



# **DIGISTAT® Patient Explorer**

DIGISTAT® Version 4.1

## **User Manual**

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**DIGISTAT® version 4.1**

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**Information is accurate at the time of release.**

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**DIGISTAT® product is  marked according to 93/42/CEE directive (“Medical devices”) amended by the 2007/47/EC directive.**

**ASCOM UMS is certified to UNI EN ISO 9001:2008 and UNI CEI EN ISO 13485:2012 standards for the design, development, production, installation and servicing of software.**

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## 2. Using the manual

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### 2.1. Aims

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The effort which has gone into creating this manual aims to offer all the necessary information to guarantee a safe and correct use of the DIGISTAT<sup>®</sup> system and to allow the manufacturer identification. Furthermore this document aims to describe every single part of the system, it also intends to offer a reference guide to the user who wants to know how to perform a specific operation and a guide to the correct use of the system so that improper and potentially hazardous uses can be avoided.

The use of DIGISTAT<sup>®</sup> requires a basic knowledge of information systems concepts and procedures. The comprehension of this manual requires the same knowledge.

Always remember that DIGISTAT<sup>®</sup> systems are highly configurable, in order to satisfy the requirements of every user. This extreme flexibility makes a description of all the system's possibilities impossible. Hence the decision to describe a “probable”, or “standard” configuration, so that we can explain what we feel to be the fundamental parts of the system, and their purposes. Consequently, the user may come across descriptions of pages and functions that are different in the configuration he is using.

To be more precise, the differences may concern

- 1) The appearance of the page (a page may appear different from that shown here).
- 2) The functions (certain operations may or may not be enabled).
- 3) The flow of use (certain procedures can be performed following a different sequence of pages and operations).

Care has been taken to highlight and emphasize this concept every time the configuration possibilities are such as to prevent a univocal description of the system operation.

Should you require more details regarding a specific configuration, please contact your system administrator or the ASCOM UMS technical support service.

Remember that, by specific request, ASCOM UMS is able to provide custom-made documentation for every specific type of procedure and/or configuration.

## 2.2. Characters used and terminology

---

The use of DIGISTAT® systems requires a basic knowledge of the most common IT terms and concepts. In the same way, the comprehension of this manual is subject to such knowledge. However, in order to improve access to the document and clarify the use of certain terms relating to the DIGISTAT® systems, we have included a glossary for quick (and obviously concise) reference for the clarification of terms (see Appendix A).

Remember that the use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.

When consulting the on-line version as opposed to the paper version, cross references in the document work like hypertextual links. This means that every time you come across the reference to a picture (“Fig 7”, for example) or to a paragraph (“paragraph 5.4”, for example), you can click the reference to directly access that particular figure or that particular paragraph.

Every time reference is made to a button, this is written “**Bold**”. For example, in expressions like:

- Click the “**Update**” button,

“**Update**” is a button featured on the page being described. Where possible, it is clearly indicated in a figure (with cross references as “See Fig 7 **A**”

The character ➤ is used to indicate an action which the user must perform to be able to carry out a specific operation.

The character ● is used to indicate the different elements of a list.

## 2.3. Symbols

---

The following symbols are used in this manual.



### **Useful information**

*This symbol appears alongside additional information concerning the characteristics and use of DIGISTAT®. This may be explanatory examples, alternative procedures or any “extra” information considered useful to a better understanding of the product.*



### **Caution!**

*The symbol is used to highlight information aimed at preventing improper use of the software or to draw attention to critical procedures which might cause risks. Consequently, it is necessary to pay extreme attention every time the symbol appears.*



## 3. Introduction to DIGISTAT®

---

The DIGISTAT® clinical modules suite is an advanced patient data management software system that is designed specifically for use by clinicians, nurses and administrators.

The software package comprises a set of modules that can either work alone or be fully integrated to provide a complete patient data management solution.

From the Intensive Care Unit to the Ward, from the Operating Room to the Administrative Department, DIGISTAT® can be used in a wide range of environments.

DIGISTAT®'s modular architecture and extensive customization capabilities allow you to build your own patient data management system and to expand the system to meet your new demands, when required.

DIGISTAT® system can only be accessed by entering username and password. Every user is defined by a detailed profile, and can access only the allowed areas. A record of every action performed is automatically generated by the system.

### 3.1. Modular architecture

---

“Modular Architecture” means that different products (or modules) having particular goals can be implemented within the same software environment (DIGISTAT® in the present case) that is characterized by a determined graphic design, general goals and terms of use.

Different modules can be added in different times, and in a way that is agreed with the user. The resultant software suite fits to the specific user needs and can change in time, according to the possible changes in the user needs.

### 3.2. Intended use

---

The product “DIGISTAT®” (hereafter “PRODUCT”) is a medical device composed only of software that is licensed exclusively to create an electronic copy of certain data and recording of the unit's activity in order to provide:

- electronic documentation of the activity in the unit;
- information on the use of human resources and materials;
- deferred statistics for quality control;
- support to the diagnostic and therapeutic activities, within the limits of what specified herein below;
- support to the management of alarms coming from the connected medical devices;
- display of information to remote users for non-clinical purposes.

The PRODUCT is not aimed to administer or exchange energy to or from the human body or to transmit medicines, liquids or other substances to or from the human body.

The PRODUCT is not aimed to allow direct diagnosis or monitoring of vital physiological processes (by way of example cardiac performance, respiration or activity of CNS) and therefore the therapeutic or diagnostic procedure or maneuver, if any, deemed necessary by the User, shall be performed by him/her solely as consequence of the direct examination and of the scientific correspondence of the specific case with the data obtained through the use of the PRODUCT.

Based on the above features, the PRODUCT, even if designed to provide the maximum reliability, cannot guarantee the perfect correspondence of the provided data, nor can it substitute the direct verification of the same by the User.

In any case, the PRODUCT must be used in compliance with the safety procedures reported in the user manual accompanying the Product.



***Always check that the information supplied is correct. It is under exclusive responsibility of the User to make correct use of the information supplied.***

The PRODUCT can be used close to the patient and to the medical devices in order to speed up the data entry, to decrease the chances of errors and to allow the User to verify the correctness of the data through the immediate comparison with the actual data and activities.



***When entering patient related data it is necessary to double-check that the patient identity, hospitalization department and bed displayed in DIGISTAT® are correct. This is utterly important in case of critical actions as, for instance, drug administration.***

The User must implement adequate procedures to guarantee that potential errors occurring in the PRODUCT are promptly detected and corrected and do not constitute a risk to the patient and the operator.

These procedures depend on the configuration of the PRODUCT and the method of use preferred by the User.

Only printouts that are signed (with digital signature or autograph) by authorized physicians or medical operators shall be considered valid clinical documents. In signing the aforementioned printouts, the User certifies that he/she has checked the correctness and completeness of the data present in the document.

Only these signed documents are a valid source of information for diagnostic or therapeutic processes and/or procedures.



***Only printouts signed by the authorized physicians or medical operators shall be considered valid clinical documents.***

The PRODUCT may provide, depending on the configuration, access to information on drugs. It is responsibility of the User to initially and periodically verify that this information is current and updated.

The PRODUCT can be connected to other medical devices in order to import data therefrom but is not aimed to control, monitor or influence the performances of the medical devices with which it is connected.

The PRODUCT may provide, depending on the modules installed, visual and acoustic indication of the status and operating conditions of the approved devices connected to the PRODUCT thus providing a support to the management of the alarms and to the planning of nursing workflow.

The information displayed by the PRODUCT is not meant to replace or replicate the original display of data, messages and alarms of the medical devices. The PRODUCT does not and is not intended to control, affect or modify the normal use of those connected devices.

The PRODUCT does not substitute a “Nurse Call” system and it is not a “Distributed Alarm System” (as defined by the standard EN 60601-1-8). Therefore, it must not be used in place of the direct monitoring of the alarms generated by the medical devices. This limitation is due, among the other reasons, to the specifications and limitations of the communication protocols of the medical devices and to the nature and limitations of the hospital local network.



***DIGISTAT® is not a “Distributed Alarm System”.***

The minimum patient height is 20 cm.

The maximum patient height is 250 cm.

The minimum patient weight is 0,2 Kg.

The maximum patient weight is 250 Kg.

### 3.2.1. Intended users

---

The PRODUCT must be used by properly trained physicians, nurses, administrative staff, system administrators, biomedical engineers and technicians.

Use of the PRODUCT must be granted, by means of specific configuration of the passwords and active surveillance, only to User 1) trained according to PRODUCT indications by personnel authorized by ASCOM UMS or ASCOM UMS distributors and 2) in possession of the professional qualifications to correctly interpret the information supplied and to implement the appropriate safety procedures.



***Use of DIGISTAT® must be granted only to professionally qualified and properly trained personnel.***

Limited parts of the PRODUCT may be used by other categories of users for non-clinical purposes, to access a limited set of information and without the ability to alter existing information or enter new ones. For example patient’s family member can access information of their relative.

### 3.2.2. Intended environment

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The PRODUCT can be used inside medical facilities in intensive care units, wards, operating blocks, operating theatres and other departments.

The PRODUCT is software-only medical device that can be run on a computer connected to the hospital local network and must be adequately protected against cyber-attacks.

The PRODUCT must be installed only on recommended PCs and/or operating systems.



***DIGISTAT® must be installed only on recommended PCs and/or operating systems.***

---

In using the PRODUCT, the User declares to have understood and accepted the characteristics, limits and responsibilities contained herein and in the user manual. Should the User consider any of these clauses to be unacceptable, he must immediately stop using the PRODUCT and inform promptly the system administrator.

### 3.2.3. “Off-label” use of the Product

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Every use of the Product outside what explicitly stated in the “Intended use” (usually referred to as “off-label” use) is under the full discretion and responsibility of the user and of the Responsible Organization. The manufacturer does not guarantee in any form the Product safety and suitability for any purpose when the Product is used outside what explicitly stated by the “Intended use”.

### 3.3. Manufacturer's responsibility

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The **CE** seal is a safety warranty of the product introduced on the market.  
ASCOM UMS is responsible for the product's safety, reliability and performance only if:

- Use and maintenance comply with User Manual instructions;
- This Manual is stored in good conditions and all sections are readable;
- Configurations, changes and repairs are only performed by personnel formed and authorized by ASCOM UMS ;
- The Product's usage environment complies with safety regulations;
- The environment's wiring system is highly efficient and complies with related regulations.

#### **WARNING!**



*Should the supply cause the establishment of a “medical electrical system” through electrical and functional connection of devices, the hospital organization is in charge of the required safety verification and acceptance tests, even in case that ASCOM UMS performed in whole or in part the wiring and the necessary connections.*

### 3.4. Product tracking

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In order to ensure device tracking and on-going safety and efficiency checks on site, in compliance with ISO 9001 and EN 13485 quality standards and European law on medical devices 93/42/EEC, amended by the directive 2007/47/EC, the former owner is recommended to inform ASCOM UMS/Distributor about any ownership transfer by giving written notice stating the product, former owner and new owner identification data.

Device data can be found in the product labelling (either paper label provided at installation time or “About box” displayed within the product – see paragraph 6.8.5).

In case of doubts/questions about product labelling and/or product identification please contact ASCOM UMS/Distributor technical assistance (for contacts see paragraph 9).

### 3.5. Post-market surveillance

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The **CE** marked device is subject to a post-market surveillance - which ASCOM UMS, its distributors and dealers must provide for each marketed copy - concerning actual and potential risks, either for the patient or the User, during the Product's life cycle.

In case of deterioration of the device characteristics, poor performance or inadequate user instructions that have been or could be a hazard to either the patient or User' health or to environmental safety, the User must immediately give notice to either ASCOM UMS, one of its branches or nearest authorised dealer.

The device details can be found on its labelling.

On reception of a user feedback ASCOM UMS will immediately start the review and verification process and, when required, solve the reported non conformity.


## 3.6. Product life

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The life time of the product does not depend on wearing or other factors that could compromise safety. It is influenced by the obsolescence of the hardware (PC and server) and is therefore assessed as 5 years since the release date of the product specific version, period in which the manufacturer is committed in keeping technical documentation and provide technical support.

## 3.7. CE mark and regulation conformity

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ASCOM UMS DIGISTAT<sup>®</sup> product is  marked according to 93/42/EEC directive (“Medical devices”), amended by the directive 2007/47/EC, and is therefore compliant with the EU basic safety standards there specified (received in Italy with Legislative Decree n. 37/2010 and subsequent variants and integrations).

ASCOM UMS declines all responsibility for the consequences on the safety and efficiency of the device determined by technical repairs or maintenance not performed by its own Technical Service personnel or by ASCOM UMS-authorized technicians.

The attention of the user and the legal representative of the health structure where the device is used is drawn to their responsibilities, in view of the legislation in force on the matter of safety in the workplace (Italian Legislative Decree no. 81 of 09/04/2008) and of on-site security for hazardous or potentially hazardous incidents.

The ASCOM UMS Service is able to offer clients the support needed to maintain the long-term safety and efficiency of the devices supplied, guaranteeing the skill, instrumental equipment and spare parts required to guarantee full compliance of the devices with the original construction specifications over time.

## 4. Software/Hardware specifications

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The information provided in this chapter covers the manufacturer's obligations identified by the IEC 80001-1:2010 standard (Application of risk management for IT-networks incorporating medical devices).

### 4.1. Bedside

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#### 4.1.1. Hardware

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According to the IEC 60601-1 regulation, for “bedside” PCs, or for PCs positioned within the “Patient Area”, the use of “Medical grade” devices is required. In these places medical grade PANEL PCs are often used. If explicitly requested, ASCOM UMS is able to provide information on some suitable devices of this kind.

##### **Minimum hardware requirements:**

- Intel® processor with Intel® dual-core technology (or faster)
- Memory: 2 GB RAM (4 GB suggested)
- Hard Disk: at least 20 GB of available space
- Monitor: 1024 x 768 or higher (1280 x 1024 suggested, 65.000 colors minimum)
- Mouse or other compatible device
- Windows® compatible printer
- Ethernet interface 100 Mb/s (or higher)
- CD/DVD Drive or possibility to copy the installation files

#### 4.1.2. Operating System

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Supported operating systems:

Microsoft Corporation Windows® XP SP3 32 bit  
Microsoft Corporation Windows® XP SP3 64 bit  
Microsoft Corporation Windows® 7 32 bit  
Microsoft Corporation Windows® 7 64 bit  
Microsoft Corporation Windows® 7 SP1 32 bit  
Microsoft Corporation Windows® 7 SP1 64 bit  
Microsoft Corporation Windows® 8 32 bit  
Microsoft Corporation Windows® 8 64 bit  
Microsoft Corporation Windows® 8.1 32 bit  
Microsoft Corporation Windows® 8.1 64 bit

## 4.2. Central

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### 4.2.1. Hardware

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#### **Minimum hardware requirements:**

- Intel® processor with Intel® dual-core technology (or faster)
- Memory: 2 GB RAM (4 GB suggested)
- Hard Disk: at least 20 GB of available space
- Monitor: 1024 x 768 or higher (1280 x 1024 suggested, 65.000 colors minimum)
- Mouse or other compatible device
- Windows® compatible printer
- Ethernet interface 100 Mb/s (or higher)
- CD/DVD Drive or possibility to copy the installation files

### 4.2.2. Operating System

---

#### Supported operating systems:

Microsoft Corporation Windows® XP SP3 32 bit  
Microsoft Corporation Windows® XP SP3 64 bit  
Microsoft Corporation Windows® 7 32 bit  
Microsoft Corporation Windows® 7 64 bit  
Microsoft Corporation Windows® 7 SP1 32 bit  
Microsoft Corporation Windows® 7 SP1 64 bit  
Microsoft Corporation Windows® 8 32 bit  
Microsoft Corporation Windows® 8 64 bit  
Microsoft Corporation Windows® 8.1 32 bit  
Microsoft Corporation Windows® 8.1 64 bit

## 4.3. Server

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### 4.3.1. Hardware

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#### **Minimum hardware requirements:**

- Intel® Xeon® E series processor (or faster)
- Memory: 4 GB RAM (8 GB recommended)
- Hard Disk: at least 80 GB of available space
- Monitor: 1024 x 768 or higher (1280 x 1024 suggested, 65.000 colors minimum)
- Mouse or other compatible device
- Ethernet interface 100 Mb/s (or higher)
- CD/DVD Drive or possibility to copy the installation files

### 4.3.2. Operating System

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Microsoft Corporation Windows Server 2012 R2 x64 Standard/Enterprise Ed. latest available SP.  
Microsoft Corporation Windows Server 2008 R2 x64 Standard/Enterprise Ed. latest available SP.



### 4.3.3. System Software

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Microsoft SQL Server 2012 R2 x64 Standard/Enterprise Ed. latest available SP.

Microsoft SQL Server 2008 R2 x64 Standard/Enterprise Ed. latest available SP.

