 1 minute.

Note: if the value is set as "zero" the dosimeter's configured value will be used instead.

DetailHistoriqueJournalier=10

Selecting the detail display value set in the dosimeter for displaying the daily log.

This means using the value set in the dosimeter to display the log. If the value entered is other than "0" then the preceding configuration is not used. (DetailHistoriqueJournalier = 0 even if the value has been entered)

The detail is defined as hourly (60 minutes) at maximum

1 = inhibits setting the variable --> DetailHistoriqueJournalier above, the detail value set in the dosimeter is used. 0 = the manually set detail value is used (value of the variable "DetailHistoriqueJournalier")

DetailFrequenceDosimetre=0

Setting the number of hours displayed on the daily log graph

This means defining the interval displayed in the graph, for example the last 12 hours:

Note: the minimum value is 1 hour

NbHeureHistoriqueJournalier=12

Setting the purge value for the daily log

This configures the number of entries retained for a worker. For example, retaining the log for the past year is configured as follows:

;Enable/disable purging the daily log

;0 = disabled

<u>;1 = enable</u>d

PurgerHistoriqueJournalierActif = 1

:Configuring the number of days before purging the daily lock

; if the value is 0 or below, the default value is defined as 5 * 365 days

NbJoursPurgeHistoriqueJournalier = 365

Setting transaction purging

This configures the number of transactions retained for a worker. For example, retaining all transactions for the past year is configured as follows:

;Enable/disable purging transactions

;0 = disabled

:1 = enabled

PurgerTransactionActif = 1

;Configuring the number of days before purging transaction is

; if the value is 0 or below, the default value is defined as 5 * 365 days

NbJoursPurgeTransaction = 365

11.2.3.1 Normal mode

The graph below is displayed (see Figure 24: graph).

It is possible to view:

- In the title bar: The start and end dates of the log period
- On the right-hand side: The legend
- At bottom right: a button to close the window
- Below the graph: the parameter settings
- 2D: Flat representation
- 3D Three-dimensional representation
- Log: Logarithmic curves
- Lin: Linear curves
- Histograms: Display as bar chart
- Lines: Display as curves

Settings for display of curves and colours

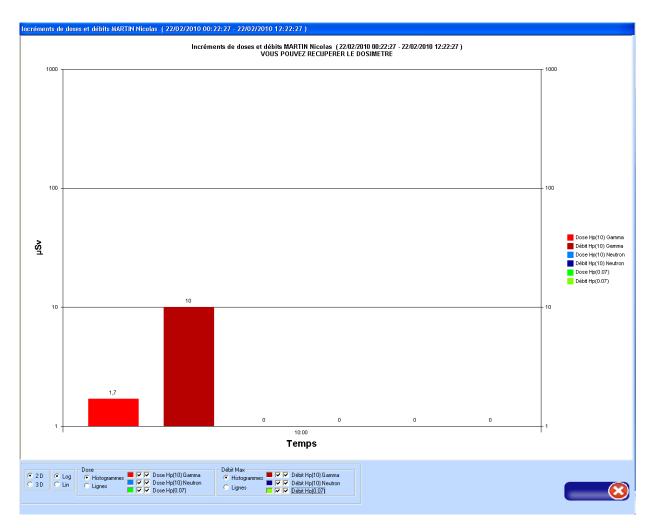


Figure 24: Graph

Incréments de doses et débits MARTIN Nicolas (22/02/2010 00:22:27 - 22/02/2010 12:22:27)
VOUS POUVEZ RECUPERER LE DOSIMETRE

