DIGISTAT® OranJ

DIGISTAT® Version 4.3

User Manual

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Contents

Contents **3**
1. The OranJ system **6**
1.1. Introduction 6
1.2. General structure 6
1.3. Colors and operation state in OranJ 6
1.4. The “List of operations” page 7
1.4.1. The list of operations 8
1.4.2. The filter buttons 11
1.4.3. “List of operations” screen command bar 11
2. The “OranJ” module **13**
2.1. “OranJ Home” screen 14
2.2. Operation data 14
2.3. Command bar 16
2.4. Operation chronology: the “Markers” 16
2.4.1. Markers sequence 17
2.4.2. Patient identification 19
2.4.3. Markers and operation state changes 21
2.4.4. Markers management 22
2.5. “Drugs, events and notes” area 24
2.5.1. How to record an event 26
2.5.2. How to edit an existing event 32
2.5.3. How to delete an existing event 33
2.6. The “Notes” area 34
2.7. The “patient” area 36
2.8. The “room” area 37
2.9. The “residual time” area 38
2.10. The “staff” area 40
2.10.1. “Room Staff” page description 41
2.10.2. Operating staff management 42
2.11. The “materials and resources” area 45
2.11.1. Manual procedure 48
2.12. “Resources Used” screen description 50
2.12.1. Editing the “Resources used” screen 53
2.12.2. How to move a specified resource set to another operation 55

3. Operation and patient management 59
3.1.1. Patient 61
3.1.2. Operation 62
3.1.3. Other operations 64
3.1.4. Other information 66
3.2. How to schedule a new operation 67
3.2.1. How to cancel a scheduled operation 70
4. The OranJ "Plan" module 73
4.1. Screen description 74
4.2. The "OranJ Plan" command bar 79
4.2.1. How to edit the operation plan 79
4.2.2. How to change the block displayed 81
4.2.3. How to change the time range displayed 82
4.2.4. How to change the day displayed 82
4.3. The "not assigned" area 84
4.3.1. Planning a "Reserve" operation 86
4.4. Room Plan 86
4.4.1. Scheduling the single room 87
4.4.2. Room schedule 87
4.4.3. The command bar 90
4.4.4. The "daily program" area 91
4.4.5. The "not assigned" area 92
4.4.6. How to edit the operations schedule 92
4.4.7. Room markers 94
4.4.8. How to edit the room markers 95
5. The OranJ Central module 97
5.1. The main page 97
5.2. Operating Room detail 100
5.3. Room schedule 101
5.4. The command bar 105
5.5. "Room monitor" page contents 105
5.6. Operating times detail 106
5.6.1. Operation times 106
5.6.2. Room times 115
6. OranJ Chart module 117
6.1. Page features 117

6.1.1. The “Events” area 118
6.1.2. The “Chart” area 119
6.1.3. The command bar 120
7. Check-In configuration 121
7.1. Modules in use 121
7.1.1. OranJ Plan 121
7.1.2. OranJ Check-In 123
7.2. How to perform the patient check-in 124
7.2.1. Check-in procedure by barcode reading 124
7.2.2. Manual check-in procedure 125
7.3. How to perform the patient check-out 128
8. OranJ - “Bedside”Configuration 129
8.1. The Room Plan module 129
8.1.1. Room schedule 130
8.1.2. The command bar 133
8.1.3. The “daily program” area 133
8.1.4. The “not assigned” area 134
8.1.5. How to edit the operation plan 135
8.1.6. Room markers 136
8.1.7. How to edit the room markers 137
9. Contacts 139

1. The OranJ system

1.1. Introduction

For general and detailed information about the DIGISTAT® environment and the instruction for use of the Control Bar software see the document "DIG UD CBR IU 0005 ENG V01 - Digistat Control Bar User Manual".

The set of modules belonging to the OranJ (Operating Room and Anesthesia Journal) systemprovides a complete documentation of operations in the operating room at surgical block or individual room level.

Using OranJ, it is possible to record every significant event, manage room staff, plan time schedules, spaces and operating resources.

1.2. General structure

OranJ is structured to supply a constantly up-to-date picture of the situation in the surgical block or individual room. The workstations are configured to provide all and only the information relevant to the user concerned.
This means that every workstation enables the use of the program functions concerning the specific user.
There are four types of standard configuration:

1) GENERAL CENTRAL STATION: destined for use inside the surgical block. This makes it possible to display the situation of every single block and to operate on it.
2) BLOCK CENTRAL STATION: destined for use inside a specific surgical block. It has the same functions as the GENERAL CENTRAL STATION, but limited to block level.
3) OPERATING ROOM: destined for use inside the operating room. It makes it possible to manage all the activities of the individual room.
4) CHECK IN: destined for procedures relating to the admission of the patient to the surgical block.

1.3. Colors and operation state in OranJ

The term "operation state" indicates a standard meaningful moment in the patient's operating process.

Four different operation states are possible.

1) Scheduled – the operation has been scheduled;

2) Ready – the patient has undergone block check-in;

3) In progress – the patient has entered the operating room;

4) Completed – the operation has been completed.

On the pages of OranJ, each of these four states is identified by a color.

1) Light gray: indicates that the operation is scheduled (Scheduled).

2) Green: indicates that the patient has undergone block check-in (Ready).

3) Cyan: indicates that the patient has entered the operating room (In progress).

4) Dark gray: indicates that the operation has been completed (Completed).

The DIGISTAT® Smart Scheduler/OranJ combined system envisages six different operation states. The first two (in logical and chronological order) are "foreseen" and "requested". These two states are managed by the DIGISTAT® Smart Scheduler system and are not displayed by the OranJ system.

It is moreover possible (in ways depending on the specific configuration) to activate on "OranJ" an ulterior state which makes an operation impossible to edit. The operations, when in this state, are "Read only". A darker shade of grey characterizes this state.

1.4. The "List of operations" page

To access the "List of Operations" page (Fig 2)

- Click the **Patient** button on the DIGISTAT® Controlbar (Fig 1 **A**).

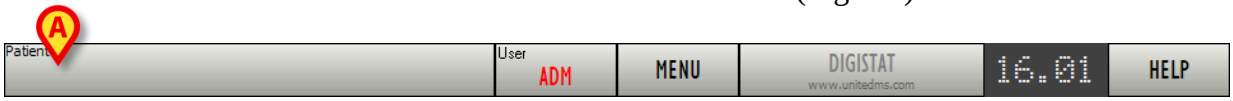


Fig 1 - Control Bar

A page similar to that shown in Fig 2 is displayed.

The "List of Operations" screen is formed of three main areas:

1) the lists of operations (grouped by state - Fig 2 **A**);
2) the filter buttons (Fig 2 **B**);
3) the command bar (Fig 2 **C**).