#### **WARNING!**



*To correctly use DIGISTAT®, the Microsoft Windows Display Scaling must be set to 100%. Different settings may prevent the product from starting or cause malfunctions in the way DIGISTAT® is visually displayed. Please refer to the Microsoft Windows documentation for instructions on the Display Scaling settings.*

#### **WARNING!**



*The minimum vertical resolution of 768 is supported only if DIGISTAT® is configured to run in full-screen mode or if the Windows traybar is in Auto-hide mode.*

#### **WARNING!**



*The computers must comply with the regulations regarding the environment where they are installed. Check compliance with competent authorized personnel.*

#### **WARNING!**



*In compliance with on-going product improvement policies pursued by ASCOM UMS, this User Manual's specifications can be changed at any moment. Please contact the Firm's authorized representative concerning market availability of the product range presented in this User Manual.*

#### **WARNING!**



*The computers and the other connected devices must be suitable for the environment in which they are used and must therefore comply with the relevant regulations. The personnel in charge should perform the adequate compliance checks.*

#### **WARNING!**



*It is recommended to follow the manufacturer instructions for storage, transport, installation, maintenance and waste of third parties hardware. These procedures must be performed only by qualified and authorized personnel.*



**WARNING!**

*The responsible organization shall implement for the DIGISTAT<sup>®</sup> workstations a date/time synchronization mechanism to a reference source.*

## 4.4. Firewall and Antivirus

---

To protect the DIGISTAT® system from possible cyber-attacks, it is necessary that:

- the Windows® Firewall is active both on the client PCs and the server;
- an antivirus software is installed and regularly updated both on the client PCs and the server.

The Responsible Organization shall ensure that these two protections are activated. ASCOM UMS tested the Product with ESET Antivirus but, considering the strategies and policies already existing in the hospital, the actual choice of the antivirus is left to the Responsible Organization. ASCOM UMS cannot ensure that the DIGISTAT® system is compatible with any antivirus or antivirus configuration.

### **WARNING!**



*Some incompatibilities have been reported between parts of DIGISTAT® and the Kaspersky antivirus. The solution to these incompatibilities required the definition of specific rules in the antivirus itself.*

### **WARNING!**



*It is suggested to keep open only the TCP and UDP ports actually needed. These may change according to the system configuration. Please refer to the ASCOM UMS technical assistance for more information.*

## 4.5. Local network features

---

This paragraph lists the features of the local network on which DIGISTAT® is installed in order to guarantee the system's full functionality.

- DIGISTAT® uses a TCP/IP traffic protocol.
- The LAN must not be congested and/or full loaded.
- DIGISTAT® requires at least a 100 Mbps LAN available to the end user. 1 Gbps backbones would be worthwhile.
- There must not be filters in the TCP/IP traffic between workstations, server and secondary devices.
- If the devices (server, workstations and secondary devices) are connected to different subnets there must be routing in these subnets.
- It is recommended to adopt redundancy strategies to ensure network service availability in case of malfunction.
- It is recommended to schedule together with ASCOM UMS the maintenance calendar in order to let ASCOM UMS or the authorized Distributor efficiently support the healthcare structure in managing the possible disservices caused by maintenance activities.

### **ATTENTION!**



*If the network does not match the requested features, DIGISTAT® performance gradually deteriorates until timeout errors occur. The system may finally switch to “Recovery” mode.*

### **ATTENTION!**



*In case a WiFi network is in use, given the possible intermittence of the WiFi connection, network disconnections are possible, that cause the activation of the “Recovery Mode” and the consequent system unavailability. The Responsible Organization shall ensure an optimal network coverage and stability, and train the personnel in the management of these temporary disconnections.*

## **4.5.1. DIGISTAT® impact on the hospital network**

---

DIGISTAT® impacts the local network of the healthcare structure. This paragraph provides information on the traffic generated by DIGISTAT® on the network in order to make it possible for the structure to evaluate and analyse the risks related to the introduction of DIGISTAT®.

The bandwidth used by a DIGISTAT® system depends on many different factors. The most important are:

- Number of workstations,
- Number of workstations configured as central stations,
- Number and type of devices dedicated to data acquisition (either only or as well dedicated).
- Interfaces with external systems,
- DIGISTAT® configuration and mode of use.

In a configuration with 100 clients the following bandwidth occupation values can be indicatively predicted

Average: 0.8 – 6 Mbit/s

Pitch: 5 – 25 Mbit/s

# 5. Before starting

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## 5.1. Installation and maintenance warnings


---

The following warnings provide important information on the correct installation and maintenance procedures of the DIGISTAT® product. They must be strictly respected.

DIGISTAT® must absolutely be installed and configured by specifically trained and authorized personnel. This includes ASCOM UMS (or authorized Distributor) staff and any other person specifically trained and authorized by ASCOM UMS/Distributor. Similarly, maintenance interventions and repairs on DIGISTAT® must absolutely be performed according to the ASCOM UMS company guidelines only by ASCOM UMS/Distributor personnel or other person specifically trained and authorized by ASCOM UMS/Distributor.



***DIGISTAT® must absolutely be installed and configured by specifically trained and authorized personnel. This includes ASCOM UMS (or authorized Distributor) staff and any other person specifically trained and authorized by ASCOM UMS/Distributor.***

- Only use devices approved by ASCOM UMS bearing the  mark.
- Only use devices approved by ASCOM UMS. It is not possible to install devices without proper training.
- Only use devices approved by ASCOM UMS. There is a risk of injury to the patient and operators.
- Scrupulously observe the manufacturer's instructions for the hardware installation.
- Make provision for regular maintenance of the inner disk and checks on the operating system.
- The DIGISTAT® USB dongle must be stored and used in eligible environmental conditions (temperature, humidity, electromagnetic fields etc.), as specified by the dongle manufacturer. These conditions are equivalent to those required by common office electronic devices.
- Within "Patient Area" (see Fig 1) it is recommended to use washable waterproof devices.
- Within "Patient Area" (see Fig 1) it is recommended to use washable, sterilizable rubber keyboards and mouse devices. For "touch screens" capacitive technology (insensitive if used with gloves) is recommended because it discourages using gloves (sometimes contaminated).

## 5.2. Cleaning

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Cleaning and disinfection procedures of hardware components must comply with the usual cleaning/disinfection procedures that the hospital adopts for all the hospital's assets (both fixed and moveable)



*Check the suggested cleaning procedures in the manuals of the hardware products that accompany DIGISTAT®.*

## 5.3. Precautions and warnings

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*To guarantee the reliability and security of the software during use, strictly observe the instructions given in this section of the manual.*



*Place the PC in order to ensure adequate anterior and posterior ventilation. Failure to meet hardware ventilation requirements may cause equipment failure, thus jeopardizing patient data management system functions.*



*The holder of the hardware (individual, hospital or institution) and the user of the device and the software are personally responsible for ensuring that the devices follow a meticulous maintenance schedule to guarantee safety and efficiency and reduce the risk of malfunctioning and the occurrence of possible hazards to the patient and user.*



*The device and software are destined for use only under the supervision of properly trained and authorized medical personnel.*

### 5.3.1. Electrical safety

---

The hardware devices used together with DIGISTAT® (PC, display, barcode reader, etc...) must comply with the relevant **CE** mark prescriptions, in particular with those indicated by the 2006/95/EC directive and subsequent amendments.

The device complies with the characteristics envisaged by the **CE** marking in accordance with directive 2006/95/EC and subsequent amendments.



*The electrical devices installed within the Patient Area must have the same security level of an electromedical device.*

It is moreover recommended to perform all the relevant measurements on the leakage currents of the electro-medical system in use (PC, display and possible connected devices). The hospital structure is responsible for these measurements.



*The hospital structure is responsible for all the required measurements on the electrical safety of the electro-medical system in use (PC, display and other possible connected devices) taking into consideration the actual environment in which the system is used.*

### 5.3.2. Patient Area

---

The term “Patient Area” or “Patient Environment” means the space in which intentional or unintentional contact may take place between the patient and parts of the system (any device) or between the patient and other people who may come into contact with parts of the system (e.g., a physician who touches the patient and other devices at the same time). This definition applies when the patient’s position is pre-determined: in other cases, all the possible positions of the patient must be taken into consideration.



*According to IEC 60601-1 standard, every computer placed within the “Patient Area” must be a medical grade device.*

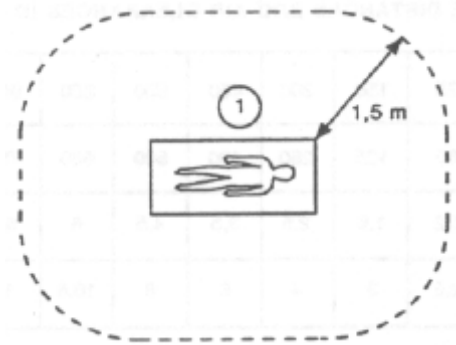
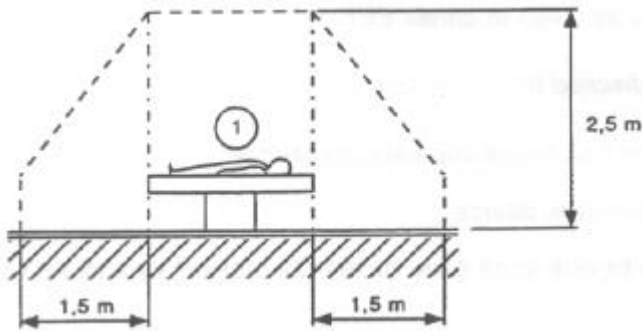


Fig 1

It is the direct responsibility of the hardware licensee (individual, hospital or institution) to perform all the required measurements on the electrical safety of the electro-medical system in use (PC, display and other possible connected devices) considering the environment in which it is used.

#### **WARNING!**

*Should the supply cause the establishment of a “medical electrical system” through electrical and functional connection of devices, the hospital organization is in charge of the required safety verification and acceptance tests, even in case that ASCOM UMS/Distributor performed in whole or in part the wiring and the necessary connections.*

### **5.3.3. Electromagnetic compatibility**

The hardware devices used together with the DIGISTAT<sup>®</sup> system (PC, display, barcode reader, etc...) must comply with electromagnetic emission and immunity characteristics envisaged by the **CE** seal, in compliance with Directive 2004/108/EC and following amendments.

### **5.3.4. Devices eligibility**

It is mandatory to use devices that are suitable for the environment in which they are installed and used (meeting, for instance, the directives LVD 2006/95/EC, EMC 2004/108/EC, penetration by liquids, et al.).



## 5.4. Privacy Policy

---

The following precautions should be taken in order to protect the privacy of users and patients, and to ensure that personal data are processed by respecting data subjects' rights, fundamental freedoms and dignity, particularly with regard to confidentiality, personal identity and the right to personal data protection.



*“Sensible data” are those personal data that reveal the race, the religious and/or philosophic beliefs, the personal political opinions, the support to political parties and/or trade unions and/or associations and organizations having political, religious or philosophical aims. Moreover, “sensible data” are those data providing information on the health conditions and/or the sexual life.*



***Please read the following precautions carefully and strictly observe them.***

- The workstations must not be left unattended and accessible during work sessions. It is recommended to log out when leaving a workstation. See paragraph 6.5 for log out procedure.
- Sensible data saved in the system, as passwords or users' and patients' personal data, must be protected from possible unauthorized access attempts through adequate protection software (antivirus and firewall). It is the hospital structure responsibility to implement this software and keep them updated.
- The user is advised against the frequent use of the lock function (paragraph 6.5.2). Automatic log out allows to protect the system from unauthorized accesses.



***In some circumstances personal and/or sensible data are transmitted in non-encrypted format and using a connection which is not physically secure. An example of this kind of transmission are the HL7 communications. The Responsible Organization is responsible to provide adequate security measures to comply with the local privacy laws and regulations.***

### 5.4.1. User credentials features and use

---

This paragraph explains the user's DIGISTAT® credentials (username and password) features, use and update policy.

- Every precaution must be taken in order to keep personal username and password secret.

- Username and password must be kept private. Do not let anybody know your username and password.
- Each user can own one or more credentials to access the system (username and password). The same username and password must not be used by more than one user.
- Authorization profiles must be checked and renewed at least once a year.
- It is possible to group different authorization profiles considering the homogeneity of the users' tasks.
- When user accounts are created, it is recommended to always use a nominal identification. Generic users as, for instance, "ADMIN" or "NURSE" must be avoided. Every account must be used by one and only one user.
- Each user is characterized by a profile enabling him/her to access only the functionalities that are relevant for his/her working tasks. The system administrator must assign an appropriate user profile when creating the user account. The profile must be reviewed at least once a year. This revision can also be performed for classes of users. The user profile definition procedures are described in the DIGISTAT® configuration manual.
- Password must be at least 8 characters.
- The password must not refer directly to the user (containing, for instance, user's first name, family name, birthdate etc.).
- The password is given by the system administrator at user account creation time. It must be changed by the user at first access in case this procedure is defined by configuration (see paragraph 6.8.4 for the password modification procedure).
- After that, the password must be changed at least every three months.
- If username and password are left unused for more than 6 months they must be disabled. Specific credentials, used for technical maintenance purposes, are an exception. See technical manual for the configuration of this feature.
- User credentials must also be disabled if the user is not qualified anymore for those credentials (it is the case, for instance, of a user who is transferred to another department or structure). A system administrator can manually enable/disable a user. The procedure is described in the DIGISTAT® configuration manual.

***The following information is reserved to system administrators:***

The password must match a regular expression defined in the DIGISTAT® configuration (default is `^.....*` i.e. 8 characters). The password is assigned by the system administrator when a new account for a user is created. The system administrator can force the user to change the password at first access to choose a personal one. The password expires after a certain (configurable) period, after that period, the user must change the password. It is also possible (by configuration) to avoid password expiration.

See DIGISTAT® configuration manual for detailed information on user account creation procedures and password configuration.

### 5.4.2. System administrators

---

ASCOM UMS/Distributor technical staff, when performing installation, updates and/or technical assistance may have access to and deal with personal sensible data stored in the DIGISTAT® database.

ASCOM UMS srl or Distributor, for issues relating to management of personal sensible data, adopts procedures and working instructions complying with the current privacy regulation (D.Lgs 196/2003 of the 30<sup>th</sup> of June 2003).

In performing the abovementioned activities the ASCOM UMS/Distributor technical staff is configured as “System Administrator” for the DIGISTAT® system (see regulation of 25/11/2008 of the Privacy Guarantor on “System Administrators”). ASCOM UMS/Distributor staff performing this kind of procedures is appropriately trained on privacy issues and, in particular, in sensible data treatment issues.

In order to comply with the requests of the “System administrators” regulations, the responsible healthcare structure must:

- define nominal accesses;
- activate the access log both at operating system and at client and at server level;
- activate the access log to the database server Microsoft SQL Server (Audit Level);
- configure and manage all these logs to keep track of the accesses for at least one year.

### 5.4.3. System logs

---

DIGISTAT® records the system logs on the database. These logs are kept for a configurable period of time. Also, logs are kept for different times depending on their nature. Default times are:

- information logs are kept for 10 days;
- logs corresponding to warning messages are kept for 20 days;
- logs corresponding to alarm messages are kept for 30 days.

These times are configurable. See DIGISTAT® configuration manual for the configuration procedures.

## 5.5. Back up policy

---



*It is recommended to regularly perform system backups.*

The responsible healthcare structure using DIGISTAT<sup>®</sup> system must define a backup policy that best suits its data safety requirements.  
ASCOM UMS/Distributor is available to help and support in implementing the chosen policy.

The responsible healthcare structure must ensure that backup files are stored in a way that makes them immediately available in case of need.

If data are stored on removable memory devices, the healthcare structure must protect these devices from unauthorized access. When these devices are not used anymore, they must be either definitively deleted or destroyed.

## 5.6. Out-of-order procedure

---

This paragraph describes the policy suggested by ASCOM UMS in case a DIGISTAT<sup>®</sup> workstation gets out of order. The goal of the procedure here described is to minimize the time required to replace the out-of-order workstation with one properly working.

ASCOM UMS suggests for this purpose to have at disposal, as substitute equipment, an additional PC on which DIGISTAT<sup>®</sup> is already installed.

In case of a DIGISTAT<sup>®</sup> workstation is out-of order, the substitute equipment can promptly replace the DIGISTAT<sup>®</sup> workstation.

Always remember that DIGISTAT<sup>®</sup> must only be installed by trained authorized personnel. This includes ASCOM UMS/Distributors staff and any other person specifically trained and explicitly authorized by ASCOM UMS/Distributor. Missing an explicit, direct authorization from ASCOM UMS/Distributor, the hospital staff is not authorized to perform installation procedures and/or to modify DIGISTAT<sup>®</sup> configuration.

The risk related to the DIGISTAT<sup>®</sup> workstation deactivation and substitution is that of associating the workstation with a wrong bed or room. This could lead to a “patient switch”, which is an extremely hazardous condition.

The risk related to the substitution and/or reconfiguration of network equipment involved in the DIGISTAT<sup>®</sup> data acquisition (i.e port server, docking station, etc...) is that of assigning the acquired data to a wrong patient. The patient-acquired data relation is based on the IP address. Changing it could lead either to data flow interruption or, in severe cases, to assigning data to the wrong patient.