Figure 25: Graph title

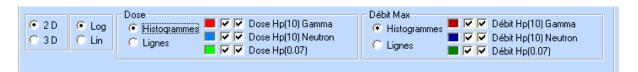


Figure 26: Graph parameters



Figure 27: Graph legend

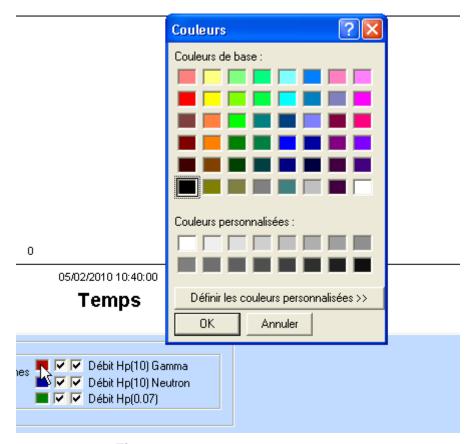


Figure 28: Colour configuration 1



Figure 29: Colour configuration 2

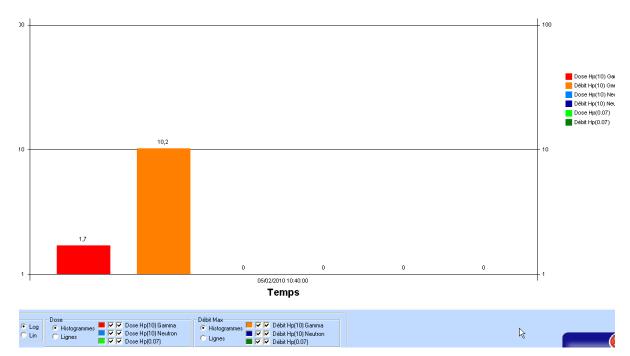


Figure 30: Colour configuration 3

11.2.3.2 touchscreen mode

Notes: In touchscreen mode, the graph parameters cannot be altered, however the configuration is saved when you modify it in normal mode. So to configure the graph display in touchscreen mode, to as follows:

- Open the application configuration file (ldm1.ini)
- set the application to open in normal mode (GererTactile=0)
- Save and close the file.
- Run the application in non-touchscreen mode
- Simulate entering a controlled zone
- Simulate leaving a controlled zone
- When the graph is displayed on leaving a controlled zone,
- Remove your dosimeter
- Stop the application.
- Open the application configuration file (ldm1.ini) again
- set the application to open in touchscreen mode (GererTactile=10)
- Save and close the file.
- Run the application in touchscreen mode

The graph will now be displayed as you have defined it, when in touchscreen mode.

11.3 LDM 3000

The LDM3000 is continually searching for a dosimeter:

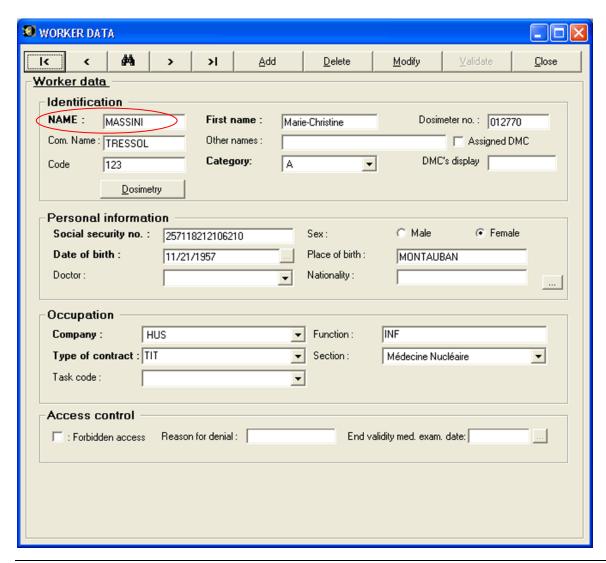


Once a dosimeter has been detected the worker will be prompted to enter it's identification.



Please note this code must match the field "code" of the workers information screen.

If the dosimeter detected is affected to the worker, he does not need to enter his access code. He can only press enter.



Note: The LDM 2000/3000 reader can also be configured in order to prompt for job code see 11.4.2 Using LdmMgr2000

When the codes have been entered, the reader send access request to the LdmMrg2000 it is attached to.