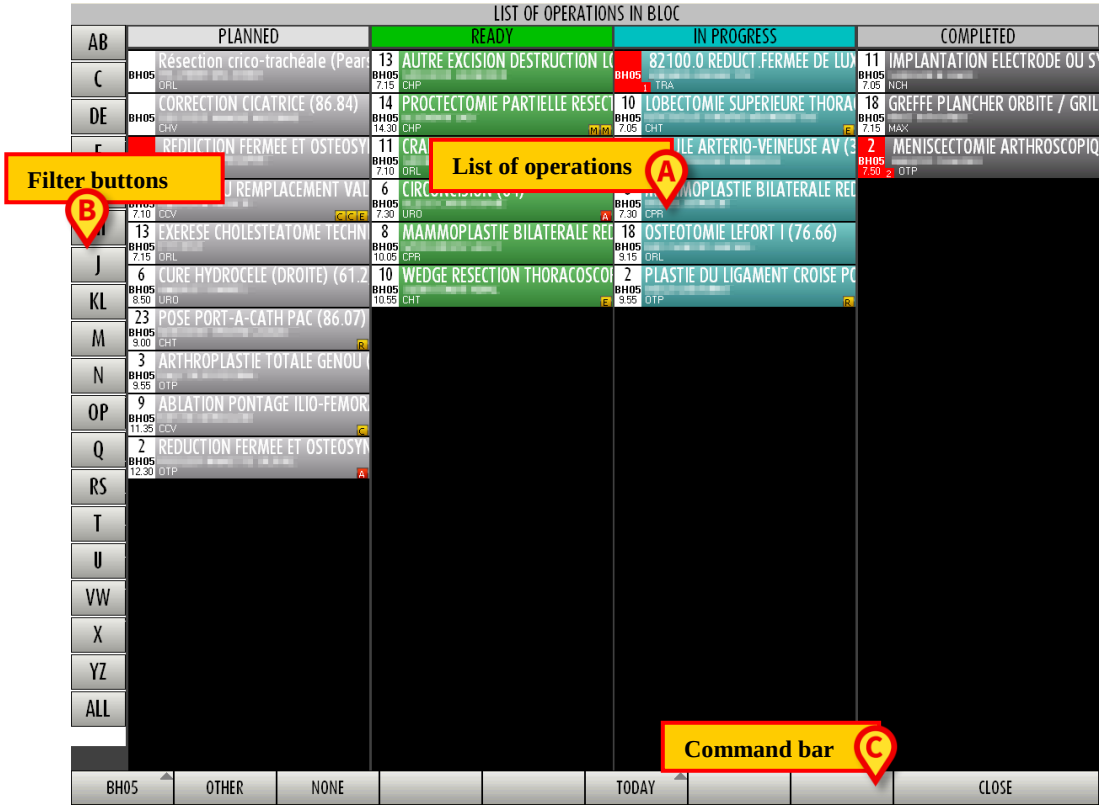


Fig 2 – List of operations

1.4.1. The list of operations

The operations are displayed as colored boxes (Fig 2 **A**, Fig 3).

Fig 3 – Operation

Boxes are arranged into four columns. Every column corresponds to an "operation state", it includes all the operations in that state that are scheduled for the selected day and operating block (see paragraph 1.3 for a description of the possible states)
The page shows all the operations scheduled for the current day, plus any operations begun on previous days and still in progress.

The color of the operation boxes indicates the "state" of the corresponding operation (See paragraph 1.3 for an explanation of the association between color and operation state).

Operation information about is displayed in the box. On the right (Fig 3 **A**) the following information can be displayed:

- the patient's name;
- the type of operation;

- the hospital unit requesting the operation.

On the left (Fig 3 **B**) the following information can be displayed:

- the planned room (room 6 in Fig 3);
- the planned block (BLO in Fig 3);
- the operation scheduled start time (10:35 in Fig 3).

The kind and position of the information displayed in a box depend on the configuration in use.Thus the information can be different from that displayed in the examples here described.

If an operation is assigned to a block and a room thet are different from those specified in the scheduling phase, the corresponding operation box (Fig 3) shows the actual block and room (no longer the scheduled ones). The block and room originally scheduled are still indicated on the record shown on the "Patient and Operation Details" page (described in paragraph 3).

The box can contain small yellow or red letters (Fig 4).

Fig 4 – Allergies and devices

The yellow letters indicate the possible devices required for the operation. The letter is the initial of the name of the device.

The red letters indicate the presence of infections, allergies or transmissible diseases. This information is specified on the DIGISTAT® Smart Scheduler system.

One or more requirements can be configured to be displayed on the "Operation box". For instance: to indicate that an ICU bed is required after the operation, or to indicate that an operation requires no anesthesia. The requirement is displayed on the operation box as a small square, having customizable colour and indicating the first letter of the name of the requirement.

When the left part of a box is red (as in Fig 5) it means that the operation is an "Emergency".
"Emergencies" are displayed not only on the current day, but also on the pages referring to future days (see paragraph 1.4.3 for the procedure required to change the day displayed).
The small number indicated in Fig 5 **A** indicates the emergency level (level 1 in the figure - the configuration here described envisages three emergency levels).

Fig 5 - Emergency

If the ! icon (Fig 6 **A**) is displayed alongside the patient's nameit means that the patient's data is temporary. The "Temporary patient" related procedures are described in the DIGISTAT® "Smart Scheduler" system user manual.

The red triangle indicated in Fig 6 **B** means that the operation is a reserve planned for a day that is not the current day. See paragraph 4.3 for the explanation of the term "Reserve" in the "OranJ" context.

Fig 6 – Temporary patient

If a red cross is displayed before the operation name (Fig 7) it means that the patient entered the block and, for any reason, was not operated and checked-out immediately after.

Fig 7

The operation boxes are clickable. Click one of the boxes to access the corresponding "Home OranJ" screen. The "Home OranJ" screen makes it possible to display and manage all the information available for a specific operation. The "Home OranJ" screen, shown in Fig 91, is described in paragraph 2.1.

The boxes characterized by the ! icon (temporary patient data) cannot be clicked

1.4.2. The filter buttons

On the left side of the screen there is a vertical bar comprising all the letters of the alphabet (Fig 2 **B**). This bar works like an index and makes it possible to display the patients whose names begin with a specific letter.
For example, click the **AB** button on the bar once and only patients whose names begin with the letter A appear.
Double click the same button and only patients whose names begin with the letter B appear.
Click the **All** button to see the complete list of patients.

1.4.3. "List of operations" screen command bar

The command bar of the "List of operations" screen (Fig 2 **C**, Fig 8) contains several buttons making it possible to perform specific operations.

Fig 8 – Command bar ("List of operations" screen)

The specific function of each button is described in the following paragraphs.

The command bar may appear differently depending on the type of workstation you are using. Some buttons are not enabled if the related functionality is not relevant for the specific workstation goals.

1.4.3.1. Block selection

The first button on the left (**BH05** in the figure) shows the name of the operating block currently displayed.

The button can be used, if the workstation is a General Central Station, to display the data relating to another surgical block. To do that

- click the block selection button.

A list of all the blocks configured in the OranJ system opens (Fig 9).

Fig 9 – Block selection

- Click the button corresponding to the relevant block.

The data relating to the selected surgical block will be displayed.

1.4.3.2. Selection of another patient

To select a patient that is not currently displayed on screen

- click the **Other** button on the command bar.

The patient search and selection tool will open. See the specific relatd documentation for descriptions and procedures.

1.4.3.3. Patient deselection

The **None** button makes it possible to deselect the patient currently selected. The name of the selected patient is displayed on the **Patient** button on Control Bar. To deselect the patient currently selected.

- Click the **None** button.

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

1.4.3.4. Displayed day selection

The **Today** button makes it possible to display the data relating to a different day.

To change the day displayed on screen

- click the **Today** button.

A calendar window opens (Fig 10).

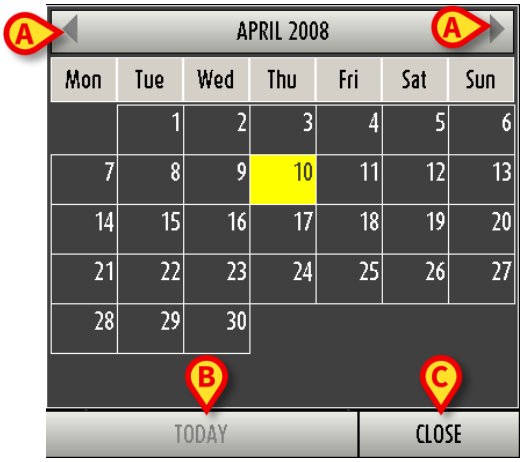


Fig 10 – Calendar

The selected day is highlighted in yellow.

You can use the arrows indicated in Fig 10 **A** to change month. If it is April, for example, click the right arrow to display the calendar for May and the left arrow to display the calendar for March.

After selecting the month

- Click the day you wish to display.

The day selected on the calendar will become yellow.

The page relating to the day selected will be automatically displayed.

If the reference day has passed, the page is divided into two columns (planned operations and completed operations).

If the reference day is in the future, the only operations displayed will be those planned (there will be a single light gray column).
If you select a different day from the current one, the **Today** button will show the date of the day displayed.

To return to the current day

- click, on the calendar, the button indicated in Fig 10 **B**.