***The out-of-order and replacement of a workstation is potentially hazardous. This is the reason why it must be, mandatorily, performed only by authorized and trained personnel.***

***The risk related to this procedure is that of associating a wrong bed or room to the workstation and create this way the possibility to select a wrong patient.***

In case a DIGISTAT<sup>®</sup> workstation needs to be deactivated and replaced, the hospital staff must promptly call ASCOM UMS (or authorized Distributors) and request the execution of this task.

We suggest the hospital management (or anyone who is in charge) to define for this purpose a clear, univocal operating procedure and to share this procedure with all the staff members involved.

In order to speed up replacement times, we suggest to have at disposal one or more substitution equipment with all the necessary applications already installed (OS, firewall, antivirus, RDP, ...) and with DIGISTAT<sup>®</sup> already installed, but disabled (i.e. not executable by a user without the assistance of an ASCOM UMS technician).

In case of out of order of a DIGISTAT® workstation, the substitution equipment availability assures the minimization of restoration times (hardware substitution) and limits at the same time the risk of patient exchange.

In case of out of order of a DIGISTAT® workstation we suggest to adopt the following procedure if a “substitution equipment” is available: guasto

- 1) The hospital staff replaces the out of order PC with the “substitution equipment”
- 2) The hospital staff calls ASCOM UMS/Distributor and requests the “substitution equipment” activation
- 3) The ASCOM UMS/Distributor staff disables the out of order workstation and correctly configure the “substitution equipment”
- 4) The out of order PC is repaired and prepared as “substitution equipment”

The instruction on how to enable/disable and replace a DIGISTAT® workstation, reserved to system administrators, are in the DIGISTAT® configuration manual.

### 5.6.1. Reconfiguration/substitution of network equipment

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In case it is necessary to either reconfigure or substitute a network device involved in the DIGISTAT® data acquisition, the hospital staff must promptly call ASCOM UMS/Distributor and schedule the substitution/reconfiguration procedure to allow ASCOM UMS staff to either reconfigure DIGISTAT® as well or provide all the necessary information. It is recommended, for this purpose, to define a clear procedure and share it with all the involved personnel. Some general indications about this are in the DIGISTAT® configuration manual.

## 5.7. Preventive maintenance

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It is suggested to perform the maintenance of DIGISTAT® system at least once a year. It must be considered, by the way, that maintenance frequency must be function of system complexity. In case of high complexity it is suggested to perform maintenances more often, up to twice a year.

This is the maintenance checklist:

### Preparatory checks

- DIGISTAT® update necessity check.
- Check minimum requirements for a possible DIGISTAT® update (both HW and SW).
- Check the Server Service Pack version and state.
- Schedule the server/s restart to apply possible updates.
- Check the SQL Server Service Pack version and state.

```
SELECT SERVERPROPERTY('productversion'),  
SERVERPROPERTY ('productlevel'),  
SERVERPROPERTY ('edition')
```

- Schedule possible updates with the technical staff

## Checks to be performed

### *Antivirus*

- Check that an Antivirus Software is installed and updated (both the application and the virus list definition).
- If viruses are present, inform the competent technician and, if authorized, try to clean the PC.

### *Database*

- Check that an effective DIGISTAT® database clean-up and back-up policy is configured.
- Check that the clean-up and back-up store procedures exist (UMSBackupComplete, UMSBackupDifferential, UMSCleanLog, UMSCleanDriver) and the related schedule.
- Check that back-up files exist (both full and differential).
- Check with the hospital technical department that back-up, configuration folders and data folders are correctly copied to another storage device.
- Restore a back-upped DB to verify its correctness.
- Delete the old back-up files (.bak) and the possible files that are not inherent to DIGISTAT® configuration on the network shared path.
- Check that the other jobs on SQL Agent or scheduled tasks (for instance those that are support to integration with third-parties systems) are present, and that their schedule is adequate.
- On SQL Agent check that the different JOBS are executed and that there are not hanging JOBS or JOBS in error.
- Check the SQL Server LOGs.
- Check the DB total size and the number of records in the main tables.  
Script for checking all the tables size:

```
USE [DATABASENAME]
GO

CREATE TABLE [#SpaceUsed]
(
    [name] [nvarchar](250) NULL,
    [rows] [nvarchar](250) NULL,
    [reserved] [nvarchar](250) NULL,
    [data] [nvarchar](250) NULL,
    [index_size] [nvarchar](250) NULL,
    [unused] [nvarchar](250) NULL
) ON [PRIMARY]

DECLARE @INS AS nvarchar(MAX)
SET @INS = '';

SELECT @INS = @INS + 'INSERT INTO #SpaceUsed exec sp_spaceused ''' +
TABLE_NAME + '''; '
FROM INFORMATION_SCHEMA.TABLES
WHERE TABLE_TYPE = 'BASE TABLE'
ORDER BY TABLE_NAME

EXEC (@INS);

SELECT *
```

```
FROM #SpaceUsed
ORDER BY CAST([rows] AS INT) DESC

DROP TABLE [#SpaceUsed]
```

### *Server*

- Check the Windows™ server event log.
- Check the permissions on the shared folders (es: Backup folder).
- Useless files and directories clean up to free up space on server disk.
- Check the displays (if any) on the server rack and verify that there are neither visual nor sound alarms.
- Check that on the different disk units there is enough space available.
- Disk check with dedicated tools (checkdisk, defrag, etc.).
- In case there are disks in RAID, check the health conditions of the RAID unit on the RAID management software.
- Check the leds of the non-alarmed RAID units.
- If an UPS is connected, check its health conditions with its management software.
- In case of UPS schedule an electric interruption (an electric failure simulation) and check that the server is configured to perform a CLEAN shutdown.

### *Workstations*

- Check if the Regional Settings on the workstations are coherent with the DIGISTAT® installation language.
- Check if every workstation has a default printer.

### *DIGISTAT®*

- Check data presence (SELECT) Patient, Admission, Bed, Location tables and some random others.
- Check on the network table that no workstation has the ALL value in the “modules” field.
- Check and in case clean the service and/or ASCOM UMS Gateway LOG.
- Check and in case clean the DAS LOGs for the Drivers (if enabled).
- Check that the privacy policy is respected as stated in this manual in paragraph 5.4.

### *Connection to devices*

- Check the connections (cables and wiring system) with data acquisition devices.

### *Instruction for use*

- Check that the user documentation in PDF format (PDF provided together with the product) is present on the server and is coherent with DIGISTAT® version.
- Check that the folder containing the user documentation in electronic format on the server is accessible to DIGISTAT® users.
- Check that the HELP button opens the user documentation.
- Check that all the other contents provided by ASCOM UMS and integrated in the HELP of DIGISTAT® system are updated and coherent.

## 5.8. Compatible devices

Some DIGISTAT<sup>®</sup> modules work together with the medical devices connected to the patient (as, for instance, infusion pumps, blood-gas analyzers etc...).

The list of compatible devices can be found on the ASCOM UMS website, at the following address

<http://www.unitedms.com/ing/prodotto.asp?ID=9>

Please note that new drivers and new connections are created very often, therefore the list published on the website may sometimes not be complete. It is possible to make request of the updated list of devices to ASCOM UMS. Please use for this purpose the references (tel, e-mail, fax...) listed in paragraph 9.

## 5.9. System unavailability

If during start up there are problems connecting to the server the system provides a specific information message (Fig 2).

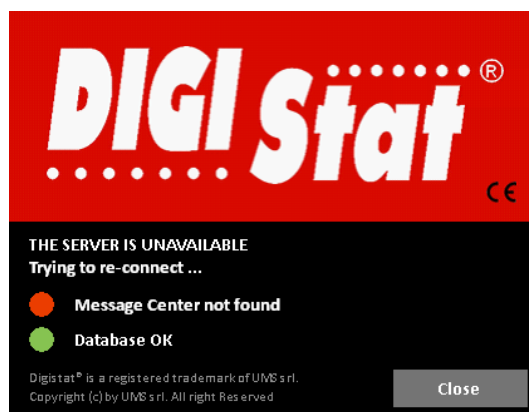


Fig 2

The connection problem is often automatically solved in a short time. If it does not happen it is necessary to contact the technical assistance (see paragraph 9 for the contacts list).

There are extreme cases, rare but possible, in which it is physically impossible using the DIGISTAT<sup>®</sup> system (it is the case of natural disasters, or long black outs etc.).

It is responsibility of the healthcare structure using DIGISTAT<sup>®</sup> to define an emergency procedure to put into effect in those cases. This is necessary to

- 1) Make it possible for the departments to keep on working
- 2) Restore as soon as possible the system availability (back-up policy is part of this management. See paragraph 5.5).





### **WARNING!**

*It is responsibility of the healthcare structure using DIGISTAT® to define an emergency procedure to put into effect in case of system unavailability.*

ASCOM UMS/Distributor offers full support for the definition of the above mentioned procedure.

See paragraph 9 for the contacts list.

## **6. “Control Bar” and DIGISTAT® environment**

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### **6.1. Introduction**

---

This section of the manual describes the features and functionalities of the DIGISTAT® environment. Namely, here are described the functionalities of the system that are common to all the DIGISTAT® configurations.

Please remember that DIGISTAT® is a software environment that, depending on the modules that are actually implemented, can be used in different kinds of locations (as, for instance, intensive care, operating rooms, outpatients departments etc...) and for different goals.

### **6.2. Touch screen**

---

DIGISTAT® can run both on touch and non-touch workstations. The same procedures can be performed using both fingers and mouse device. In this manual a “mouse” terminology is used (with terms as “click” instead of “tap”, for instance). Here is a quick translation table making it possible to apply this manual to all kinds of workstations and user preferences. When specific gestures can be applied to specific screens/functionalities it will be highlighted in the relevant context. In general, the main actions can be translated this way:

<b>Mouse</b>	<b>Touch</b>
Click	Tap
Double click	Double tap
Drag	Flick
Use scrollbars	Scroll
Zoom in	Two fingers tap

## 6.3. Launching DIGISTAT®

---

To launch DIGISTAT®,

- double click the desktop icon (Fig 3).



Fig 3

The following splash-screen is displayed while the system is loading.



Fig 4

## 6.4. DIGISTAT® Work Area

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The DIGISTAT® Work Area is defined and delimited by Control Bar, a tool that is common to all and every possible DIGISTAT® installation (Fig 5).

Control Bar manages the installed modules, the patients and their data, the users and their permissions etc.

DIGISTAT® Control Bar is formed by a horizontal command bar (Fig 5 A), by a vertical selection bar on the left (Fig 5 B) and by a central Work Area. The different screens of the installed modules are displayed within the Work Area (Fig 5 C).

Fig 5 shows Control Bar with no module installed.



**Fig 5**

The command bar (Fig 5 A) will be described in paragraph 6.4.1 (and subsequent).

The lateral bar displays the icons of the currently available modules. See, for instance, Fig 6, that refers to a configuration implementing the “Image Bank” and “Clinical Forms” modules.



**Fig 6**

The module currently selected is highlighted (yellow).

### 6.4.1. Selecting a module

---

To select a module

- click the corresponding icon.

The icon is this way highlighted. The module’s functionalities are displayed within the Work Area.

It is possible to select a specific module only after the user log in (paragraph 6.5).

## 6.5. Accessing the system

The DIGISTAT® system can only be accessed by entering the personal username and password (“Log in” procedure).

For this reason, at the beginning of every work session, it is necessary to click the **User** button (Fig 7 A).

The following page is displayed.



Fig 7

To access the system,

- enter the username in the “**Username**” field (Fig 7 B).
- Enter the password in the “**Password**” field (Fig 7 C).
- Click the **Ok** button (Fig 7 D).

The user is this way logged in. To cancel the operation

- click the **Cancel** button (Fig 7 E).



*The username and password are issued by the system administrator. If you do not have a username and a password you are not authorized to use the DIGISTAT® system.*

You can enter the username and password either using the virtual keyboard displayed on screen (clicking the letters with the mouse or touching them if you are using a touch screen) or the workstation keyboard.

After accessing the system, an acronym corresponding to the logged user appears is displayed on the **User** button on the control bar (the acronym is ADM in Fig 8 A).

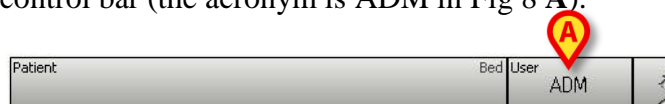


Fig 8

#### **WARNING!**



*The user whose credentials are displayed on the **User** button is responsible for all the actions performed on DIGISTAT®. It is strongly recommended to log out before leaving the DIGISTAT® workstation to avoid improper use of the system.*

To log out, click the **User** button during the work session. When this button is clicked the user is disconnected and the acronym of the user disappears from the button.

To log in again, click the **User** button again. The page shown in Fig 7 is displayed again.

#### **WARNING!**



*DIGISTAT® does not support the Microsoft® Windows® “switch user” functionality. This means that, for instance, if*

- a) User 1 launches DIGISTAT®,*
- b) User 1 switches to User 2 without logging out User 1,*
- c) User 2 attempts to launch DIGISTAT® again,*

*then the second DIGISTAT® instance cannot be launched because the first one is still running.*

### **6.5.1. Barcode log in**

---

It is possible, if the functionality is implemented, to log in through barcode scanning.

To use this functionality, when the system displays the login screen (Fig 7),

- scan the user's personal barcode.



Fig 9

The user is immediately logged in.



*Barcode technology is recommended when selecting an item. Scanning the item's barcode (as, for instance, the user's personal badge), instead of selecting it manually, helps the user to diminish selection errors.*

## 6.5.2. Disabling the automatic log out

If the system remains idle for a certain length of time, the user is automatically disconnected (automatic log out). This length of time depends on a configuration parameter.

To stop this from happening it is necessary, when logging in, after username and password specification and before clicking **Ok**, to

- click the **Lock** button on the “Login” screen command bar (Fig 10 A)

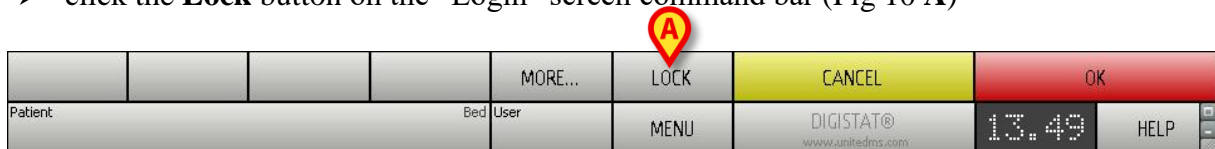


Fig 10

If the user is locked, the name of the user appears in red on the control bar (Fig 11).



Fig 11



*The user is advised against the frequent use of the lock function. Automatic log out is implemented to protect the system from unauthorized accesses.*

### 6.5.3. Recent users

The “Recent” area of the “Login” page (Fig 12 A) displays the names of users who have accessed the system recently.

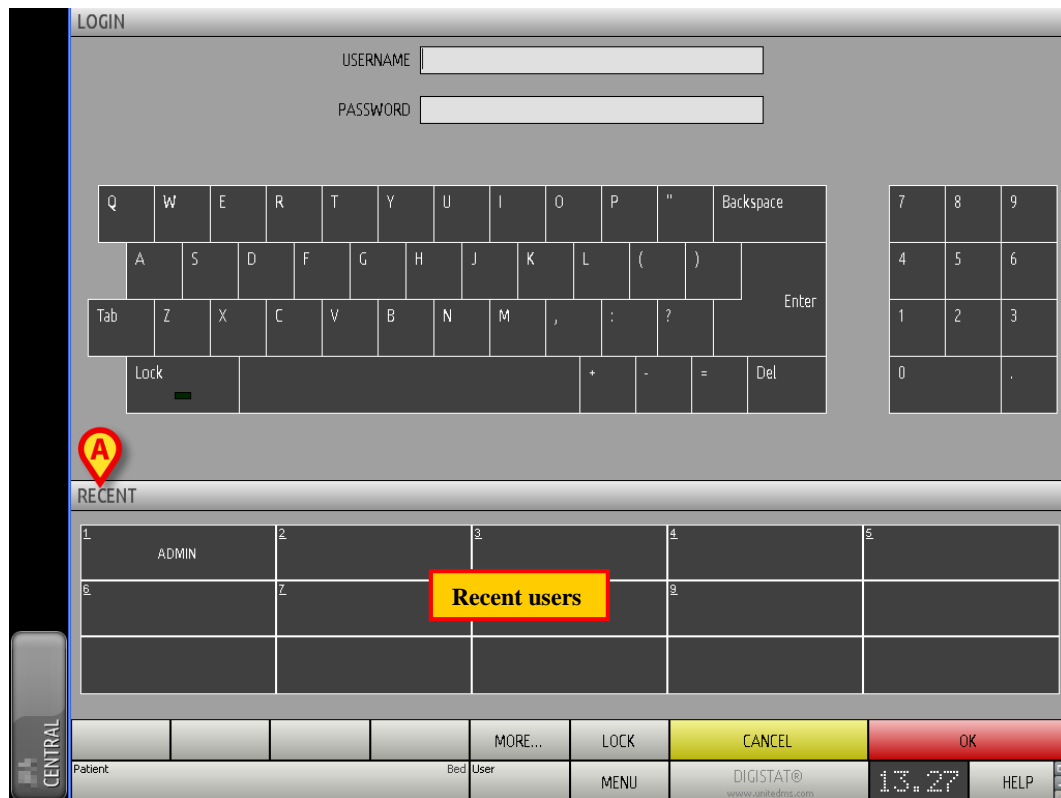


Fig 12

The area is divided into rectangles. The names of the users who accessed the system recently appear inside the rectangles. When any of these rectangles is clicked, the “Username” field is automatically filled with the name appearing inside the rectangle.