11.4 Reader configuration

11.4.1 Using LdmMgr

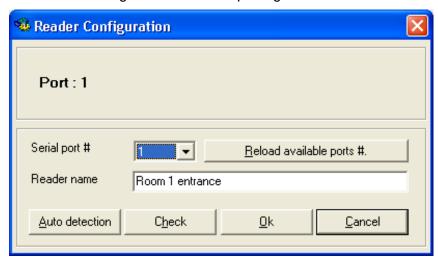
This function allows to:

- select the RS232 communication port,
- check the dialog with the reader,
- detect the readers connected to the PC,
- modify the reader name.

The procedure is described below.

Select the Configuration\Configuration Reader menu.

Wait for the configuration window opening.

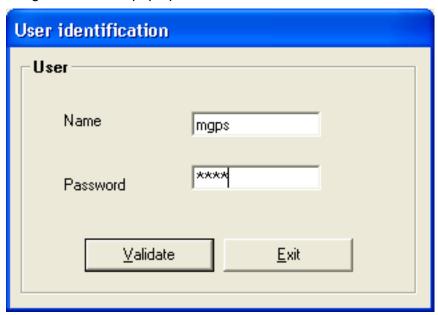


- Serial port #: Allows to select the RS232 port used. Only the ports available on the computer are displayed in the list. (Ports over #16 are not usable by the software).
- Reader name: Allows to modify the reader name.
- Reload available ports # : Allows to search and display in the list all available computer ports.
- Auto Detection: Allows to detect automatically the readers connected to the computer. At the end of the automatic detection, the list of ports #, where readers have been detected, is displayed.
- Check: Allows to check, on the selected port #, the communication with the reader.
- Ok : Save changes.
- Cancel : Cancel changes.

11.4.2 Using LdmMgr2000

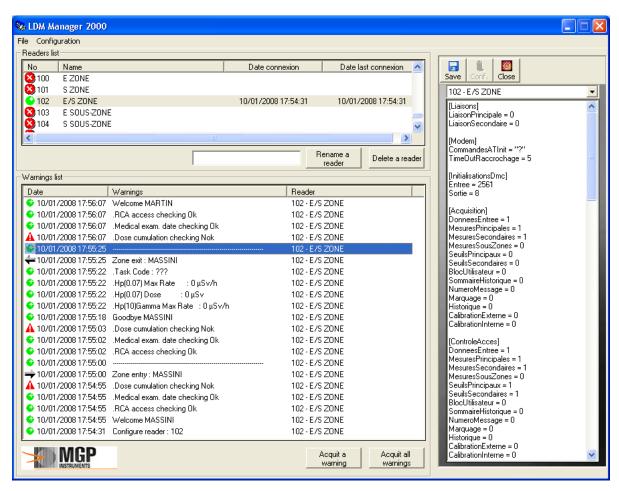
Once a reader is selected in the reader list, select "reader configuration" in the "Configuration menu"

A login window will pop up.



The supervisor level has to be used.

A new window will appear on the right of the screen.



Type in the data and press "Configure" to immediately send the new configuration to the reader and press Save to write it on your hard drive.

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12. Tips and tricks

12.1 Presentation

This chapter describes other specific operations:

- Changing the radiological units of the system.
- Changing the language.
- Changing audible alerts.
- Checking a communication error with the reader.

12.2 Changing the units

The default unit is the microSievert.

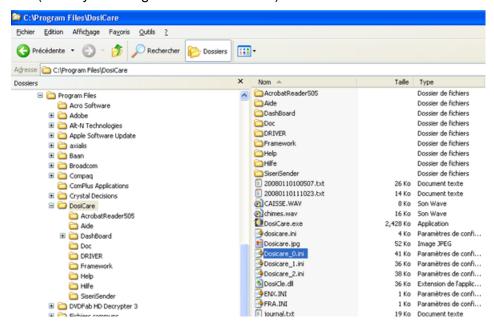
To change the displayed units, perform the following:



Warning:

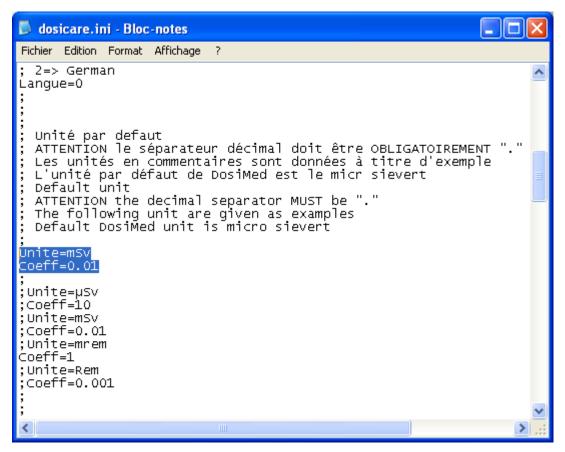
The user must change the unit BEFORE starting to use the system

Edit the "dosicare.ini"file:
 This file can be found into the DosiCare default directory.
 (Usually "C:\Program Files\DosiCare)



Double click on file in order to edit it:

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The user can see the units "Unite=µSv" and it conversion factor "Coeff=10"

There are 2 commented examples for mSv and mrem.

The conversion factor for mrem is 1: the user can enter any desired unit and evaluate the conversion factor to type in.

The sample values are preceded by ";" '(semicolon) that express a comment.

To change the sample value for use (mrem for example), delete the semicolon for that value and insert a new semicolon in front of the microSievert line.

12.3 Changing the language

It's possible to change the display language Perform as for changing unit:

Edit the "dosicare.ini"file:
 This file can be found into the DOSICARE default directory.
 (Usually "C:\Program Files\DosiCare)

The user can see "0 => French " et "1 = > English".

According to the wanted language, modify the label value "Langue= x"."Langue= 0" the software will be in French, "Langue= 1" the software will be in English, after the next start.

For ldmMgr, in order to use another character set, edit ldm1.ini and modify the section charset.

```
; Character set à utiliser sur les champs text.
; 0 : Valeur par défaut
; 128 : Japonais (japanese)
; 129 : Coréen (korean)
; 134 : Chinois (chinese)
; 161 : Grec (greek)
; 177 : Hébreu (hebrew)
; 178 : Arabe (arabic)
; 204 : Cyrillique (cyrillic)
; 222 : Thailandais (Thai)
; 238 : Europe Centrale (central/eastern european)
Charset=204
```

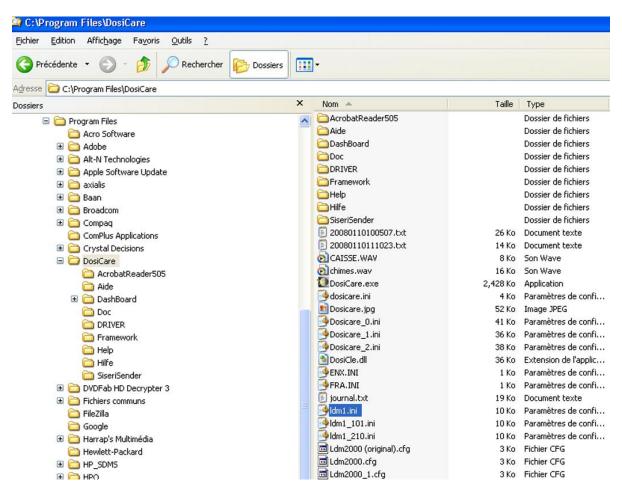
12.4 Audible alerts

There are 5 different audible alarms in LdmMgr. They are:

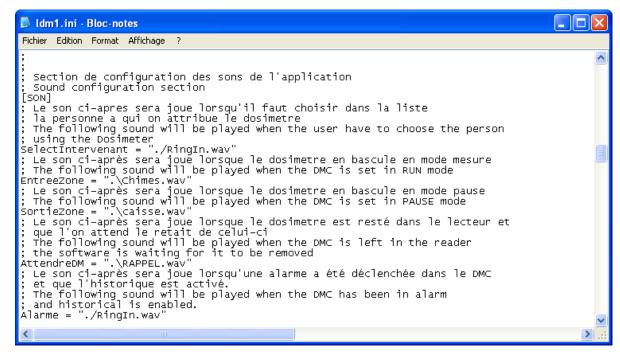
- Display of the worker list when a dosimeter is inserted (field "SelectIntervenant").
- Dosimeter turned on, the user can remove the dosimeter from the reader (field "EntreeZone").
- Dosimeter turned off when exiting the controlled area, the user can remove the dosimeter from the reader (field "SortieZone").
- The user forgot to remove the dosimeter out of the reader field ("AttendreDM").
- Possible consultation of the histogram upon exit from an area where alarms have been triggered ("Alarm" field value)