To close the calendar

- click the **Close** button indicated in Fig 10 **C**.

1.4.3.5. Closing the "List of operations" screen

To close the "List of operations" screen

- click the **Close** button on the command bar.

2. The "OranJ" module

The DIGISTAT® OranJ module makes it possible to manage and document all the activities relating to an operation.

The OranJ module is installed on GENERAL CENTRAL STATION, BLOCK CENTRAL STATION and OPERATING ROOM Workstations.

2.1. “OranJ Home” screen

When accessing the “OranJ” module, the “OranJ Home” screen is displayed (Fig 12). This page is accessed when

a) you select the OranJ module icon on the side bar - 

;

b) you select a patient and/or an operation wherever this is possible.

The screen is formed of three main areas that will be described in the following paragraphs. These are:

1. the operation data (Fig 11 **A**);
2. the command bar (Fig 11 **B**);
3. the chronology of the operation (markers list - Fig 11 **C**).

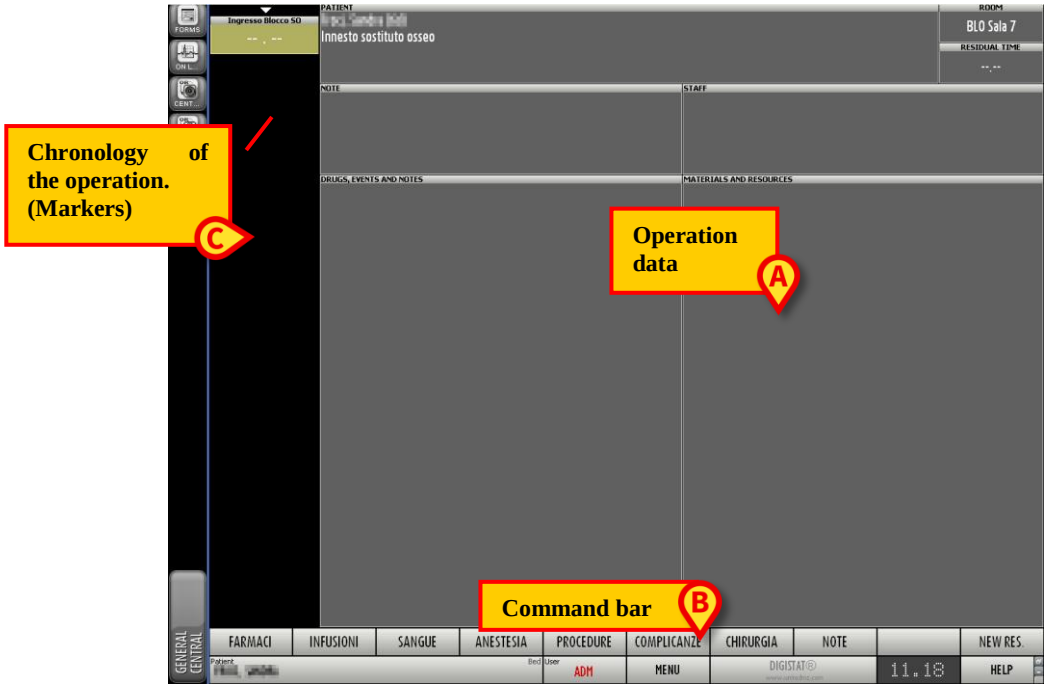


Fig 11 - OranJ Home

2.2. Operation data

The area shown in Fig 12 makes it possible to record and display all the operation’s relevant data.

Fig 12 – Operation data

The "Operation data" area is itself divided in further different sections, each of which is related to a set of features of the operation.

These sections are here listed and briefly described. A detailed description is provided in the paragraphs indicated.

- **"Patient"** area (Fig 12 **A**). Summarizes the data of the patient and the operation. Click it to access the "Patient and Operation Details" page (paragraph 3).

- **"Note"** area (Fig 12 **B**). Shows any notes concerning the operation or the patient. Click it to open a keyboard window and add a note (see paragraph 2.6 for the related procedures).

- "**Drugs, events and notes**" area (Fig 12 **C**). Shows the complete list of events recorded during the operation, the drugs administered and the notes added, in chronological order. Click it to access the "Events" page and enter, delete or edit these events (paragraph 2.5).

- "**Staff**" area (Fig 12 **D**). Shows the list of names and roles of staff involved in the operation. Click it to access a page to edit this list and manage changes in room staff in real time (paragraph 2.10).

- "**Materials and resources**" area (Fig 12 **E**). Shows the list of materials and instruments used during the operation. Click it to access a page to manage the resources scheduled and to add or eliminate them if necessary during the operation (paragraph 2.11).

- "**Room**" area (Fig 12 **F**). Indicates the surgical block and operating room. This section cannot be clicked. In the event of a change in the room scheduled for the operation, this

must be recorded using the OranJ Plan module (paragraph 4) or the "Patient and Operation Details" page (paragraph 3).

- "**Residual time**" area (Fig 12 **G**). Indicates the time remaining until the end of the operation according to the scheduled duration. This quadrant works like a countdown which starts when the patient enters the room (paragraph 2.9).

2.3. Command bar

The command bar of the main page of the OranJ module contains a series of buttons which make it possible to directly access some of the pages and functions described in this chapter.
These are shortcut buttons to facilitate access to those operations performed more frequently.
This bar is configurable: i.e., the number and function of the buttons change to suit the specific user's needs. The figure below should only therefore be considered as an example.

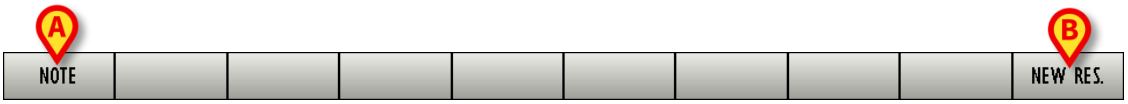


Fig 13 – OranJ module command bar

In the example shown here, the **Note** button (Fig 13 **A**) makes it possible to directly access the page used to add a note. Use the **New Res.** Button (Fig 13 **B**) to directly access the page to manage the operation room resources. Each of these pages is described in detail during this chapter.

Similarly, the other buttons, when so configured, offer direct access to those pages and functions which, depending on the user's needs, are used most frequently.

2.4. Operation chronology: the "Markers"

The left side of the screen (Fig 12 **C**) shows the sequence of events that make up an operation, in chronological order.
It is assumed that certain events are repeated for all operations and that they occur in a specific order. These are known as "**Markers**".
A marker follows the other, both chronologically and logically. The OranJ system envisages 6 markers as standard:

- Block in (the patient has undergone block check-in)
- Room in (the patient has undergone room check-in)
- Skin incision
- Suture
- Room out (Operation done)
- Block exit

The number and nature of Markers, as well as their sequential logic, can be configured to suit the specific healthcare structure's needs. The example here refers to a configuration which comprises the events most commonly used.

2.4.1. Markers sequence

The markers appear as a sequence of boxes (Fig 14). The boxes are arranged in chronological and logical order.

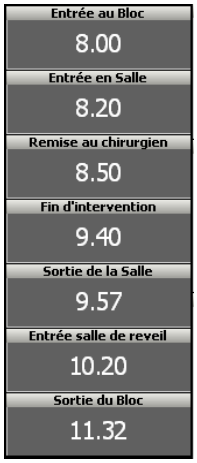


Fig 14 – Markers sequence

The first box, relating to entrance into the surgical block, appears when an operation is scheduled. The box is yellow and contains no information on the moment (date and time) in which the event occurred (Fig 15). This means that the event has not occurred (the patient has not yet entered the block).

Fig 15 – First marker

When the patient physically enters the surgical block, to record the event, the user has to simply click the box.
At this point, if specified by configuration, patient identification is necessary. Patient identification procedure is described in paragraph 2.4.2.

If an OranJ "Check In" workstation is active it is used to manage the patient's block entrance. OranJ "Check In" is described in paragraph 7.

After patient identification the box becomes gray and records the time at which it is clicked. A new ochre yellow box (or several boxes, depending on the configuration) indicating no time appears below it. New boxes refer to subsequent events (Fig 16).