### 6.5.4. How to use the “User List”

The **More** button on the control bar (Fig 13) makes it possible to display the complete list of possible users.

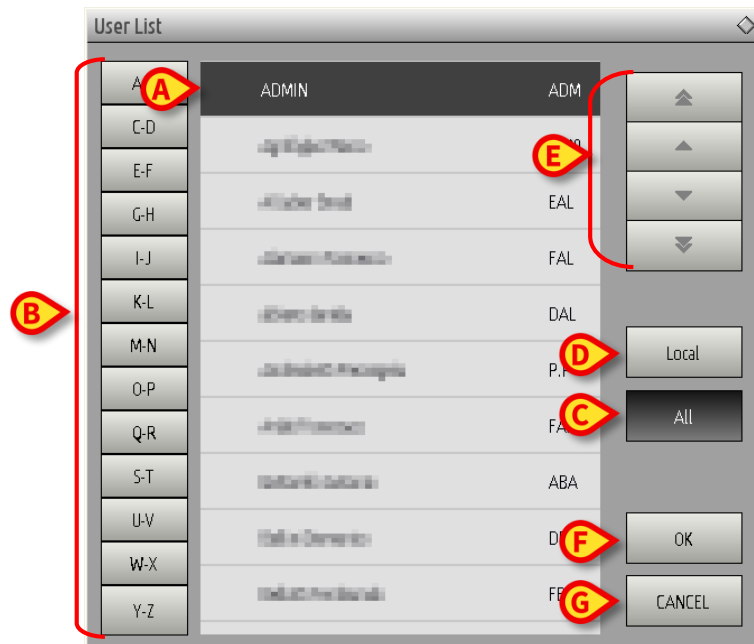


Fig 13

To display the “User List”,

- click the **More** button.

The following window is displayed (Fig 14).



**Fig 14**

The window shown in Fig 14 can be used as an index book enabling to search and select a user in the list of all the possible users.

The central part of the window shows the names of possible users, in alphabetical order (Fig 14 A).

The letters on the left side of the window (Fig 14 B) work like an index and make it possible to see only the users whose names begin with a specific letter.

For example: click the **C-D** button to see the list of patients whose names begin with the letters C or D.

Use the **All** button (Fig 14 C) to see the list of all possible users.

Use the **Local** button (Fig 14 D) to see the list of users relating to the specific workstation on which you are currently working.

Use the arrows on the right side of the window (Fig 14 E) to scroll up and down the list of users.

To select a user

- click the name of the user.

The name will be highlighted, then

- click the **Ok** button (Fig 14 F).

Otherwise you can

- double-click the row displaying the name of the user.

After selection, the “**User list**” window closes and the name of the selected user appears in the “**Username**” field on the “**Login**” page (Fig 7 A).



Use the **Cancel** button (Fig 14 G) to cancel the operation and close the “User list” window without selecting any user.

## 6.6. DIGISTAT® Control Bar

The control bar that appears in the lower part of the screen is common to all DIGISTAT® modules. Its main characteristics are listed below. If required, a more detailed explanation of its functionalities is provided in the following paragraphs.



Fig 15

- The **Patient** button (Fig 15 A) will contain, after a patient has been selected, the patient's name and, if the patient has been admitted, his/her bed number.
- The **User** button (Fig 15 B) shows the name of the user connected. See Fig 8.
- Use the **Menu** button (Fig 15 C) to open the following window (Fig 16).






Fig 16

The buttons contained in this window give access to functionalities that will be described later.

- The button quoting the DIGISTAT® brand name and the ASCOM UMS srl web address (Fig 15 D) is used by the system to signal that there are alarms or warnings going on in one of the modules. This feature is explained in the context of the specific module.
- The display indicated in Fig 15 E alternately shows the current date and time.
- Use the **Help** button (Fig 15 F) to access the on-line documentation available.

- The small buttons highlighted in Fig 15 G can be used to:

1. minimize the DIGISTAT® window (  button);
2. select the full screen display mode (  button);
3. select the window display mode (  button).



*These three buttons are present only if enabled by configuration.*

### 6.6.1. How to read the “Patient” button

#### Patient selected

When a patient is selected, the **Patient** button displays the name of the selected patient (Fig 17 A). See the documentation of the specific modules for the patient selection procedure.



Fig 17

#### Patient admitted

When a patient is admitted the **Patient** button displays, besides the patient name, the bed number and the name of the department where he/she is admitted (Fig 18).



Fig 18

The department name and the bed number are black if the patient is located in a department associated to the workstation on which the user is working (see Fig 18).

The department name and the bed number are red if the patient is located in a department that was not associated to the workstation on which the user is working (Fig 19 - the workstation/department link depends on configuration choices).



Fig 19



*Every workstation is associated by configuration to one or more departments. The user is allowed to perform certain specific actions only if the patient is admitted to one of the associated departments. The red colour in the **Patient** button is used to advise the user that he/she is working with a patient that is outside the associated departments.*

The signal “Other location” (Fig 20) appears when,



Fig 20

at patient admission time, in the bed selection window (Fig 21), the user specified that the patient is not in one of the configured departments. The user therefore selected the “Other location” option in the window displayed in Fig 21.

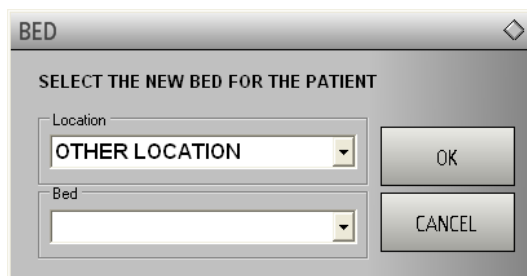


Fig 21

See the specific module’s documentation for the patient admission procedure.


When the  icon is displayed alongside the patient name, it means that the user is not enabled to edit that patient’s data.



Fig 22



### ***Patient management.***

*The patient archives management tools can change depending on the modules installed, on the user needs, on the chosen configuration etc. The related procedures change accordingly.*

*The DIGISTAT® module “Patient Explorer” was explicitly created to manage the patient archives. Please refer to the “Patient Explorer” module documentation for the related procedures.*

*If the DIGISTAT® module “Patient Explorer” is not installed the patient management functions are performed by “Control Bar”. When this is the case, the related procedures are described in the specific documentation.*

*If the patient archives management tool in use is not part of the DIGISTAT® environment please refer the relevant technical documentation.*



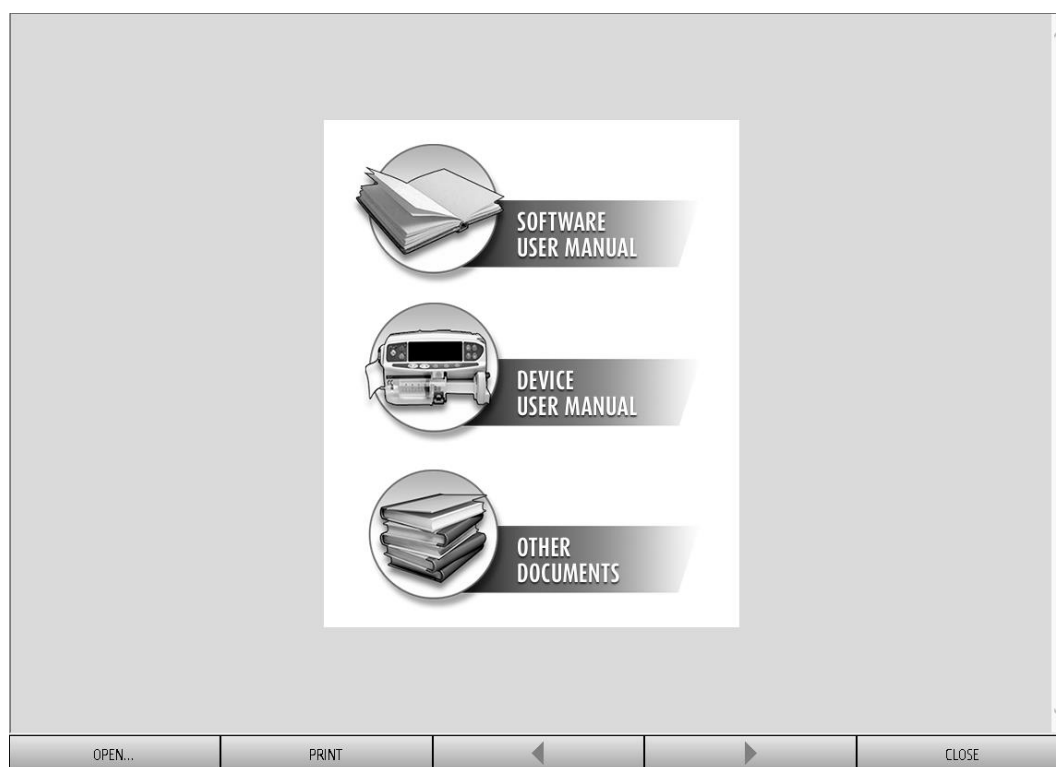
### **WARNING!**

*When entering patient-relating data it is necessary to double-check that the patient identity, hospitalization department and bed displayed in DIGISTAT® match with the actual ones.*

*This is utterly important in case of critical actions as, for instance, drug administration.*

## 6.7. Help

Click the **Help** button on Control Bar (Fig 15 E) to access the on-line documentation available. The page shown in Fig 23, or an analogous one, depending on the available documentation, will open.



**Fig 23**

The command bar (Fig 24) offers some navigation possibilities.



**Fig 24**

- the **Open** button makes it possible to open other documents (if the user has the required permissions);
- the **Print** button prints the currently displayed document;
- the **<** and **>** buttons display either the previous or the next page of the document;
- the **Close** button closes the on-line help.

## 6.8. DIGISTAT® Main Menu

The **Menu** button placed on the DIGISTAT® Control Bar (Fig 25)



Fig 25

opens a menu containing several options (Fig 26).

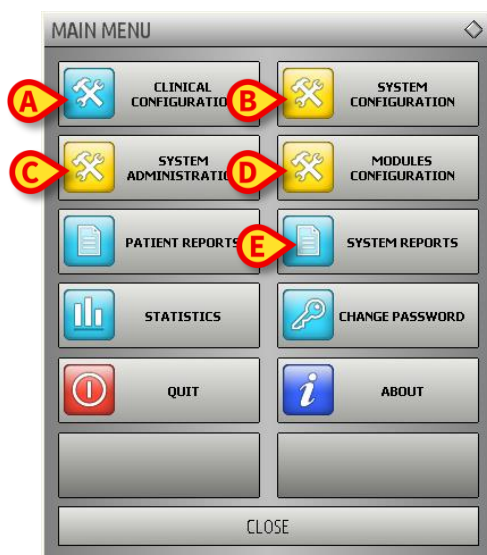


Fig 26

Each button on the menu accesses a specific set of functions.

The procedures associated to the following buttons relate to system configuration and are therefore reserved to the system administrators.

**Clinical configuration** - (Fig 26 A)

**System configuration** - (Fig 26 B)

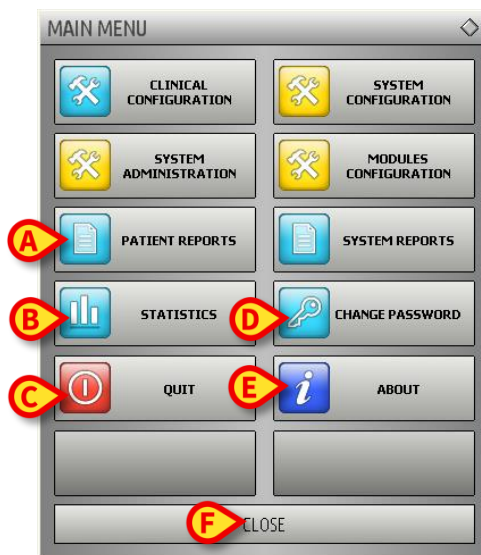
**System administration** - (Fig 26 C)

**Modules configuration**- (Fig 26 D)

**System reports** - (Fig 26 E)

Contact your system administrator for the procedures associated to these buttons.

The other buttons, indicated in Fig 27, make it possible to access features and functions that some users can perform (according to their permission level). These will be described in the following paragraphs.



**Fig 27**

**Patient reports** - (Fig 27 **A**, paragraph 6.8.1)

**Statistics** - (Fig 27 **B**, paragraph 6.8.3)

**Quit** - (Fig 27 **C**, paragraph 6.8.6)

**Change Password** - (Fig 27 **D**, paragraph 6.8.4)

**About** - (Fig 27 **E**, paragraph 6.8.5)

The **Close** button (Fig 27 **F**) closes the “Main menu” window (Fig 27).

## 6.8.1. Patient reports

---

The “**Patient reports**” button (Fig 27 A) makes it possible to access a set of options enabling the user to print reports of different kinds for the selected patient.

The button opens a menu containing different options (Fig 28).



Fig 28



*The number and kind of available reports depend on the modules installed and the configuration in use. Therefore the number and kind of buttons on this menu (Fig 28) change according to the configuration in use.*

## 6.8.2. Print reports

---

Use the buttons on the menu displayed in Fig 28 to access the system’s print functionalities.



*The type and the contents of some reports are customizable. Please refer to the system administrators for any request regarding the print reports customization.*

To print a patient report

- click one of the buttons on the menu.

A print preview of the selected document will open (Fig 29).

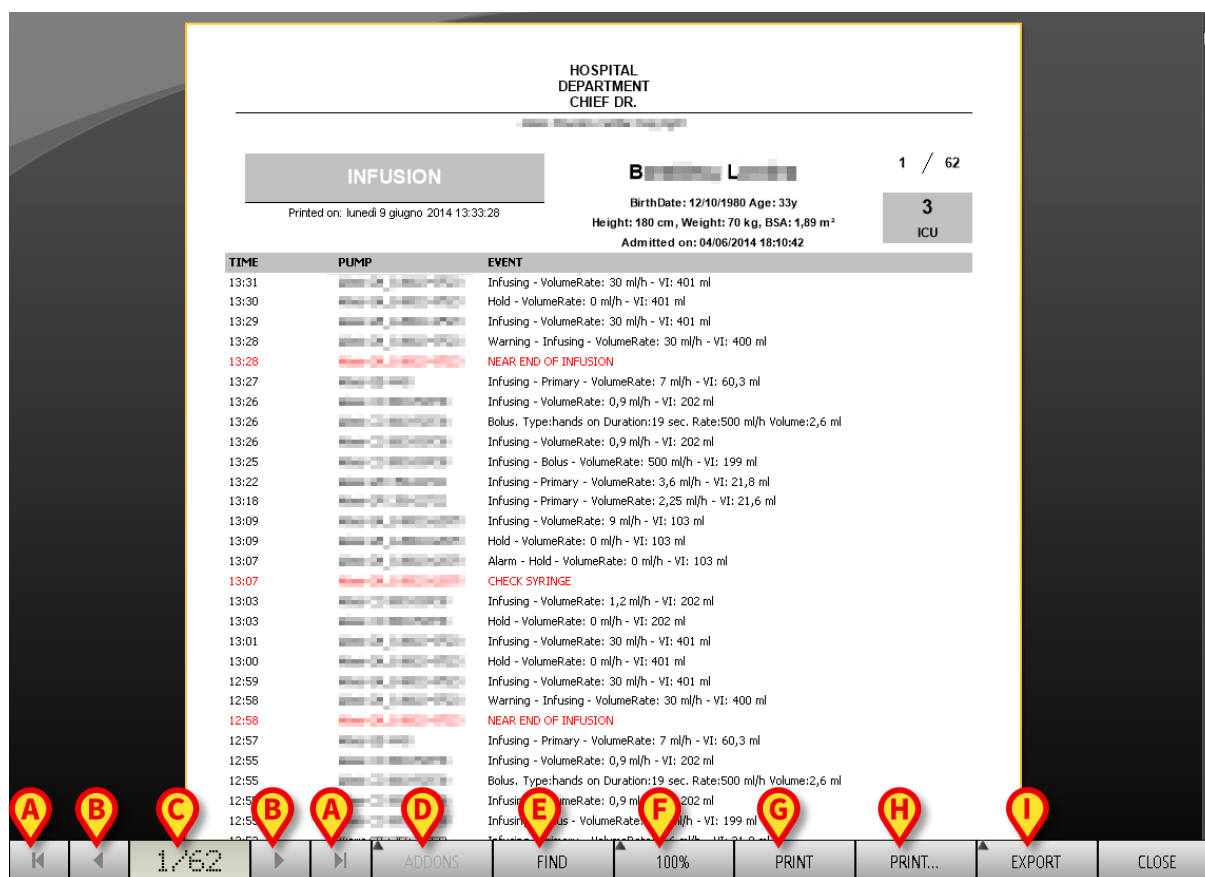


Fig 29

The buttons on the command bar of the “Print preview” screen make it possible to perform various actions, listed below.