These fields can be found in the "*Idm1.ini*" file. This file is installed in the default directory of DosiCare: (Usually "C:\Program Files\ DosiCare ").

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Double click on file in order to edit it:



To change the audible alarms, change the file indicated after the "=" sign (do not forget to put file name between inverted commas).

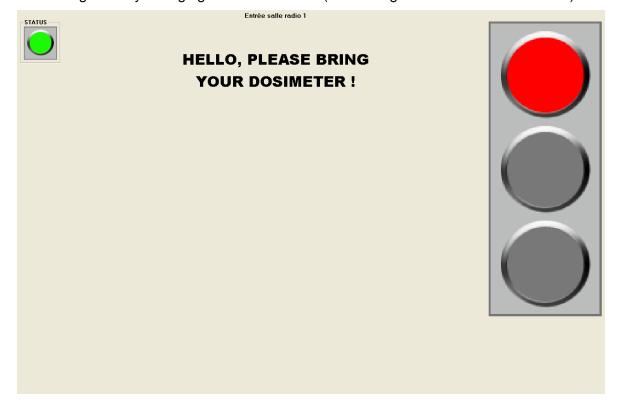
The file has to be a ".wav" file;

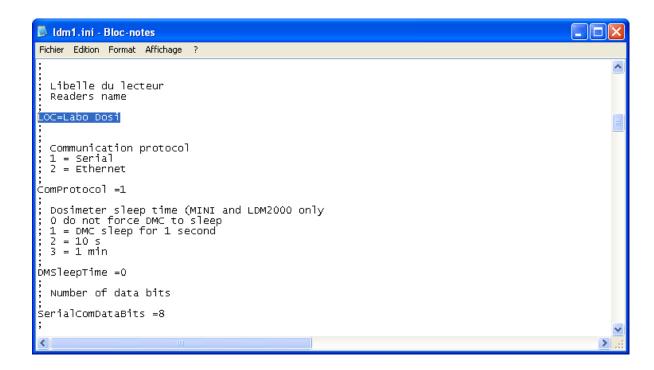
This can be useful if there are several readers in the system, a different sound can be used for each reader.

12.5 Reader name

When selecting the worker's name in the list at entry time (when allocating the dosimeter), LdmMgr changes the title of the list to indicate the managed reader. It allows to the PC's user to know the reader where the dosimeter was inserted (in case of a multiple reader configuration).

Here, the entry chapter "*Entrée salle radio 1*" is used as title for the worker list. You change this by changing the "*LOC*" value (do not forget to use inverted commas)



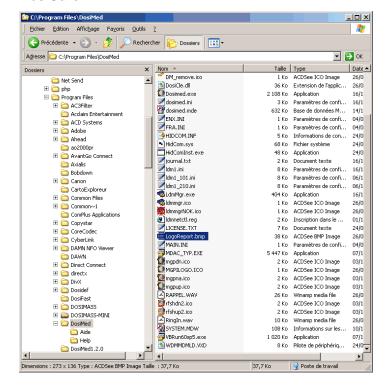


12.6 Picture used for reports

In the proposed written reports, a picture can be found on the top left of the image.

It is possible to modify this figure to insert the company logo for example.

This image is contained in the "LogoReport.bmp" file in the installation directory of DosiCare.



12.7 Using doctor information

The use of the doctor in the application is configurable. It is handled by the "GererMedecin" field in dosicare.ini.