The system can be configured to show the date of entry as well as the time.

Fig 16 – Second marker

The events this way recorded appear at the same time in the "drugs, events and notes" area of the page (Fig 17).

Fig 17 – Markers sequence

In general, to record a marker

- click the box corresponding to the event.

When the patient enters the operating room (the corresponding marker is called "room in") the system, if so configured, requests renewed confirmation of the patient's identity by means of a page similar to that shown in Fig 21. The identification procedure is the same as that described in paragraph 2.4.2, apart from the fact that identification can occur by means of barcode, patient code and also reservation number or the admission code (Fig 18).
This form enables to specify the actual room and block of the operation.

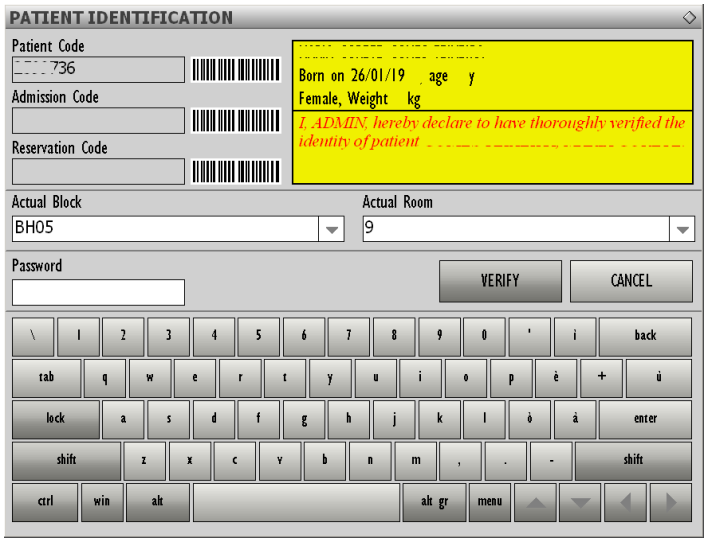


Fig 18 – Patient Identification

After identification, the "room in" box becomes gray and showns the room entrance time.
The event just recorded appears at the same time in the "drugs, events and notes" area of the page (Fig 19 **A**).
The patient's entrance into the operating room corresponds to the actual operation start time. Consequently, when the "room in" event is recorded, the length of time envisaged for the operation appears in the "residual time" area (Fig 19 **B**). This area works like a clock which performs a countdown (see paragraph 2.9 for a detailed description of this area).
The recording of the "room in" event sets off the countdown.

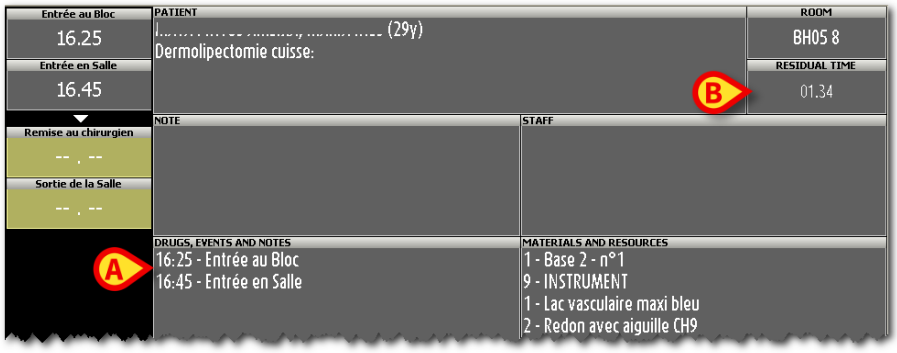


Fig 19 – Markers sequence

Every time an event is recorded, it appears in the "drugs, events and notes" area.
When the "room out" event occurs, the operation is over. The countdown of the "residual time" area stops and this area shows the actual duration time of the operation (in the form "Completed in hh:mm").

2.4.2. Patient identification

The possibility of entrance to the block and room is subject to identification of the patient if so specified by configuration. When the entrance of the patient into the block is recorded the system opens a specific window requesting confirmation of the patient's identity (Fig 20).

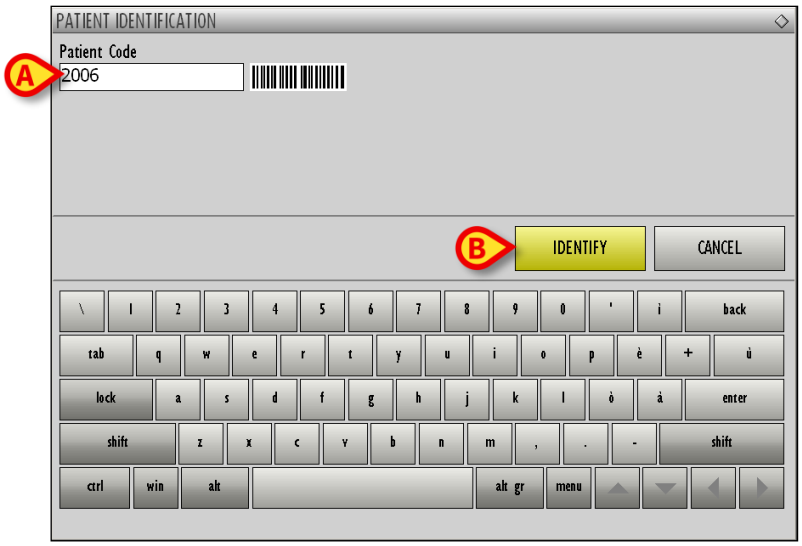


Fig 20 – Patient identification

To identify the patient

- Enter the patient code in the "Patient Code" field (Fig 20 **A**).
- Click the **Identify** button (Fig 20 **B**)

or, if the function is available

- Scan the patient's barcode.
- Click the **Identify** button (Fig 20 **B**)

A window containing the patient's data and a declaration of acceptance of responsibility by the user appears on the screen (Fig 21).

Fig 21 –Identification window

To complete the procedure the user has to

- Enter his/her password in the "Password" field (Fig 21 **A**).

- Click the **Verify** button (Fig 21 **B**).

The first event (entrance to the block) will be this way recorded.

You may abandon the procedure at any time by clicking the **Cancel** button (Fig 21 **C**).

2.4.3. Markers and operation state changes

The changes in the operation state are linked to some of the markers recorded on the "OranJ Home" screen. The recording of the marker determines a change in the operation state.

- The "Block entrance" marker implies passage from "Planned" state to "Ready" state.
- The "Room in" marker implies passage from "Ready" state to "In progress" state.
- The "Cut" marker implies the end of pre-surgical time and the beginning of surgical time.
- The "Suture" marker implies the end of surgical time and the beginning of post-surgical time.
- The "Room out" marker implies passage from "In progress" state to "Completed" state.

2.4.4. Markers management

2.4.4.1. How to change the time of a marker after it has been recorded

To change the time of a marker after it has been recorded

- Click the box corresponding to the marker (Fig 22 **A**).

A numeric keyboard is displayed (Fig 22 **B**).

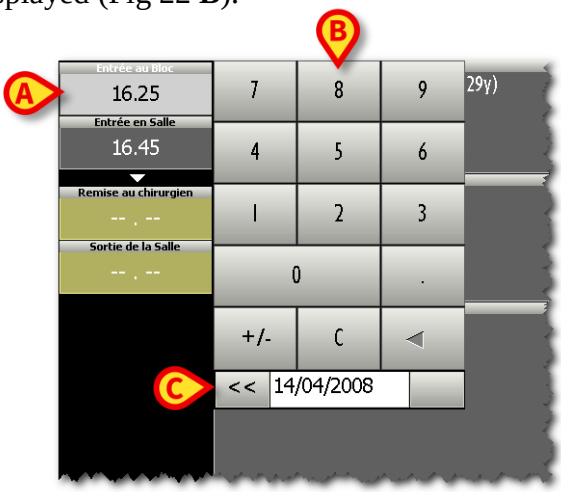


Fig 22 – Markers time change

- Enter the time required using the keyboard.
- Click again the box corresponding to the marker to record the new time.