**A** - Use the and buttons (Fig 29 **A**) to reach the beginning and the end of the document.

**B** - Use the and buttons (Fig 29 **B**) to go to the previous or the next page.

**C** - The display (Fig 29 **C**) indicates the current page number.

**D** - The **Addons** button (Fig 29 **D**) activates the possible additional print management options (in this configuration the “Watermarks” option is available - see paragraph 6.8.2.1 for a description of these options).

**E** - The **Find** button (Fig 29 **E**) makes it possible to search the displayed document. See paragraph 6.8.2.2 for more instructions.

**F** - The button indicating the **100%** percentage (Fig 29 **F**) is a zoom, making it possible to change the display mode. See paragraph 6.8.2.3 for more instructions.

**G** - Use the **Print** button (Fig 29 **G**) to print the report.

**H** - Use the **Print...** button (Fig 29 **H**) to display the print options window (Fig 35). See paragraph 6.8.2.4 for a description of this window and the related procedures.



**I** - Use the **Export** button (Fig 29 **I**) to export the document contents to different file extensions. See paragraph 6.8.2.5 for more instructions.

**L** - Use the **Close** button to close the “Print preview” screen.

### 6.8.2.1. Addons

---

The **Addons** button (Fig 29 **D**) activates the possible additional print management options.

To display the available options,

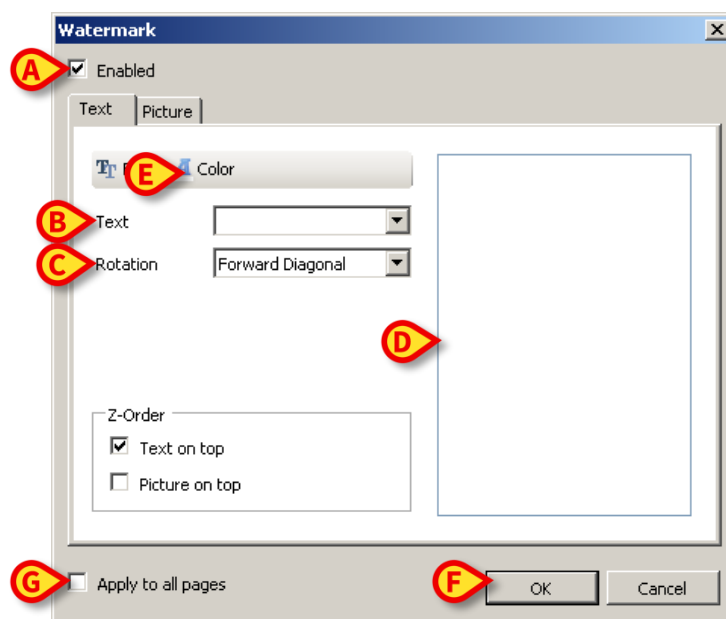
- Click the **Addons** button.
- Click the button corresponding to the functionality you want to activate.

#### *Addons - Watermark*

To add watermarks to the print report (either text or image, if the option is enabled by configuration),

- Click **Addons** and then **Mark**.

The following window is displayed (Fig 30).



**Fig 30**

To add a textual watermark,

- Ensure that the “**Enabled**” checkbox is checked (Fig 30 **A**). If not, the window’s contents cannot be edited.
- Insert the text in the “**Text**” field (Fig 30 **B**).

- Use the “**Rotation**” menu (Fig 30 C) to specify the watermark orientation (diagonal, horizontal, vertical).

A print preview is displayed in the area indicated in Fig 30 D.

- Use the buttons indicated in Fig 30 E to select the watermark font and color.
- Click the **Ok** button (Fig 30 F).

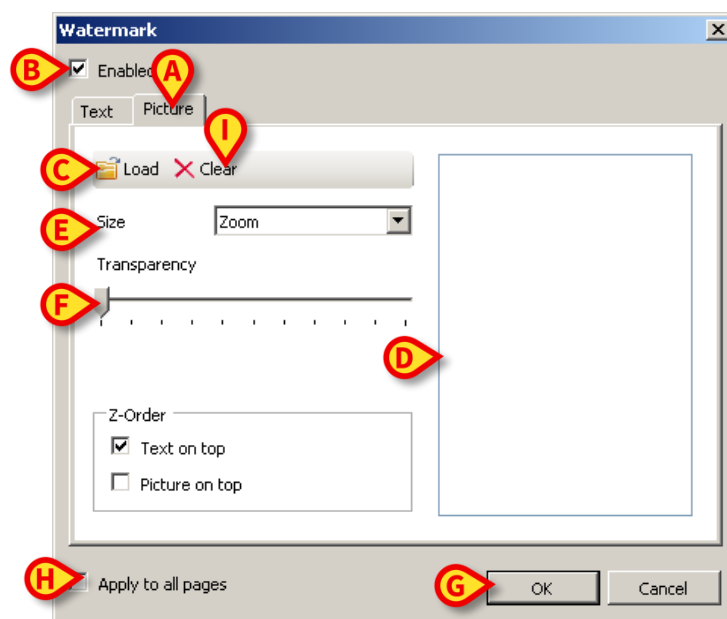
The text is this way inserted as watermark.

If the “**Apply to all pages**” checkbox is selected (Fig 30 G) the watermark is applied to each page in the document, otherwise it is applied only to the current page.

To insert a picture as watermark

- Click the “**Picture**” tab indicated in Fig 31 A.

The following window is displayed (Fig 31).



**Fig 31**

Follow these steps to insert an image as watermark,

- Ensure that the “**Enabled**” checkbox is checked (Fig 31 B). If not, the window’s contents cannot be edited.
- Click the “**Load**” button indicated in Fig 31 C.

This opens the window making it possible to browse the computer contents.

- Search and select the image to be uploaded.

The image is displayed in the area indicated in Fig 31 D.

- Use the “**Size**” drop-down menu to set the size of the image (Fig 31 **E**).
- Use the “**Transparency**” cursor to set the transparency level of the watermark image (Fig 31 **F** - maximum transparency when the cursor is aon the left).
- Click the **Ok** button (Fig 31 **G**).

The watermark image is this way inserted.

If the “**Apply to all pages**” checkbox is selected (Fig 31 **H**) the watermark is applied to each page in the document, otherwise it is applied only to the current page.

To delete an already selected image,

- Click the “**Clear**” button indicated in Fig 31 **I**.

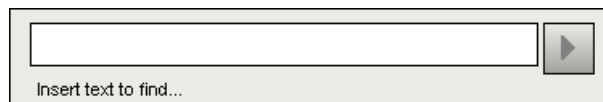
#### 6.8.2.2. Find

The **Find** button (Fig 29 **E**) makes it possible to search the print report currently displayed.

To search the print report,

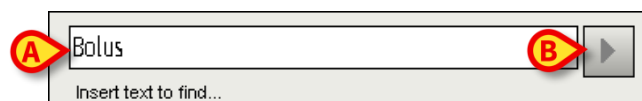
- Click the **Find** button.

The following window opens (Fig 32).



**Fig 32**

- Insert in the window the text to be found in the print report (Fig 33 **A**).



**Fig 33**

- Click the  button (Fig 33 **B**).

The text specified, if found, will be highlighted in the print report.

- Click the  button again to search for the other instances in the text.

### 6.8.2.3. Zoom

The **Zoom** button (on which, by default, the **100%** size is displayed - Fig 29 F) is a zoom, making it possible to change the display size and mode.

To change the display mode,

- click the Zoom \button. The following menu is displayed (Fig 34).



Fig 34

- Click the wanted option on the menu.

The page is displayed accordingly. The mode currently selected is indicated on the button.

The following options are available:

The **Width** button makes it possible to display the page using the full screen width;

the **Page** button displays the whole page;

the **200%** button doubles the page size (200% zoom);

the **100%** button displays the page in its actual size (100% zoom);



the area contains a cursor that can be used to zoom the page contents (left is zoom out, right is zoom in). The percentage value corresponding to the page size is displayed above the cursor. Values range from 100 to 200 %. The selected value is also displayed on the **Zoom** button on the command bar after selection.

#### 6.8.2.4. Print

The **Print...** button opens a window offering several print options.

- Click the **Print...** button (Fig 29 H) to display the print options window (Fig 35)

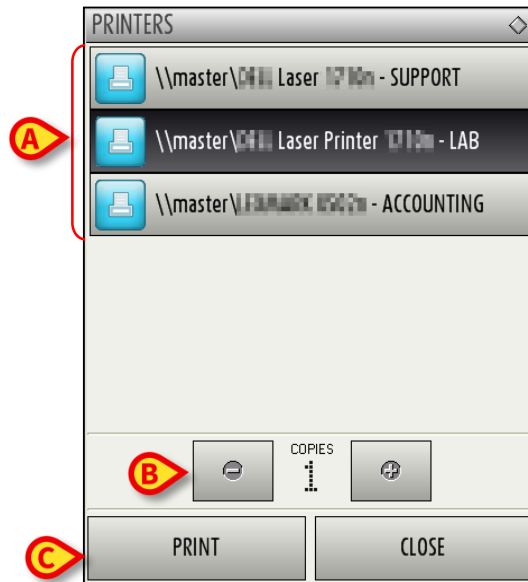




Fig 35

This window makes it possible to select the printer and the number of copies to be printed.

- Click the wanted option on the menu to select the printer (Fig 35 A).
- Use the  (one less copy) and the  (one more copy) buttons to specify the number of copies (Fig 35 B).
- Click the **Print** button (Fig 35 C) to print the report.

#### 6.8.2.5. Export

The **Export** button (Fig 29 I) makes it possible to export the displayed document contents to different file extensions.

- Click the **Export** button to open the “Export” menu.

The menu displays all the extensions currently supported by the system in use.

- Click the option corresponding to the wanted extension.

The document is this way exported to the corresponding extension.

### 6.8.3. Statistics

The **Statistics** button on the main menu (Fig 36) makes it possible to access the system's statistical calculation tools.



Fig 36

The button opens another menu (Fig 37) that enables to access various distinct tools. The type and number of accessible tools depend on the configuration in use and the specific modules installed.

These tools are mainly reserved to the system administrators. Please see the specific technical documentation for a description.

The “Query assistant” tool, which is accessible for users having specific permissions, is described in paragraph 6.8.3.1.



Fig 37

### 6.8.3.1. Query Assistant

The **Query Assistant** button (Fig 37) accesses a tool making it possible to create, save and execute queries on the DIGISTAT® database (Fig 38).

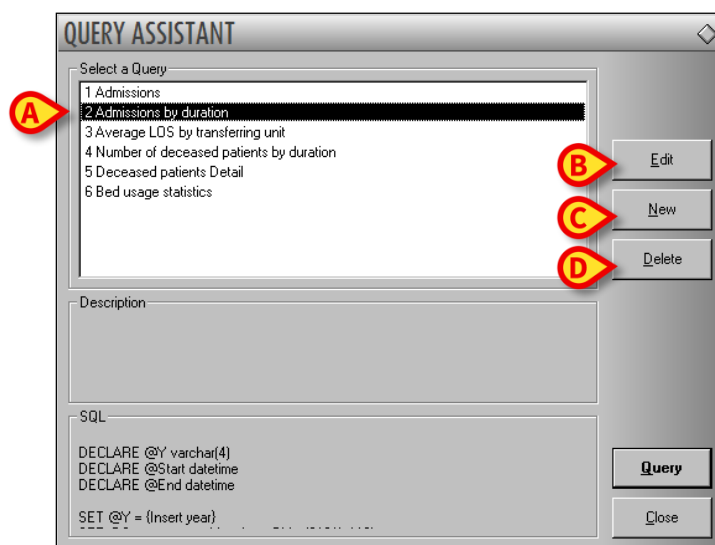


Fig 38

The user can select a query from a list of pre-defined queries, to execute it and display the results in a specific window.

The “Select a Query” area displays the list of all the pre-defined queries (Fig 38 A).

To run a query

- click the corresponding name on the list,

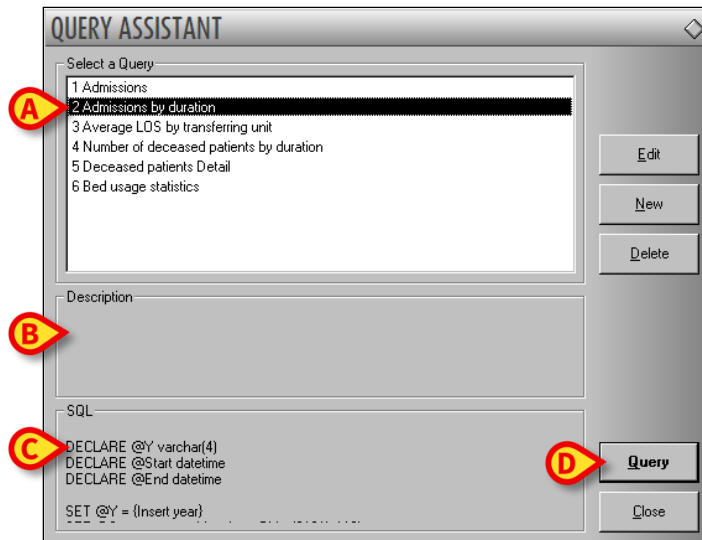
The name will be highlighted (Fig 39 A).

A textual description of the query is displayed in the “Description” area (Fig 39 B).

The “SQL” area (indicated in Fig 39 C) displays the content of the query in SQL language (Structured Query Language).



*The “edit”, “cancel” and “new” query options are reserved to the system administrators.*



**Fig 39**

To run the query

- click the **Query** button (Fig 39 **D** - bottom-right).

The results are displayed in a new window, as a table (Fig 40).

The screenshot shows the '1 Admissions' results window. It has a toolbar with 'Table', 'Setup', 'Export', 'Print', and 'Close' buttons. Below the toolbar is a text prompt: 'Drag a column header here to group by that column.' Below this is a table with 8 columns and 8 rows. The first three columns are labeled 'I', 'Desc', and 'Value'. The data in the table is as follows:

I	Desc	Value			
01	Year	2008			
02	Number of admissi...	2			
03	Total number of p...	2			
04	Average age of a...	47.50			
05	Number of readmi...	0			
06	Percentage of rea...	0			
07	Readmissions wit...	1			
08	Readmissions wit...	1			

**Fig 40**

The **Edit** button placed on the right of the “Query Assistant” window (Fig 38 **B**) makes it possible to edit an existing query.

The **New** button placed on the right of the “Query Assistant” window (Fig 38 **C**) makes it possible to create a new query.

The **Delete** button placed on the right of the “Query Assistant” window (Fig 38 **D**) makes it possible to cancel an existing query.



## 6.8.4. Change password

The **Change Password** button on the DIGISTAT<sup>®</sup> main menu (Fig 41 A) opens a window making it possible to change the password of the user currently logged to the system.

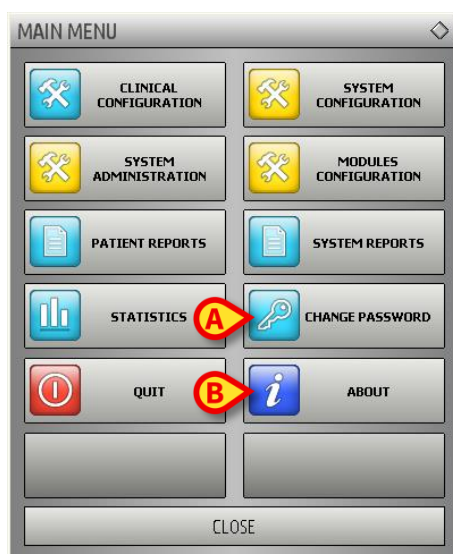


Fig 41

To change the user password

- click the **Change Password** button (Fig 41 A).

The “Change password” window will open.



Fig 42

- Type the current password in the “**Enter the OLD password**” field (Fig 42 A).
- Verify that the “**Enable password**” checkbox (Fig 42 B) is selected.
- Type the new password in the field indicated in Fig 42 C.
- Type again the new password in the field “**Re-enter new password**” (Fig 42 D).
- Click the **Ok** button (Fig 42 E).



The passwords are not sensible to uppercase and lowercase. The passwords can only be formed by numbers (0 to 9) and letters (A-Z).

### 6.8.5. About DIGISTAT®

---

The **About** button on the DIGISTAT® main menu (Fig 41 **B**) displays a window containing information on the DIGISTAT® version installed and the related licences (Fig 43).