Possible values

- 0→ no doctor
- 1 → doctors

12.8 Checking a communication problem with the reader

When the link with the reader is not operational (symbol blocked marked in red in the lower right), perform the following verifications:

- Check the connection cable between the PC and the reader,
- Check the serial port parameters are correct,
- Check that the power cable to the reader is connected,
- Check that the reader is turned ON:

12.9 LdmMgr2000

12.9.1 Automatic open

This option allows you to tell LdmMgr2000 to pop out of its docking position whenever something appends:

"*OuvertureSurAlerte*" in the LDM2000X.ini file where X is the LdmMgr2000's number. (not to be confused with the reader number).

Possible values:

- \bullet 0 \rightarrow no pop up,
- 1 → pop up

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Extension Dosicare

13. Extension

13.1 Introduction

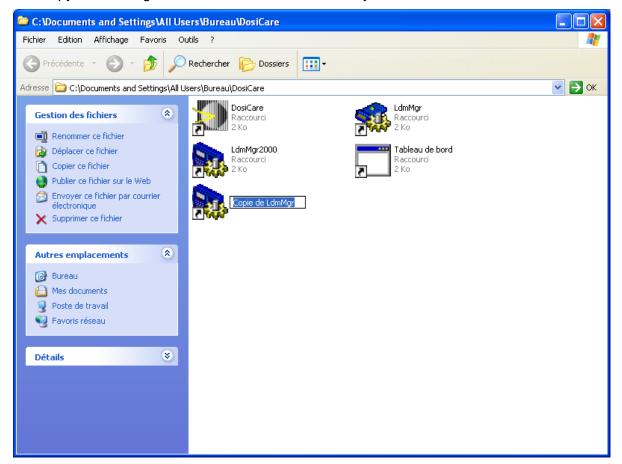
This chapter describes the operations to be performed in the case of a system with several readers on the same PC or the case of a system of several PC with a reader, and even a combination, connected to each PC.

13.2 Several LDM connected to the same PC

In a standard mode, the system is installed with one reader connected to one serial port specified during the installation.

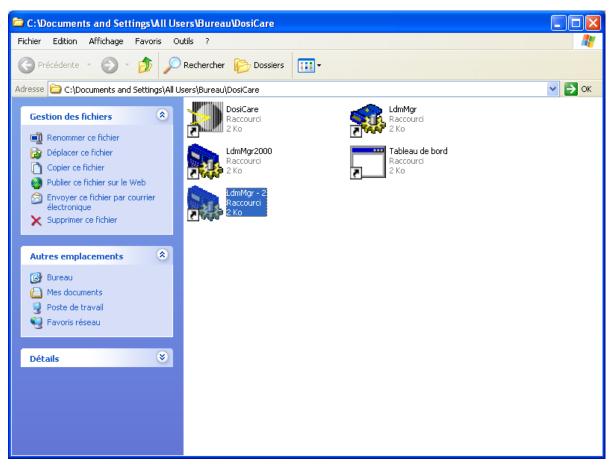
To be able to connect a second reader it is necessary to perform the following steps:

Copy the LdmMgr shortcut in the installed directory



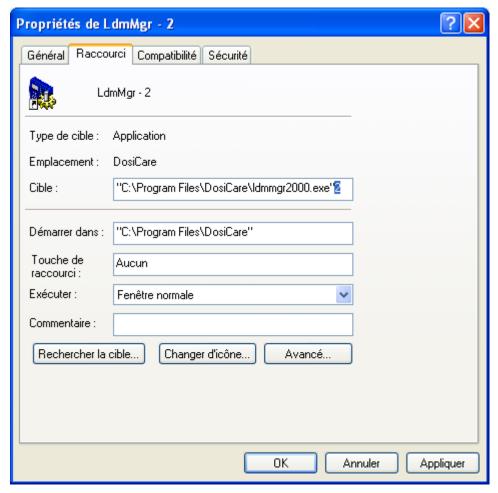
Dosicare Extension

Rename the new shortcut



Modify the properties of the shortcut to launch the program with the parameter 2 instead of 1.