The numeric keyboard disappears and the new time is displayed.

To hide the numeric keyboard, click the box corresponding to the event.

If the time entered is not coherent, the following error message pops-up (Fig 23).

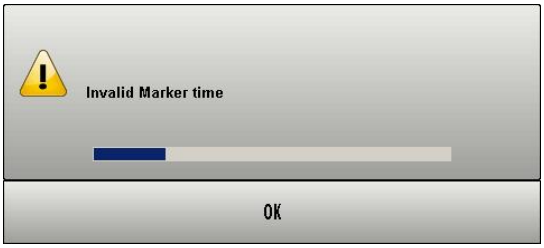


Fig 23 – Error: invalid time

2.4.4.2. Deleting a marker

To delete a recorded marker

- Click the (gray) box corresponding to the marker (Fig 22 **A**).

A numeric keyboard appears (Fig 22 **B**).

- Click the **C** button on the keyboard.

A message requesting confirmation of the operation is displayed.

Fig 24 – Marker cancellation confirmation window

- Click **Yes** to delete the marker.

Considering that one marker follows the other, not only chronologically but also logically (for example, a patient cannot be operated before entering the operating room), then
the deleting of a marker implies the deleting of all subsequent markers.

The box corresponding to the marker deleted becomes ochre yellow again and indicates no time, meaning that the related event has not yet occurred. This box is now the last on the markers sequence list; the event related to the deleted marker is the next event to happen.

2.4.4.3. How to change the date of a marker

To change the date of a marker

- Click the box corresponding to a marker (Fig 22 **A**).

A numeric keyboard appears (Fig 22 **B**). The keyboard displays the date on which the marker was recorded. Alongside the date there are two arrow-buttons (Fig 22 **C**).

- Click the left arrow << to bring the date of the event forward by one day.

- Click the right arrow >> to postpone the date of the event by one day.

You can only change the date within the range of specific values.
It is possible to bring the date of the first event forward by one day; the date of subsequent events on the other hand can be changed between the current date and the date on which the first event is recorded.

2.5. “Drugs, events and notes” area

Several kinds of events can be associated to an operation. The OranJ system makes it possible to configure a series of events which make it possible to describe the chronology of an operation in detail. The nature and number of these events are decided during configuration. In general, these are data relating to drugs administered (type, quantity, boluses), operating procedures implemented or possible complications which might occur during or after the operation is indicated.

These events are recorded on the “Events” page (Fig 26).

To access the “Events” page, on the “OranJ Home” page (Fig 25),

- Click the “drugs, events and notes” area of the screen (Fig 25 **A**).

Fig 25 - OranJ Home

The “Events” page will open (Fig 26).

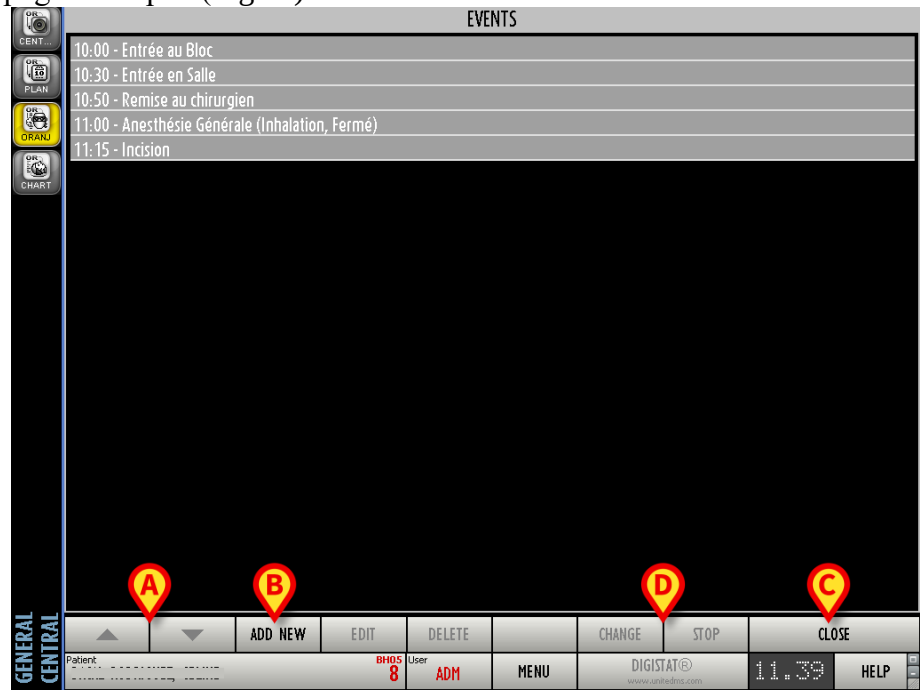


Fig 26 – “Events” page

The “Events” page shows all the events associated with the operation in chronological order, together with the markers and any notes added.

Markers cannot be edited on this page. To edit a marker, you have to use the procedure described in paragraph 2.4.

If the whole list of events cannot be displayed on the screen, you can use the arrows on the control bar to scroll the list (Fig 26 **A**).

To close the “Events” page, on the control bar

- Click the **Close** button (Fig 26 **C**).

The system returns to the “OranJ Home” page (Fig 12).

The **Change** and **Stop** buttons (Fig 26 **D**) are used to manage those events that continue over time and which, while occurring, may be subject to changes. This is true, for example, for certain infusions for which it might be necessary to change the infusion speed while they are in progress.

- Click the **Change** button to access the page that makes it possible to manage the data related to the event (an example is shown in Fig 30; remember, however, that the page in question can be configured in numerous ways and changes according to the event selected).

- Click the **Stop** button to record the end of the event in progress.

2.5.1. How to record an event

To record an event

- Click the **Add New** button on the command bar (Fig 26 **B**).

A page similar to that shown in Fig 27 is displayed.

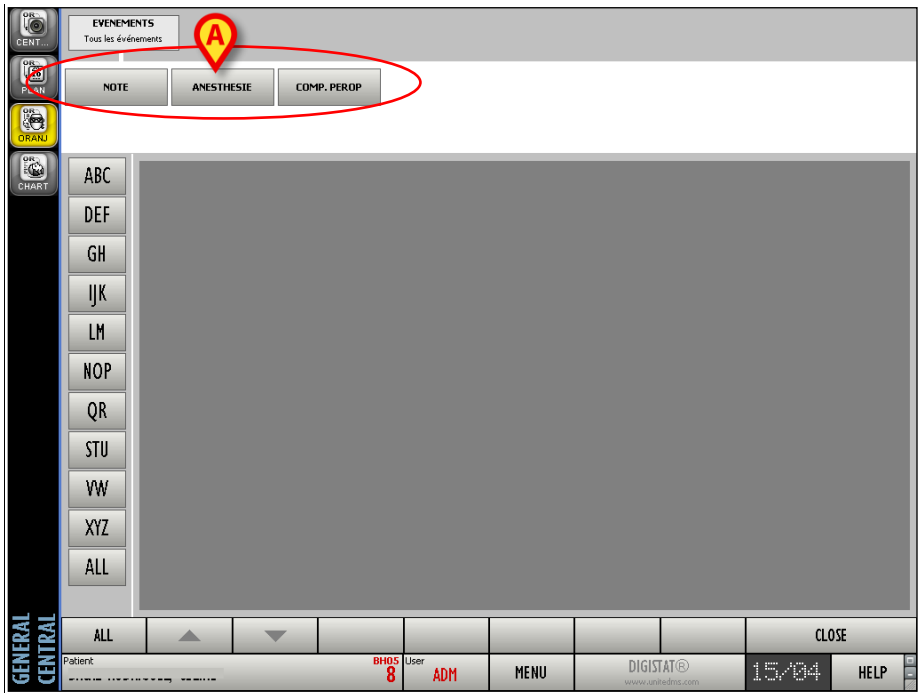


Fig 27 – Adding an event

Every type of event is represented by a gray rectangle (Fig 28).