Fig 43

### 6.8.6. Quit DIGISTAT®

The **Quit** button on the DIGISTAT® main menu (Fig 45 A) makes it possible to quit the DIGISTAT® environment.

To quit DIGISTAT®

- click the **Menu** button on the control bar (Fig 44).



Fig 44

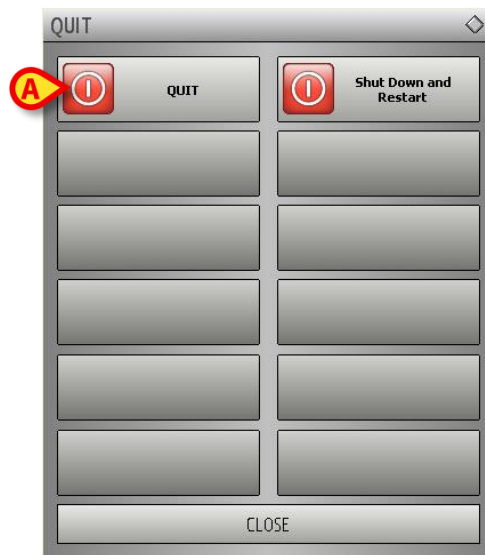
The DIGISTAT® main menu will open (Fig 45).



Fig 45

- Click the **Quit** button (Fig 45 A).

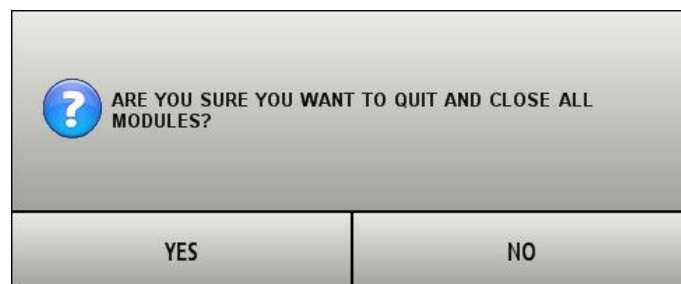
Another menu is displayed (Fig 46).



**Fig 46**

- Click the **Quit** button again (Fig 46 A).

User confirmation is required (Fig 47).



**Fig 47**

- Click **Yes** to exit DIGISTAT®.



*A user must have the required permissions level to exit DIGISTAT®.*

## 6.9. Warning messages

---

Different types of pop-up windows are used throughout the DIGISTAT® environment to provide information or warnings regarding the correct use of the software. Also, when a critical operation is being performed, they are used to request confirmation of the operation.

The possible messages are communicated by 4 different types of window, here explained.

- 1) Timer window with single option (Fig 48).

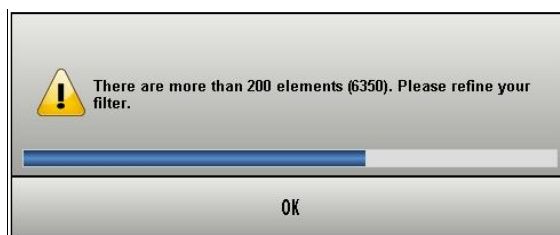


Fig 48

This type of window is generally used to issue warnings or error messages to the user. The bar indicated in Fig 48 is a timer indicating how much time the window remains on screen. The blue part of the bar gets shorter as time goes by.

When the blue part reaches the left side of the bar the window disappears.

To make the window disappear immediately, click the **Ok** button.

- 2) Timer window with double choice (YES or NO - Fig 49).

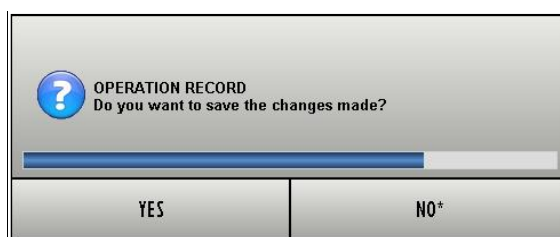


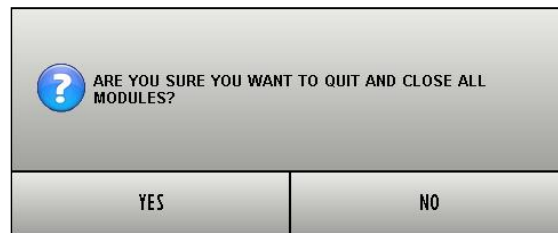
Fig 49

This window offers two options, usually related to an action which has just been performed. Click the **Yes** button to perform the action, click the **No** button to cancel the action.

The bar indicated in Fig 49 is a timer. The blue part of the bar gets shorter as time goes by.

When the blue part reaches the left side of the bar the window disappears. When this happens the system automatically makes a choice depending on the type of question and the context in which the message appears.

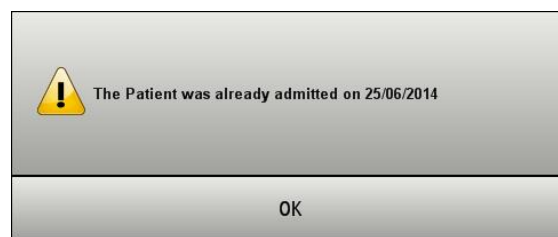
3) Window without timer with double choice (YES or NO - Fig 50).



**Fig 50**

The window shown in Fig 50, as the previous one, requires a choice between the options **Yes** and **No** in relation to an operation which has just been performed. Click the **Yes** button to perform the action, click the **No** button to cancel the action. This type of window has no timer and remains on screen until a choice is made.

4) Window without timer with single option (Fig 51)



**Fig 51**

The window shown in Fig 51 provides information regarding a procedure error. No timer here, the kind of information provided requires a reading confirmation from the user (click **Ok**).



*The presence or absence of the timer in a window depends on the context it appears in. Certain messages only make sense momentarily and with reference to the operation the user is performing. These messages have a timer and disappear after a certain time. Other messages must be received by anyone using the system, even after some time, and require a reading confirmation. These messages have no timer.*



*The messages provided by the DIGISTAT® environment are complete and comprehensible. There is no need to refer to special codes in order to understand them. In case of unclear messages, please inform your ASCOM UMS referent as soon as possible, for reporting and clarity improvement purposes.*

## 7. DIGISTAT® Patient Explorer

---

The DIGISTAT® “Patient Explorer” module makes it possible to manage the patient database of one or more hospitals in a simple and customized manner.

The main data of every known patient can be rapidly accessed, displayed, edited and, when required, automatically inserted in a selected document/module.

DIGISTAT® “Patient Explorer” is fully customizable to suit the needs of the healthcare structure using it. The possible configurations are potentially unlimited. This manual describes a sample standard configuration to illustrate the module’s main functionalities and procedures.

### 7.1. Accessing the “Patient Explorer” module

---

To access DIGISTAT® “Patient Explorer”

- Click the **Patient** button on Control Bar (Fig 52).



Fig 52 - “Patient” button



*The procedure that must be performed to open “Patient Explorer” depends, for some configurations, on the system’s general features and goals. It can therefore be different from that described here. If this is the case see the specific documentation of the system in use to know the actual procedure.*

A screen analogous to that displayed in Fig 53 will open



***Please remember that “Patient Explorer” is widely customizable and that the screens displayed change according to the chosen configuration. This manual describes a standard configuration as example.***

***The screens displayed by the actual system in use can be different from those described in this manual.***

**ICU**  
Intensive Care Unit

**PATIENTS**  
PATIENT SEARCH

Last Name  First Name  Sex   
 Birth Date  /  /  Patient Code   
 Admission Code

**SEARCH**  
**CLEAR**

**A Search fields**

Last Name	First Name	Sex	Birth Date	Patient Code	Admission Code	A	Di
AMARILLO	LAMEZIATERME	M	22/08/1935	0301424	006-RI-2010-00...	I	I
APPLETON	GALLIPOLI	M	22/02/1936	0143404	006-RI-2010-00...	0	0
APPLETON	CERNOBBIO	F	23/03/1957	0213269	006-RI-2010-00...	I	I
ARCADIA	FROSINONE	M	11/03/1929	100051584	006-RI-2011-00...	0	0
ARLINGTON	ISPICA	M	11/03/1929	0096787	006-RI-2010-00...	2	2
BALDWIN PARK	VIBOVALENTIA	F	31/08/1940	0114524	006-RI-2010-00...	I	I
BAYONNE	MONTESCAGLIOSO	F	12/10/1938	0324373	006-RI-2010-00...	2	2
BAYTOWN	SANBENEDETTO DEL TRONTO	F	16/10/1939	0363086	006-RI-2010-00...	2	2
BEDFORD	ALESSANO	M	11/04/1932	0099919	006-RI-2010-00...	2	2
BEDFORD	MONTEVARCHI	M	11/05/1935	5561716	006-RI-2010-00...	2	2
BEDFORD	SPILIMBERGO	M	14/09/1953	0355330	006-RI-2010-00...	2	2
BELL GARDENS	MONTESCAGLIOSO	F	17/03/1942	100042579	006-RI-2010-00...	0	0

**B Search results**

**C Command bar**

PATIENT SEARCH

NEW PATIENT EDIT PATIENT SELECT NONE CLOSE

Fig 53 – Patient search

By means of this page you can

- search a patient in the configured databases;
- record a new patient in the database;
- edit the patient's data.

## 7.2. Screen features

The “Patient Explorer” module screen is formed of three main areas.

- 1) The “Search fields” area, in which you can enter the search parameters and activate the patient search procedures (Fig 53 A).
- 2) The “Search results” area, displaying the results of the search performed (Fig 53 B - Search results).
- 3) The control bar is formed of various function-buttons making it possible to perform different procedures (Fig 53 C).



## 7.3. Patient search

---

The search fields in the upper area make it possible to specify the relevant patient's information.

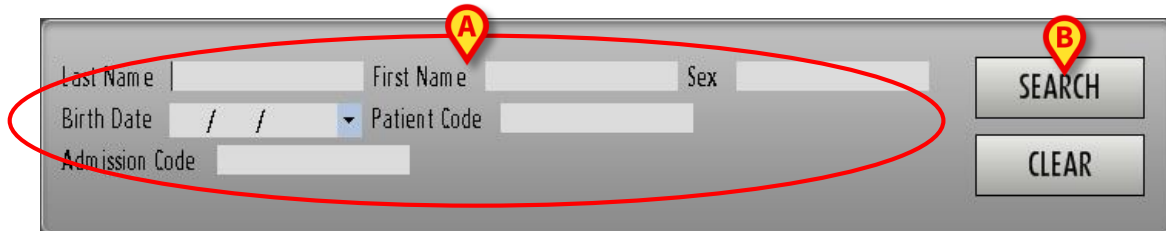


Fig 54 – Search fields

To search for a patient

1. enter the data of the patient you are searching for in one or more fields (Fig 54 **A**).
2. Click the **Search** button (Fig 54 **B**).

The central area displays in a table the list of all the patients whose data match those specified.

The system displays the list of patients who satisfy all the search parameters entered.

For example: if a search is performed by entering the patient's birthdate, the result is the list of all patients born on that date. If a search is performed by entering the patient's birthdate **and** sex the result is the list of only the men or women born on that date.

Click the **Search** button without entering any value in the search fields to display the list of all the patients registered in the database.

When there is only one result the patient's data are automatically inserted in the relevant screen of the system in use. Also, the patient is automatically selected. See paragraph 7.4.2 for an explanation of the meaning of the phrase "Patient selected".

When there are two or more results the result list is displayed.

To select a patient on the list, double click the row corresponding to the patient required.

Use the **Clear** button to clear the search filters.

## 7.4. The search results

The search results are shown in the central part of the screen (Fig 55).

Last Name	First Name	Sex	Birth Date	Patient Code	Admission Code	A	Di
AMARILLO	LAMEZIATERME	M	22/08/1935	0301424	006-RI-2010-00...	I	I
APPLETON	GALLIPOLI	M	22/02/1936	0143404	006-RI-2010-00...	0	0
APPLETON	CERNOBBIO	F	23/03/1957	0213269	006-RI-2010-00...	I	I
ARCADIA	FROSINONE	M	11/03/1929	100051584	006-RI-2011-00...	0	0
ARLINGTON	ISPICA	F	21/06/1969	0096787	006-RI-2010-00...	2	2
BALDWIN PARK	VIBOVALENTIA	F	31/08/1940	0114524	006-RI-2010-00...	I	I
BAYONNE	MONTESCAGLIOSO	F	12/10/1938	0324373	006-RI-2010-00...	2	2
BAYTOWN	SANBENEDETTO DEL TRONTO	F	16/10/1939	0363086	006-RI-2010-00...	2	2
BEDFORD	ALESSANO	M	11/04/1932	0099919	006-RI-2010-00...	2	2
BEDFORD	MONTEVARCHI	M	11/05/1935	5561716	006-RI-2010-00...	2	2
BEDFORD	SPILIMBERGO	M	14/09/1953	0355330	006-RI-2010-00...	2	2
BELL GARDENS	MONTESCAGLIOSO	F	17/03/1942	100042579	006-RI-2010-00...	0	0

Fig 55 – Search results

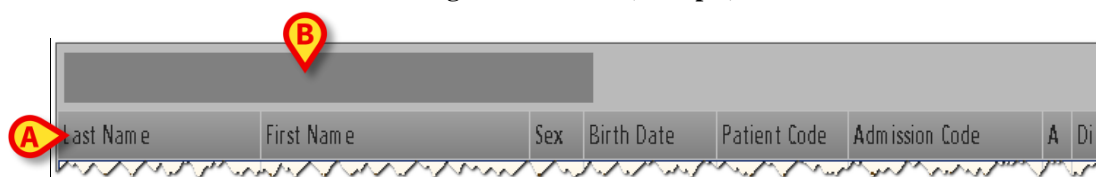
The results are displayed in alphabetical order. The information provided for each result depends on the configuration in use. In the example shown in Fig 55 the columns indicate the name, last name, sex, code and birthdate of every patient. It is possible that not all the data will be available for a patient, in which case the area corresponding to the missing information is empty.

### 7.4.1. How to sort the search results

The title-boxes indicated in Fig 56 and Fig 57 A can be used to sort the search results.

Last Name

Fig 56 - Box-field (example)



Last Name	First Name	Sex	Birth Date	Patient Code	Admission Code	A	Di
-----------	------------	-----	------------	--------------	----------------	---	----

Fig 57

Initially the results are displayed in alphabetical order by family name.

To sort the results differently,

- drag the title-box of a column (Fig 56) on the gray bar (Fig 57 B)

The results are displayed in the order specified in the box.



To “drag”, move the mouse cursor over the object required, click and, keeping the button pressed, physically move the object to the position required. The object (the box in this case) moves with the cursor.

You can, for example, take the “Last name” box and drag it to the gray bar (Fig 58 A). In this way the results are grouped by last name (Fig 58), in alphabetical order. If two or more patients have the same last name, they are grouped together.



Last Name	First Name	Sex	Birth Date	Patient Code	Admission Code	A
- Last Name: AMARILLO						
AMARILLO	LAMEZIATERME	M	22/08/1935	0301424	006-RI-2010-00...	I
- Last Name: APPLETON						
APPLETON	GALLIPOLI	M	22/02/1936	0143404	006-RI-2010-00...	0
APPLETON	CERNOBBIO	F	23/03/1957	0213269	006-RI-2010-00...	I
- Last Name: ARCADIA						
ARCADIA	FROSINONE	M	11/03/1929	100051584	006-RI-2011-00...	0
- Last Name: ARLINGTON						
ARLINGTON	ISPICA	F	21/06/1969	0096787	006-RI-2010-00...	2
- Last Name: BALDWIN PARK						
BALDWIN PARK	VIBOVALENTIA	F	31/08/1940	0114524	006-RI-2010-00...	I
- Last Name: BAYONNE						

Fig 58 –Search results (by last name)

After performing this operation, you may decide to refine the arrangement of the results further. You can, for example, take the “Birthdate” box and drag it to the gray bar. This will be displayed as shown in Fig 59. The results inside every group are this way arranged by birthdate. This maintains the arrangement by family name and, within this arrangement, displays the results by birthdate.



Last Name	First Name	Sex	Birth Date	Patient Code	Admission Code
- Last Name: AMARILLO					
- Birth Date: 22/08/1935					
AMARILLO	LAMEZIATERME	M	22/08/1935	0301424	006-RI-2010-00...
- Last Name: APPLETON					
- Birth Date: 22/02/1936					
APPLETON	GALLIPOLI	M	22/02/1936	0143404	006-RI-2010-00...
- Birth Date: 23/03/1957					
APPLETON	CERNOBBIO	F	23/03/1957	0213269	006-RI-2010-00...
- Last Name: ARCADIA					
- Birth Date: 11/03/1929					
ARCADIA	FROSINONE	M	11/03/1929	100051584	006-RI-2011-00...
- Last Name: ARLINGTON					

Fig 59 – Search results by family name and birthdate

You can repeat this operation as many times as you like, using the same box several times and choosing the preferred order to refine the groups more and more.