Extension Dosicare



When starting "LdmMgr Reader 2", it will now use the new configuration file "*Idm2.ini*" instead of "*Idm1.ini*".

It is necessary, by copying the "*Idm1.ini*" file, to create the "*Idm2.ini*" (see previous paragraph).

Dosicare Extension

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Glossary Dosicare

14. Glossary

365 days dose accumulations: Dose accumulations calculated over the last 365 days.

Activating a dosimeter: All the operations enabling a dosimeter to change its operation mode

from de-activated (quiet status) to run mode (measurement operation

mode).

Allocating a dosimeter: Procedure consisting in associating permanently or temporarily a specific

dosimeter (identified by its serial number) to a worker in order to allow

him to access to a controlled area.

Area entry: These terms are used to briefly designate the controlled area entry.

Area exit: These terms are used to briefly designate the controlled area exit.

Calendar dose accumulations: Dose accumulations calculated over a number of entire months (1 month,

3 months, civil year, 60 months; goes from the 1st of each month to the last day of the month, to include the exact number of days in each

month).

Controlled area: Closed perimeter within which each worker must wear a dosimeter. The

controlled area access authorization is mainly based on dosimetric

criteria.

Database: A database is all the data stored on the hard drive related to the

operation of a complete dosimetry system.

Deactivating a dosimeter:

All the operations enabling a dosimeter to change its operation mode

from run mode (measurement operation mode) to de-activated mode

(quiet status).

DMC2000: Compact dosimeter, model 2000: new-generation electronic dosimeter,

very compact and lightweight.

Dosimetric limits: The dosimetric limits are dosimetric accumulation thresholds (sliding or

calendar) used by the dosimetry system. These thresholds are

associated with time intervals (1 month, 3 months, Civil year, 365 days, 5 years). They are mainly used to control the area access of the workers.

Field: A field is a category of information; it allows information of the same type

to be grouped in a table (for example, "first name" and "last name" are

fields in the worker table).

Item: By item we mean the data related to a subject in a table (for example, in

the table of workers, all the contents of the different fields of the table corresponding to a given worker are items: last name, first name, date of

birth, sex, category, etc.).

On-area stay: Time interval during which a worker wearing a dosimeter is within a

controlled area.

Operational dose : Dose measured by an operational dosimeter (DMC2000 for instance)

Dosicare Glossary

Operational dosimetry: The operational dosimetry consists in using electronic dosimeters

specially intended to obtain real-time dosimetric measurements.

Period: In the dosimetry system managed by the DOSICARE software, the time

is broken down into periods. By default, each period has a standard

duration, which corresponds to a calendar month.

Do not mistake this period for the time intervals of 1 month, 3 months, Civil year, 365 days, 5 years associated with the dosimetric limits.

RCA: Acronym used for Regulatory Controlled Area.

Regulatory dose: Dose obtained from a regulatory dosimeter (dosimeter film badges, pen-

type dosimeters, etc.)

Primary dose: Dose termed "deep" HP(10) as opposed to the secondary dose termed

"superficial" HP(0.07) measured by a DMC2000 XB type dosimeter which

measures both of these values.

Secondary dose: Dose termed "superficial" HP(0.07) as opposed to the primary dose

termed "deep" HP(10) measured by a DMC2000 XB type dosimeter which

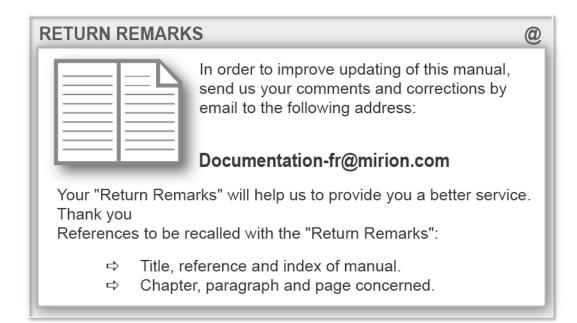
measures both of these values.

Table: A table is a grouping by subject of data from the database (for example,

the worker table, company table, task table, etc.).

Glossary Dosicare

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