Fig 28 – Type of event

In this example 3 types of events are configured: notes, type of anesthesia and operating procedures (Fig 27 **A**).

Remember that the number and kind of events are customizable. The configuration described here is an example.

At this point it is necessary to select one of the types (rectangles) available.

- Click the type of event required.

Every “type” of event can offer access to various sub-types. In the example shown in Fig 29, the “anesthesia” event gives access to four specific types of anesthesia. Likewise, the “drugs” event can give access to a list of types of drug (sleep inducers, anesthetics, painkillers, etc.), and every type of drug gives access to a list of specific drugs (Propofol, Midazolam, etc.).

To display the list of all the elements of a specific type (e.g., all drugs or all types of anesthesia)

- click the All button (Fig 29 **C**).

The elements on the list can be filtered using the index buttons on the left of the screen (Fig 29 A - See paragraph 1.4 for the explanation of how these buttons work).

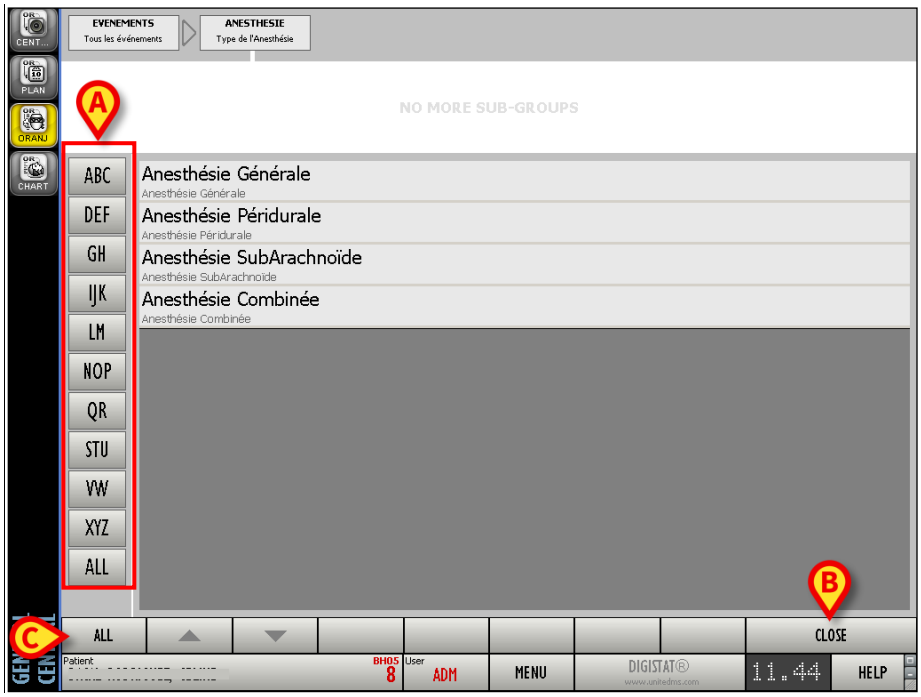


Fig 29 – Types of anesthesia

To add the event, you have to select one of the items from the list.

- Click the name of the event required.

By way of example, we have selected “Subarachnoid Anesthesia”. This selection gives access to the page shown in Fig 30.

Fig 30 – Event: subarachnoid anesthesia

The page makes it possible to specify, in detail, the type of anesthesia administered (Fig 30 **A**).

After entering the specific values, to record the new event

- Click the **Ok** button (Fig 30 **B**).

The new event recorded appears on the "events" page (Fig 26) and in the "drugs, events and notes" area of the "OranJ Form" page (Fig 25 **A**).

To cancel the operation

- Click the **Cancel** button (Fig 30 **B**).

The system returns to the page shown in Fig 29 without making any changes.

To close this page and return to the "Events" page

- click the **Close** button on the page (Fig 29 **B**).

You can also record an event using the shortcut buttons described in paragraph 2.3 (Fig 13). Click the buttons on the control bar to directly access the relative page for the addition of events.

The page which makes it possible to enter data relating to an event (Fig 30) changes depending on the type of event selected. While, for example, for an anesthesia you can specify the approach, location, needle, etc., for a drug to be administered, you can specify the dose, dilution, etc.

These parameters are decided during configuration and depend on the user's requirements.

Here is a description of the characteristics of the page which are common to all events.

2.5.1.1. The "notes" area

The "notes" area (Fig 30 **C**) makes it possible to add a note.

To enter a note

- Click the "notes" area.

A cursor appears inside the area.

- Enter the note using your workstation keyboard.

or

- Click the **Keyboard** button (Fig 31 **D**) to display a virtual keyboard on the screen (Fig 31).

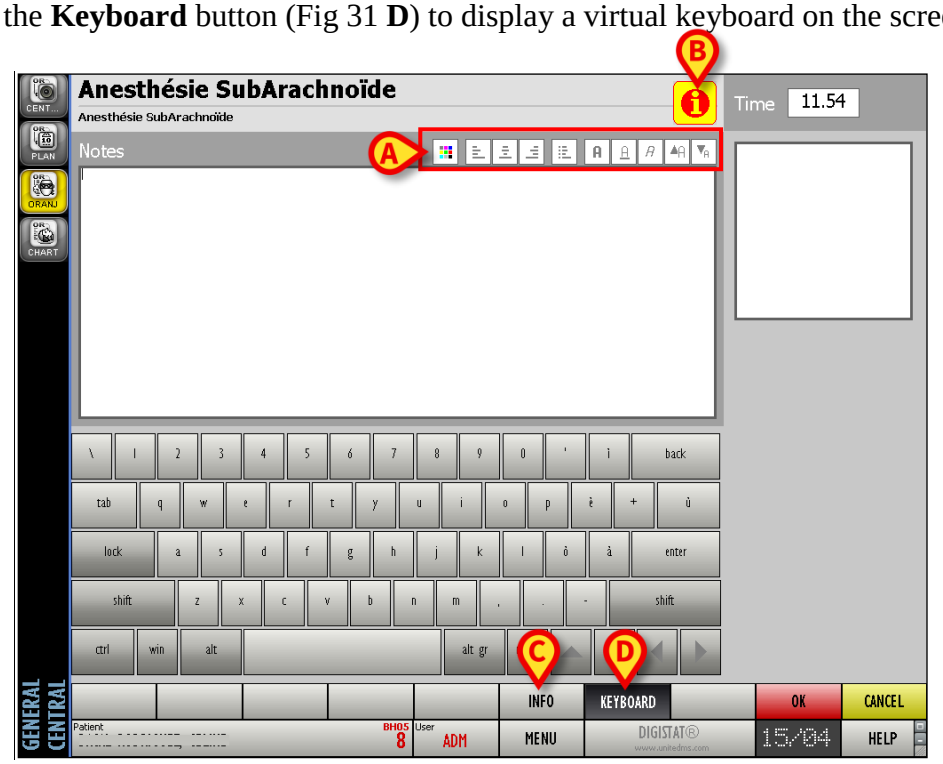


Fig 31 – Virtual keyboard

When the keyboard is displayed, the **Keyboard** button is black.

To hide the keyboard on the screen

- Click the **Keyboard** button again.

The buttons at the top of the notes area make it possible to use some of the most common text formatting functions (Fig 31 **A**).

The  button makes it possible to change the color of the text.

The  button makes it possible to align the text to the left.

The  button makes it possible to center the text.

The  button makes it possible to align the text to the right.

The  button makes it possible to create bulleted lists.

The  button makes it possible to write in bold type.

The  button makes it possible to write underlined.

The  button makes it possible to write in italics.

The  button makes it possible to enlarge the character used.

The  makes it possible to shrink the character used.

2.5.1.2. Information

The  button (Fig 31 **B**), like the **Info** button (Fig 31 **C**), makes it possible to access a page containing information on the event being added (Fig 32).

Fig 32 – Event information

The page can contain notes, bibliographic references, pictures, etc…

To exit the information page

- Click the  button again or click the **Info** button.