To eliminate one of the titles from the gray bar and so change the arrangement of the results, simply drag it back to the original column (the position from where it was taken).

## 7.4.2. How to select a patient

To select a patient

- double click the row containing his/her name.

Otherwise,

1. click once the line containing his/her name.

The line is this way highlighted.

2. Click the **Select** button on the command bar (Fig 63 C).

The name of the selected patient is displayed on the **Patient** button on Control Bar (Fig 60).



Fig 60 - Selected patient

The selected patient's data are automatically inserted in the module/system/record currently in use.



*The patient selected is always the one whose name appears on the **Patient** button. Any operation performed from the “Patient Search” page refers to the patient whose name appears on this button and not to any other patients displayed on the page.*



*From here onwards, the following terms are used in relation to patients.*

**Patient registered in the database** – Means that his/her name and data appear in the archive that we are consulting.

**Patient selected** – Means that the patient has been selected. The selection procedure is described in this paragraph. When the patient is selected, his name appears on the **Patient** button.

**Patient admitted** – Means that the patient has been admitted to the hospital structure. The admission of a patient involves the assignment of a bed and a location. When an admitted patient is selected, his/her bed number appears along side the name on the **Patient** button.

## 7.5. “Search” selection buttons

---

The buttons on the left (Fig 61) make it possible to access system functionalities that are configuration-specific and that can be either enabled or disabled depending features of the logged user. For instance, different buttons can access different databases. Also, specific buttons can be configured top access screens relating to specific departments.



*The DIGISTAT® “Patient Explorer” module is widely configurable. The structure and features of the different screens depend on the needs of the healthcare structure using the system.*



**Fig 61**

The selected option is highlighted yellow.

In Fig 61, for instance, the **Patient Search** button selects the “Patient search” screen (Fig 53), while the **Intensive Care Unit** button makes it possible to display the details of the Intensive Care Unit (Fig 62).



Fig 62

The buttons indicated in Fig 62 **A** represent the department’s beds. The name of the patient (if any) is displayed on the button corresponding to the bed. Click the button to select a patient. This screen is of course only accessible to the enabled users.

## 7.6. The command bar

---

The command bar (Fig 63) contains five buttons that enable the performance of different operations.



Fig 63 – Command bar



*The possible presence of other buttons above those shown in Fig 63 depends on the configuration and are used for the specific goals and procedures of the healthcare structure using DIGISTAT® “Patient Explorer”.*

- 1) **New Patient** (Fig 63 A) – This button makes it possible to enter a new patient in the database (see paragraph 7.6.1 for the detailed procedure).
- 2) **Edit Patient** (Fig 63 B) – This button makes it possible to edit the patient’s data (see paragraph 7.6.2).
- 3) The **Select** button (Fig 63 C) makes it possible to select a patient (see paragraph 7.6.3).
- 4) **None** (Fig 63 D) – This button makes it possible to deselect a patient when he/she is selected. After clicking the **None** button, the name of the previously selected patient disappears from the **Patient** button (see paragraph 7.6.4).
- 5) **Close** (Fig 63 E) – This button makes it possible to close the search page (see paragraph 7.6.5).

### 7.6.1. The NEW PATIENT button

---

The **New Patient** button (Fig 64 A) makes it possible to enter a new patient in the database.




Fig 64 - Command bar

To enter a new patient

1. click the **New Patient** button.

The following window opens.



The dialog box titled "EDIT PATIENT" contains the following fields and controls:

- Family Name: Text input field
- Given Name: Text input field
- Initials: Text input field
- Patient Code: Text input field
- Birth date: Date selection field (calendar icon)
- Sex: Radio button selection (Male/Female)
- Notes: Large text area for additional information
- OK: Confirmation button
- CANCEL: Cancellation button

**Fig 65 – New Patient**

2. Enter the new patient’s data.
3. Click **Ok** to confirm.

The new patient is this way registered in the database.

## 7.6.2. The EDIT PATIENT button

The **Edit Patient** button (Fig 66 A) makes it possible to edit the data of a patient who already exists in the database.



**Fig 66 - Command bar**

Remember that this button can only be used if a patient is selected. The name must appear on the **Patient** button of the DIGISTAT® Control Bar (Fig 67). See paragraph 7.4.2 for the patient selection modes.

The “edit” operations performed are always referred to the patient whose name appears on the **Patient** button (Fig 67).

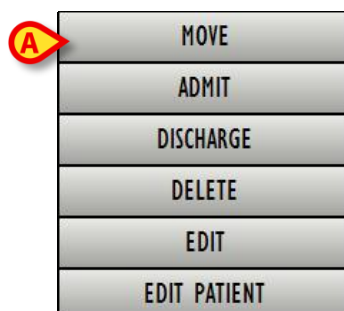


**Fig 67**

To edit the patient’s data

1. select the patient whose data must be edited
2. Click the **Edit Patient** button.

A menu containing five options opens (Fig 68).



**Fig 68 – Edit Patient**



Each of these options makes it possible to perform a different operation. The functions of the different buttons on the menu are described in the following paragraphs.

### 7.6.2.1. Move

---

The **Move** button (Fig 68 A) makes it possible to register the transferal of a patient selected to a different bed and/or a different location.



*A patient must be admitted before he/she can be transferred. See paragraph 7.6.2.2 for the patient admission procedure.*

To transfer a patient

1. select the patient.

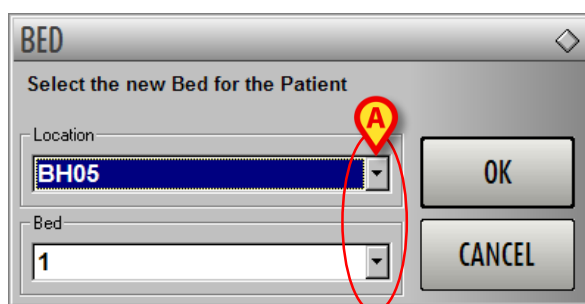
The name of the patient selected appears on the **Patient** button.

2. Click the **Edit Patient** button.

A drop-down menu containing various options appears (Fig 68).

3. Click the **Move** button (Fig 68 A).

The following window opens (Fig 69).



**Fig 69 – Patient transferal**

4. Use the arrow buttons (Fig 69 A) to select the bed to which the patient will be transferred.

The upper button opens a list of all the locations available.

The lower button opens a list of all the beds available in the location selected (Fig 70).

If the name of a patient appears alongside the bed number, the bed is already occupied (in Fig 70, beds 8, 9, 10 and 14 are occupied).

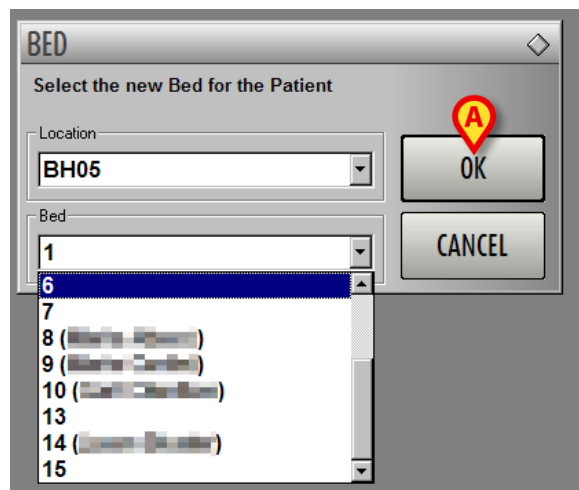


Fig 70 – List of Beds

5. Click **Ok** to confirm (Fig 70 A).

If an occupied bed is selected and the **Ok** button is clicked, the system opens a new window and asks whether we want to exchange the patients in the two beds.

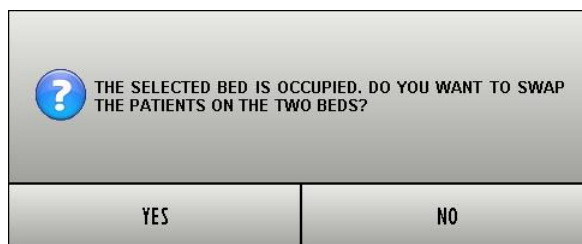


Fig 71

### 7.6.2.2. Admit

---

The **Admit** button makes it possible to register the admission of a patient to a specific location.

To admit a patient

1. select the patient.

The name of the patient selected is displayed on the **Patient** button.

2. Click the **Edit Patient** button.

A menu containing various options opens (Fig 72).

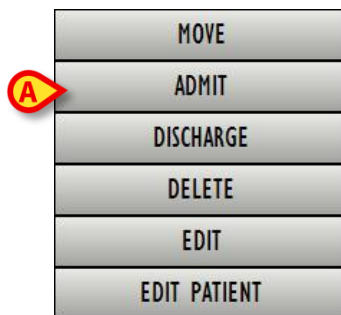


Fig 72

3. Click the **Admit** button (Fig 72 A).

The following window opens (Fig 73).

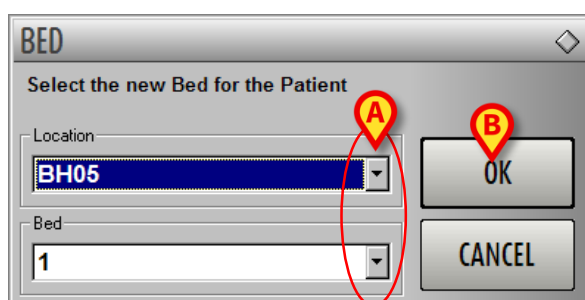


Fig 73 – Patient Admission

4. Use the arrow buttons (Fig 73 A) to select the destination bed.

The upper button opens a list of all the locations available.

The lower button opens a list of all the beds available in the location selected.

If a bed is already occupied it does not appear in the list of available beds.

5. Click **Ok** to confirm (Fig 73 B).

After clicking **Ok** the system opens a new window making it possible to specify the patient's data (Fig 74).

Fig 74 – Patient data

6. Enter the patient's data in the appropriate fields.
7. Click **Ok** to complete the admission procedure (Fig 74 A).

### 7.6.2.3. Discharge

---

The **Discharge** button makes it possible to register the discharge of a patient.



*A patient must be admitted before he/she can be discharged. See paragraph 7.6.2.2 for details on the admission procedure.*

To discharge a patient

1. select the patient.

The name of the patient selected appears on the **Patient** button.

2. Click the **Edit Patient** button.

A menu containing various options appears (Fig 75).

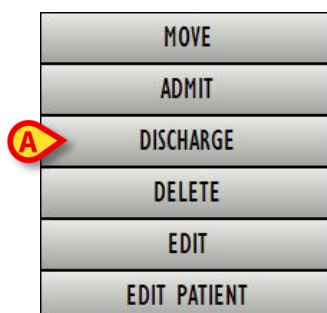


Fig 75

3. Click the **Discharge** button (Fig 75 A).

A window requesting confirmation of the operation opens (Fig 76).

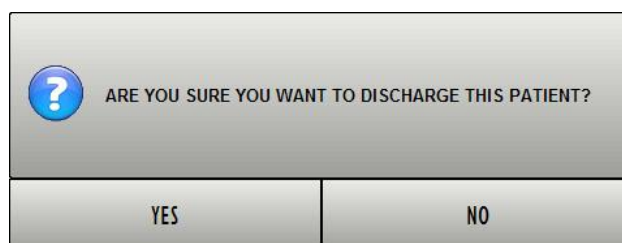


Fig 76 – Discharge patient

4. Click **Yes** to proceed with the discharge of the patient.

This action opens the window containing the patient's data (Fig 77 – unlike the window shown in Fig 74, here you can change the date and time of discharge).

EDIT PATIENT		
Family Name	Given Name	Initials
		AD
Patient Code	Birth date	Sex
222	04/08/19	F
Notes		
Date - ADMISSION - Time		Date - DISCHARGE - Time
09/06/2009 13.13.56		10/06/2009 9.16.26
Admission Code	Height [cm]	Weight [kg]
	170	65
		OK
		CANCEL

Fig 77 – Patient data (discharge)

5. Click **Ok** to complete the discharge procedure (Fig 77 A)

#### 7.6.2.4. Delete

The **Delete** button makes it possible to delete all data of a patient from the database.

To delete a patient's data

1. select the patient.

The name of the patient selected is displayed on the **Patient** button.

2. Click the **Edit Patient** button.

A menu containing various options appears (Fig 78).

MOVE
ADMIT
DISCHARGE
DELETE
EDIT
EDIT PATIENT

Fig 78

3. Click the **Delete** button (Fig 78 A).

A window requesting confirmation of the operation opens (Fig 79).



Fig 79 – Delete Patient

4. Click **Yes** to proceed with the deletion procedure.

### WARNING!



*Deleting a patient from the Database is an irreversible operation. Once a patient has been deleted it is no longer possible to access any document regarding him/her acquired through the DIGISTAT<sup>®</sup> systems.*

*Therefore it is necessary to perform this operation with extreme caution.*

## 7.6.2.5. Edit

---

The **Edit** button makes it possible to edit data of a selected patient.

To edit a patient's data

1. select the patient.

The name of the patient selected appears on the **Patient** button.

2. Click the **Edit Patient** button.

A menu containing various options opens (Fig 80).

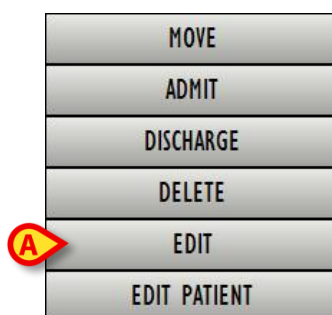


Fig 80

3. Click the **Edit** button (Fig 80 A).

A window containing the patient's data appears (Fig 81).

Fig 81 – Edit patient

4. Edit the patient's data.
5. Click **Ok** to confirm (Fig 81 A).

### 7.6.3. The SELECT button

The **Select** button (Fig 82 A) makes it possible to select a patient.



Fig 82 - Command bar

To select a specific patient

search for the needed patient data using the procedures described in paragraph 7.3.

1. The result list is displayed.
2. Click once the row containing the patient's name.

The line is this way highlighted.

3. Click the **Select** button on the command bar (Fig 82).

The name of the selected patient appears on the **Patient** button on Control Bar (Fig 83).



Fig 83 - Patient selected



*The patient can be selected double-clicking the line containing his/her name as well.*

## 7.6.4. The NONE button

---

The **None** button (Fig 84 A) makes it possible to deselect the patient selected (whose name is shown on the **Patient** button).



Fig 84 - Command bar

To deselect a patient

- click the **None** button (Fig 84).

The patient's name disappears from the **Patient** button.

## 7.6.5. The CLOSE button

---

The **Close** button (Fig 85 A) makes it possible to close the “Patient Explorer” search screen.



Fig 85 - Command bar

To close the patient search screen

- click the **Close** button on the page (Fig 85).



## 8. Enclosed Documentation

---

The following documents are enclosed

1. *End-user licence agreement*. To be fully read, signed and sent to ASCOM UMS

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It is the responsibility of the User to install and to maintain software means for the protection against intrusions or attacks (i.e. antivirus, firewall, etc.)

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The PRODUCT is a medical device composed only by software that is licensed exclusively to create an electronic copy of certain patients' data and recording of the unit's activity in order to provide:

- electronic documentation of the activity in the unit;
- information on the use of human resources and materials;
- deferred statistics for quality control;
- support to the diagnostic and therapeutic activities, within the limits of what specified herein below;
- support to the management of alarm coming from the connected medical devices;
- display of information to remote users for non-clinical purposes.

The PRODUCT is not aimed to administer or exchange energy to or from the human body or to transmit medicines, liquids or other substances to or from the human body.

The PRODUCT is not aimed to allow direct diagnosis or monitoring of vital physiological processes (by way of example cardiac performance, respiration or activity of CNS) and therefore the therapeutic or diagnostic procedure or maneuver, if any, deemed necessary by the user, shall be performed by him/her solely as consequence of the direct examination and of the scientific correspondence of the specific case with the data obtained through the use of the PRODUCT.

Based on the above features, the PRODUCT, even if designed to provide the maximum reliability, cannot guarantee the perfect correspondence of the provided data, nor can it substitute the direct verification of the same by the user. In any case, the PRODUCT must be used in compliance with the safety procedures reported in the user manual accompanying the Product.

The PRODUCT can be used close to the patient and to the medical devices in order to speed up the data entry, to decrease the chances of errors and to allow the user to verify the correctness of the data through the immediate comparison with the actual data and activities.

The user must implement adequate procedures to guarantee that potential errors occurring in the PRODUCT are promptly detected and corrected and do not constitute a risk to the patient and the operator.

These procedures depend on the configuration of the Product and the method of use preferred by the user.

Only printouts that are signed (with digital signature or autograph) by authorized physicians or medical operators shall be considered valid clinical documents. In signing the aforementioned printouts, the user certifies that he/she has checked the correctness and completeness of the data present in the document.

Only these signed documents are a valid source of information for diagnostic or therapeutic processes and/or procedures.

The PRODUCT may provide, depending on the modules installed, access to information on drugs. This information is taken from official publications. It is responsibility of the user to periodically verify that this information is current and updated.

The PRODUCT can be connected to other medical devices in order to import data therefrom but is not aimed to control, monitor or influence the performances of the medical devices with which it is connected.

The PRODUCT may provide, depending on the modules installed, visual and acoustic indication of the status and operating conditions of the approved devices connected to the PRODUCT thus providing a support to the management of the alarms and to the planning of nursing workflow.

The information displayed by the PRODUCT is not meant to replace or replicate the original display of data, messages and alarms of the medical devices. The PRODUCT is not intended to control, affect or modify the normal use of those devices.

The PRODUCT does not substitute a “Nurse Call” system and it is not a “Distributed Alarm System” (as defined by the regulation EN 60601-1-8). Therefore, it must not be used in place of the direct monitoring of the alarms generated by the medical devices. This limitation is due, among the other reasons, to the specifications and limitations of the communication protocols of the medical devices and to the nature and limitations of the hospital local network.

#### **INTENDED USERS**

The PRODUCT must be used by properly trained physicians, nurses, administrative staff, system administrators, biomedical engineers and technicians.

Use of the system must be granted, by means of specific configuration of the passwords and active surveillance, only to trained personnel in possession of the professional qualifications to correctly interpret the information supplied and to implement the appropriate safety procedures.

Limited parts of the PRODUCT may be used by other categories of users for non-clinical purposes, to access a limited set of information and without the ability to alter existing information or enter new ones. For example patient’s family member can access information of their relative.

#### **INTENDED ENVIRONMENT**

The PRODUCT can be used inside medical facilities in intensive care units, wards, operating blocks, operating theatres and other departments.

The PRODUCT is software-only medical device that can be run on a computer connected to the hospital local network and must be adequately protected against cyber-attacks.

The PRODUCT must be installed only on recommended PCs and/or operating systems.

In using the PRODUCT, the user declares to have understood and accepted the characteristics, limits and responsibilities contained herein and in the user manual.

#### **CONFLICTING TERMS**

Should the User and ASCOM UMS enter into an agreement for the supply and/or the license of the PRODUCT containing terms different from those contained herein, the terms of that agreement shall prevail on the terms of this Contract which are not compatible with them, it being understood that all the remaining terms of this Contract shall remain fully valid and the enforceable.

\* \* \* \* \*

Should you have any questions concerning this End-User License Contract, please contact the ASCOM UMS representative in your area or write to ASCOM UMS srl unipersonale, Customer Service, Via di Mucciana 19, 50026 San Casciano in Val di Pesa (Firenze), Italy (or use contacts listed below).

Date

Signature

---

### **SPECIFIC ACCEPTANCE OF CERTAIN PROVISIONS IN THIS CONTRACT**

#### **IMPORTANT—READ CAREFULLY**

In compliance with articles 1341 and 1342 of the Italian Civil Code or to any other equivalent provision applicable in any other jurisdiction, I hereby declare that I have read, fully understood and specifically accept the following clauses of the ASCOM UMS End-User License Contract concerning the product “DIGISTAT®”:

- COPYRIGHT

- LIMITED WARRANTY
- LIMITATIONS
- LIMITED LIABILITY
- INTENDED USE
- RESTRICTIONS.

Date

Signature

## 9. Contacts

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- **ASCOM UMS srl unipersonale**

Via Amilcare Ponchielli 29, 50018, Scandicci (FI), Italy  
Tel. (+39) 055 0512161  
Fax (+39) 055 8290392

- **Technical assistance**

[support@unitedms.com](mailto:support@unitedms.com)

800999715 (toll free, Italy only)

- **Sales and products information**

[sales@unitedms.com](mailto:sales@unitedms.com)

- **General info**

[info@unitedms.com](mailto:info@unitedms.com)

# Appendix A: glossary

---

The use of DIGISTAT® systems requires a basic knowledge of the most common IT terms and concepts. In the same way, the comprehension of this manual is subject to such knowledge. However, in order to improve access to the document and clarify the use of certain terms relating to the DIGISTAT® systems, we have included a glossary for quick (and obviously concise) reference for the clarification of terms.

Remember that the use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.



*Use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.*



## ALARM MESSAGE

An “Alarm message” coming from any one of the devices in use warns the user about an immediate danger for the patient or the users of the device. Alarm messages are of vital importance and must be managed with the highest priority.

## BUTTONS

### ❖ Function buttons

Buttons which, when clicked, make it possible to perform different operations or access different functions of the software. In Figure 2 the active function buttons are **New**, **Show**, **Delete**, **Change** and **Reports**.

### ❖ Active button

Button which, in the context present, can be clicked and makes it possible to perform operations or access particular functions.

### ❖ Inactive button

Button which, in the context present, cannot be clicked.

### ❖ Make button active

Perform an operation which means that a certain button becomes clickable.

## CHECKBOX

Small box, usually square, which can be clicked to select an option. It can also be called a “selection box”.

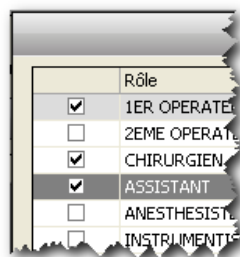


Figure 1 - Checkbox

### ❖ Selection box

See “Checkbox”.

## CLICK

Move the mouse over a specific object and press one of the buttons (the left one unless otherwise specified).

### ❖ Double Click

Click twice in rapid succession.

## CLIENT

A computer connected to a server (see) in an information network that requests the server for one or more services.

## COMMAND BAR

Term used to generically indicate a portion of screen containing different function buttons (Figure 2).



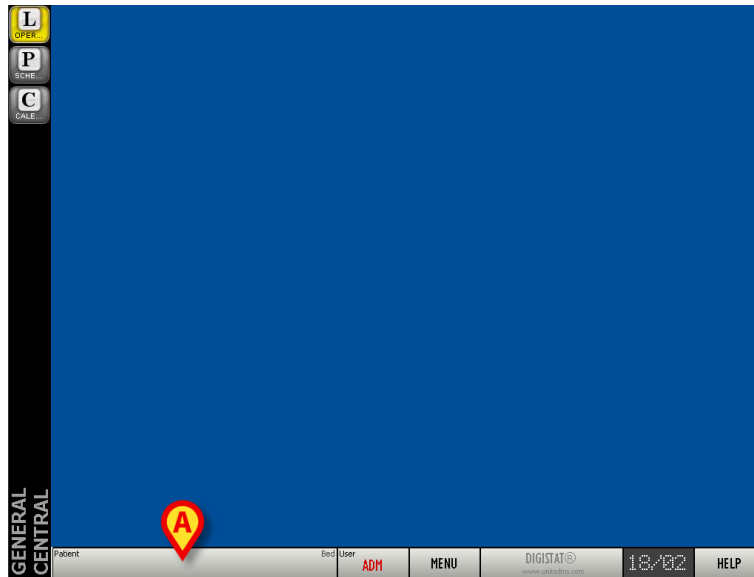
Figure 2

## CONFIGURATION

The configuration of a software product is a series of operations and choices which determine the general set-up of the software and its operation and appearance. The configuration is not to be performed by the user (see) but by a system technician/administrator (see).

## CONTROL BAR

The external portion of each page on the DIGISTAT® environment, comprised a control bar at the bottom and a side control bar. “Control Bar” is used to manage, among other things, access to the system (login - see), exit from the system (logout - see) and selection of the module required.



**Figure 3**

## **CURSOR**

Moving mark indicating a position. It is often a short blinking vertical line indicating where the user is inserting data.

## **DATABASE**

A database is a collection of data organized so that it is easily accessible. The data in a database can be consulted, edited and updated.

## **DEFAULT**

A value is classed as being “by default” when it is automatically used by the system if the user does not specify any other values.

## **DIGISTAT®**

### **❖ DIGISTAT® Module**

Software designed and developed to offer a solution to a specific series of needs and problems.

### **❖ DIGISTAT® System**

A series of DIGISTAT® modules that work in an integrated, synchronized and interdependent way.

### **❖ DIGISTAT® Environment**

The combination that encompasses and characterizes all DIGISTAT® modules and systems

## DRAG

To “drag an item” means to move to an object with the cursor of the mouse, click and, keeping the button pressed, move the cursor across the page. The object moves with the cursor. The “dragged” items stops when you release the left button.

## DRAG AND DROP

“Drag and drop” is the act of dragging an item to move it to a different point of the screen (see “drag”).

## EDIT

Modify the data on a screen.

### ❖ Edit Mode

A screen is said to be in edit mode when it can be edited by the user.

### ❖ Edit state

See “Edit Mode”.

## EVENTS

In the OranJ system, an event is a significant occurrence in the operating process which must be documented. The number and kind of possible events depend on the user needs and are set by configuration.

## FIELD

Portion of screen in which you can enter data (digits, letters or both - Figure 4).

A screenshot of a software interface titled "Filters". It contains a list of input fields: "Patient Name", "Patient Code", "Temporary ID", "Reservation Code", "Operation", "Admission Code", "H.U.", "Room", and "Requirements". The "Requirements" field has a checkbox and a dropdown menu. A red bracket on the right side of the form groups these fields, and a large red arrow points from the right towards this bracket. The bottom of the window shows a status bar with the text "Prg Jour 1".

**Figure 4 - Fields**

### ❖ Free field

A field is “free” when you can enter any type of text or digit and it is not restricted to a series of pre-defined options.

## LOCATION

The term “Location”, when used within the DIGISTAT® environment, indicates the area (for instance a department, or a ward) for which the system is configured.

## LOG

Item recording in real-time and chronologically certain operations defined as “meaningful”.

## LOGIN (procedure)

The act of accessing (by means of username and password - see) the system.

### ❖ Logout

The act of exiting the system.

## MARKER

In the OranJ system, markers are events which are defined as characterizing every operating event. The number and nature of markers, as well as the logic of succession, can be configured to suit the user’s needs. The OranJ system envisages 6 markers as standard:

1. Entrance to the block (the patient has undergone block check-in)
2. Entrance to the room (the patient has undergone room check-in)
3. Skin incision
4. Suture
5. Exit from the room (Operation done)
6. Exit from the block

## MESSAGE CENTER

A software that manages the messages and the licences within the DIGISTAT® environment (see). The use of “Message Center” is reserved to the system administrators (see).

## PAGE

Term used to indicate what can be seen on the screen in a specific moment.

## PASSWORD

A password is a sequence of numbers and/or letters used to access a protected area. It should only be known to the user concerned.

## PATIENT

### ❖ Admitted Patient

Within the DIGISTAT® environment, the expression “admitted patient” means that the patient has been admitted to the hospital structure. The admission of a patient involves the assignment of a bed and a location. When a patient is admitted, the number of his/her bed appears alongside his/her name on the **Patient** button on the ControlBar (see Figure 3 A).

### ❖ Patient registered in the database

The expression means that the name and data of a patient appear in the archive that we are consulting.

### ❖ Patient Selected

Within the DIGISTAT® environment, when the patient is selected, his/her name appears on the **Patient** button on the ControlBar (see Figure 3 A).

## POP-UP

Window containing a message for the user (see) which appears following the performance of any operation.

## QUERY

A database interrogation performed to obtain a specific set of data.

## RADIOBUTTON


Selection tool enabling to select one among many available options and having the feature: . The selection of an option excludes the other options. See, for instance, the radiobuttons shown in Figure 5.



Figure 5

## READ-ONLY

This expression means that a series of data cannot be edited by the user.

## RECORD

A series of data organized rationally and composed of coherent items. An example of a record could be the patient data composed of name, last name, address, code, etc.

## RESERVE

In the OranJ and Smart Scheduler systems, reserves are those operations which have not been assigned a time, block or room but which have been included in the daily schedule.

The “reserve” concept has been introduced to enable the immediate scheduling of emergency operations which become necessary from one minute to the next. The criterion observed for these urgent cases is “as soon as a place is free, the operation goes ahead”.

## SCREEN

Term used to indicate what can be seen on the computer screen in a specific moment.

## SERVER

An informatic component (a computer, for instance) providing services to other components (typically named “clients” - see) in an information network.

## SLOT

In the Smart Scheduler system, the term “slot” indicates the range of time in which an operating room is available to a hospital unit for scheduling. From the graphic point of view, on the scheduling grid, the slot is one of the ochre yellow colored areas (Figure 6).



Figure 6 - slot

## STATE (of the operation)

In the OranJ and Smart Scheduler systems, the “operation state” is the “stages” in which an operation is, in relation to the process necessary to its completion. There are 6 visible operation states in the two systems. These are

- 1) Foreseen – It has been decided that an operation must be performed for a specific patient.

- 2) Requested – It has been declared that the operation can be included in the schedule of the structure where you are operating, therefore its scheduling has been requested.
- 3) Scheduled – The operation has been included in the schedule of the structure where you are operating. The location and time of the operation have been decided.
- 4) Ready - The patient has undergone check-in and is inside the surgical block.
- 5) In progress – The patient has undergone room check-in. The operation is being performed.
- 6) Completed - The patient is out of the operating room. The operation is over.

The Smart Scheduler system manages operations up to scheduling, i.e., in the three states described here. The OranJ system manages the operations from scheduling up to completion (the last 4 states). Within OranJ the states are characterized by different colors. The “scheduled” state is light gray; the “ready” state is green; the “in progress” state is blue; the “completed” state is dark gray.

## SYSTEM ADMINISTRATOR

Specialized technician responsible for managing the IT system used. This is the first person to contact if you have any kind of problem.

## TAB

Tabs like those of an address book, which you click to access a different page (Figure 7).

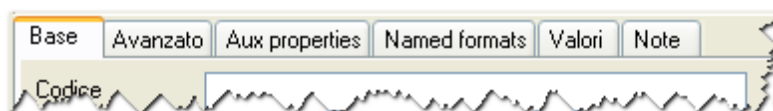


Figure 7 - Tab

## TOOLTIP

A tooltip is an area containing information about one of the items displayed on screen. The tooltip appears when the mouse pointer passes over the specific item (clicking is not necessary).



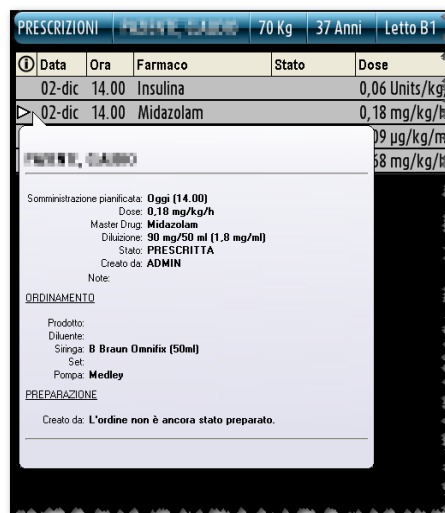


Figure 8 - Tooltip

## TOUCH SCREEN

Particular type of screen in which the operations usually performed using the mouse are performed by touching the surface of the glass.

## USER

The person using the system.

### ❖ User Connected

See “User Logged In”.

### ❖ User Logged In

User who has accessed the system (login - see) by entering his/her username and password and is therefore authorized to access some of its functions. The user logged in is also known as the “user connected”.

### ❖ User Logged-out

User who has not accessed the system (login) or who has exited the system (intentionally or otherwise) and cannot therefore access his/her functions without logging in again.

## **USERNAME**

The name which identifies the user of a system. It can be composed of letters, numbers or both together.

## **WARNING MESSAGE**

A “Warning message” warns the user that an ongoing situation or procedure could lead to a danger for the users or the patient. Warning messages are very important and must be managed as soon as possible.

## **WORKSTATION**

In this manual the word “workstation” indicates the computer on which the software or part of it is installed.

# Appendix B – Residual risks

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The risk management process has been actualized for the DIGISTAT® medical device according to the relevant technical regulations (EN14971, EN62304, EN62366). All the possible control measures have been defined to reduce all residual risks to the minimum level and make them this way acceptable considering the benefits brought in by the product. The total residual risk is also acceptable if compared to the same benefits.

The risks listed below have been taken into consideration and reduced to the minimum level possible. Yet, given the inherent nature of the “risk” concept, it is not possible to completely remove them. It is therefore necessary, according to the regulations, let the users know each and every possible risk (even though remote).

- Impossibility in using the system or some of its functionalities, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Slowdown of device performance, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Circulation of users’ and/or patients’ sensible data.
- Unauthorized actions carried out by users, which can cause errors in the therapeutic/diagnostic actions and in the attribution of responsibilities of these actions.
- Wrong data insertion and display, which can cause errors in the therapeutic/diagnostic actions.
- Display of either partial or hard-to-read information, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Attribution of patient data to the wrong patient (patient exchange), which can cause errors in the therapeutic/diagnostic actions.
- Accidental data deletion, resulting in loss of data, which can cause delays and/or errors in the therapeutic/diagnostic actions.

## **RISKS RELATING TO THE HARDWARE PLATFORM IN USE**

- Electric shock for the patient and/or the operator, which can cause injury and/or death for the patient/operator.
- Hardware components overheating, that can cause injury for the patient/operator.
- Infection contraction for the patient/operator.