2.5.1.3. Time

The "Time" field (Fig 30 **D**) shows the current time if you are entering a new event and shows the time at which the event was entered when displaying an event entered previously.
The time can be changed using the numeric keyboard shown in Fig 30 **G**.

2.5.1.4. Picture

The white box on the right of the page (Fig 30 **E**) can contain a picture relating to the event being recorded; if it is a drug, for example, the box may contain the photo of the drug in question.

2.5.1.5. History

The history area (Fig 30 **F**) displays information on all the past recordings of the same event.

2.5.1.6. Numeric keyboard

The numeric keyboard (Fig 30 **G**) makes it possible to enter numeric values in the fields on the page. To do this, it is necessary to click the field in which you wish to write and then use the keyboard number buttons.

2.5.2. How to edit an existing event

To edit data relating to an existing event, to enter a note relating to the event or to display all the details relating to that event,

on the "Events" page (Fig 26).

- Click the event to be edited.

The line corresponding to the event appears highlighted (Fig 33).

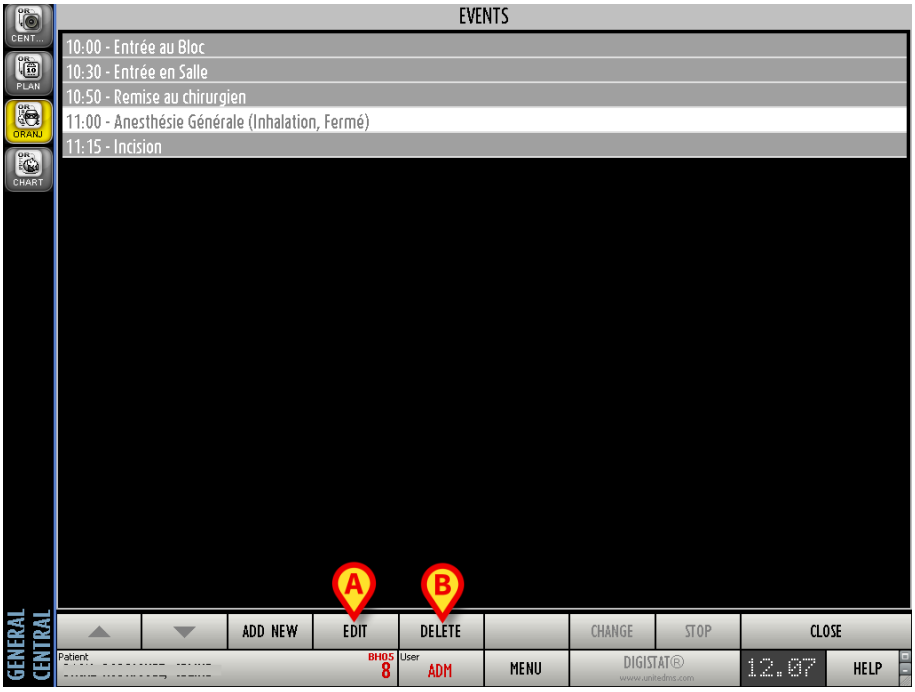


Fig 33 – Event selected

On the control bar

- Click the **Edit** button (Fig 33 **A**).

This directly accesses the page that shows the details of the event selected (Fig 34).

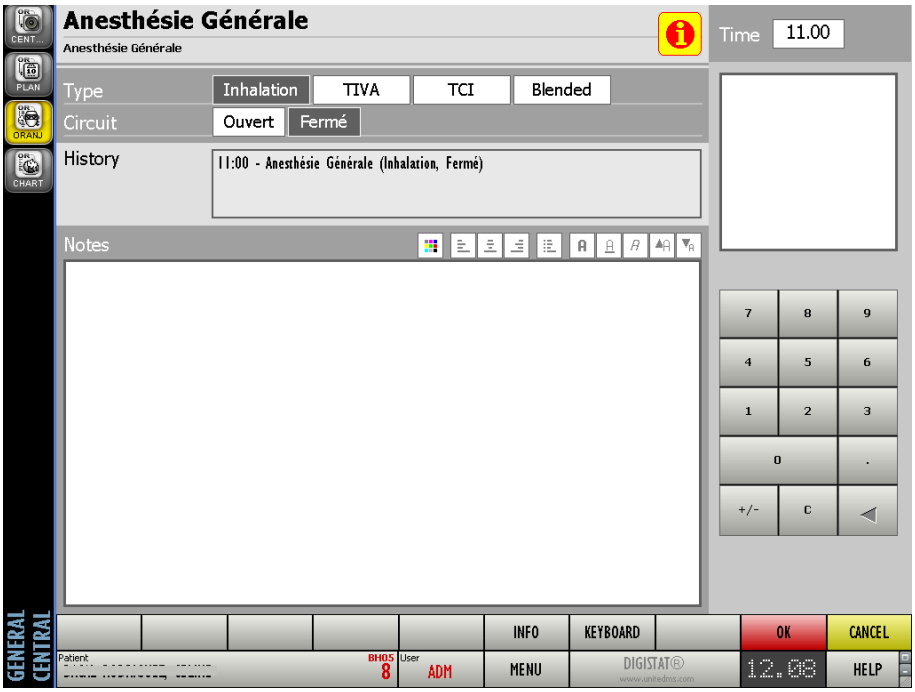


Fig 34 – Event details

The characteristics and functions of this page are described in paragraph 2.5.
You can now edit the data relating to the event. To save the changes made

- click the **Ok** button.

Remember that the markers cannot be edited or deleted from the "events" page. To edit markers it is necessary to use the procedure described in paragraph 2.4.4.

2.5.3. How to delete an existing event

To delete an event, on the "Events" page (Fig 26)

- Click the event to be deleted

The line corresponding to the event is highlighted (Fig 33).

- Click the **Delete** button on the command bar (Fig 33 **B**).

A window requesting confirmation of the operation is displayed (Fig 35).

Fig 35 – Event deletion confirmation

- Click **Yes** to delete the event.

The deleted event disappears from the "Events" page (Fig 33) and from the "Drugs, events and notes" area of the "OranJ Home" page (Fig 25 **A**).

Remember that the markers cannot be edited or deleted from the "events" page. To edit markers it is necessary to use the procedure described in paragraph 2.4.4.

2.6. The "Notes" area

To add a note to the operation selected

- Click the "Notes" area of the "OranJ Home" page (Fig 37 **A**).

Fig 36 - OranJ Home

A virtual keyboard appears on the screen (Fig 37).

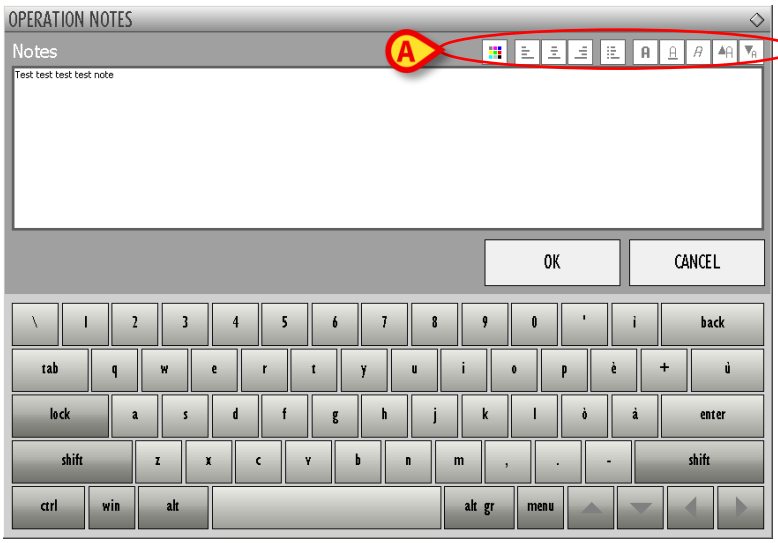


Fig 37 – Virtual keyboard

- Use the keyboard to enter the note.
- Click Ok to record the note.

or

- Click **Cancel** to cancel the operation.

The buttons at the top of the keyboard (Fig 37 **A**) make it possible to use some of the most common text formatting functions.

The  button makes it possible to change the color of the text.

The  button makes it possible to align the text to the left.

The  button makes it possible to center the text.

The  button makes it possible to align the text to the right.

The  button makes it possible to create bulleted lists.

The  button makes it possible to write in bold type.

The  button makes it possible to write underlined.

The  button makes it possible to write in italics.

The  button makes it possible to enlarge the character used.

The  makes it possible to shrink the character used.

The note is displayed in the “notes” area of the “OranJ Form” page (Fig 38).

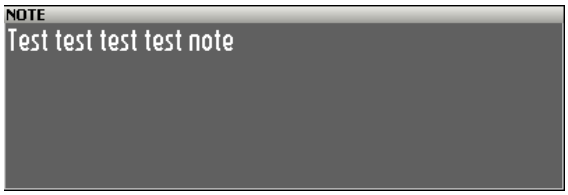


Fig 38 - Note

2.7. The “patient” area

The “patient” area of the “OranJ Form” page (Fig 39 **A**) shows the name of the patient for whom the operation is scheduled.

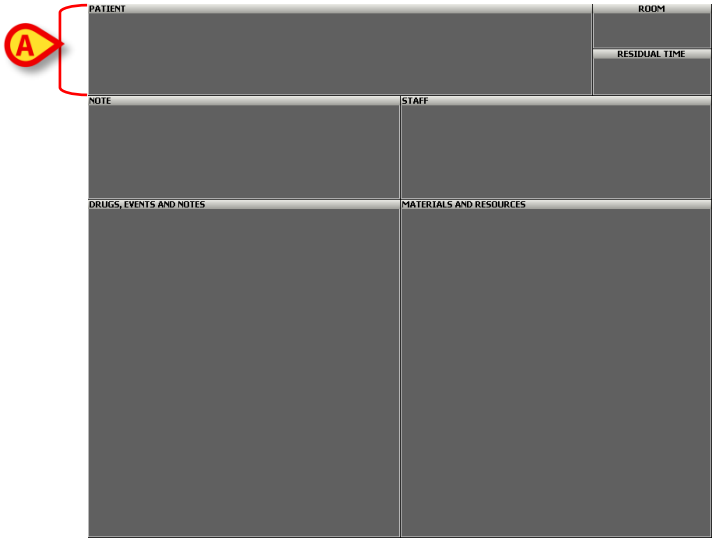


Fig 39 - OranJ Home

This area may also contain, depending on the configuration, the operation reservation code, the type of operation envisaged and, where specified, the location which has requested the operation.

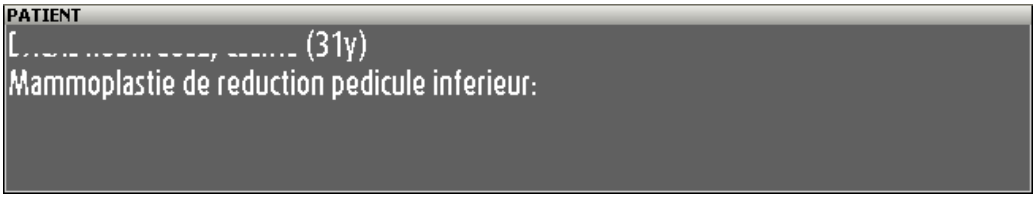


Fig 40 – “Patient” Area

The “patient” area makes it possible to access the “Patient and Operation Details” page (Fig 80).

To access the “Patient and Operation Details” page

- click the patient area.

The “Patient and Operation Details” page containing the data of the patient and the operation selected opens. See paragraph 3 for a detailed description of this page.

2.8. The “room” area

The “room” area (Fig 41 **A**) shows the block and the operating room scheduled for the operation.

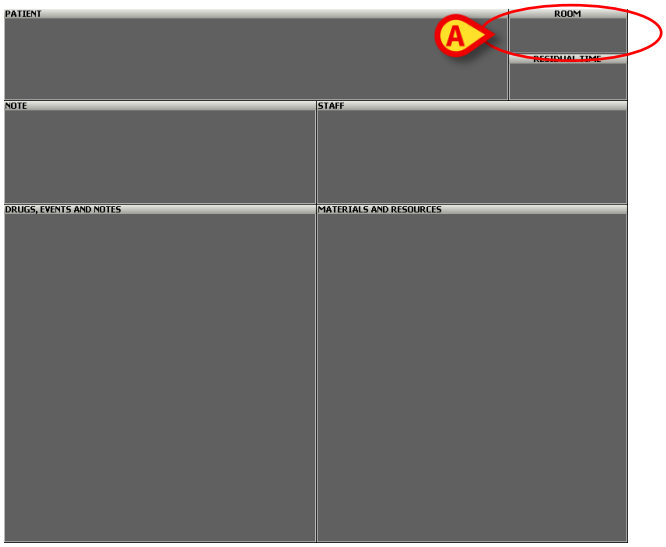


Fig 41 - OranJ Home

In the example shown in the figure “BH05” is the surgical block, “8” is the room number.

Fig 42 – “Room” area

The “room” area cannot be clicked. If there are changes concerning to the block or the room scheduled for an operation, these must be recorded on the “Patient and Operation Details” page (paragraph 3).

2.9. The “residual time” area

The “residual time” area (Fig 43 **A**) indicates the time remaining until the end of the operation with respect to the scheduled duration. The residual time is the sum of the pre-surgical, surgical and post-surgical times specified either on the “Patient and Operation Details” (Fig 84) or, if in use, on the DIGISTAT® “Smart Scheduler” system.

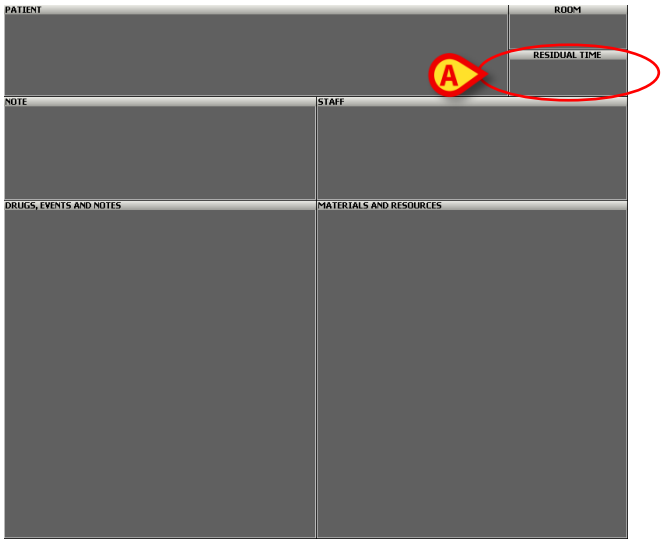


Fig 43 - OranJ Home

This quadrant works like a countdown. The example shown in Fig 44 indicates that there is 1 hour and 27 minutes left until the end of the operation (according to the planned duration).

Fig 44 – “Residual time” Area

The countdown starts when the “Room in” marker is recorded (see paragraph 2.4 for a description of the markers).

Before the patient enters the room, the area appears as shown in Fig 45.

Fig 45

When the countdown approaches zero (in the configuration used in the example, when the remaining time is less than thirty minutes) the residual time area turns yellow and starts flashing (Fig 46).

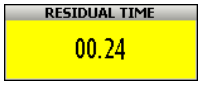


Fig 46

When the actual operation time exceeds the time scheduled, the “residual time” area continues flashing and turns red. The value shown on it becomes negative and starts indicating how much of a delay is being accumulated (Fig 47).

Fig 47

It is possible to signal, while the operation is in progress, that the operation is requiring more time than scheduled.

To do that

- click the “Residual time area”.

A quadrant containing four buttons opens (Fig 48).

Fig 48

- Click one of the buttons.

This first click brings the counter back to zero.

- Click the buttons to indicate the time remaining.

The 

button adds 10 minutes to the scheduled duration.

The 

button deducts 10 minutes from the scheduled duration.

The 

button adds an hour to the scheduled duration.

The 

button deducts an hour from the scheduled duration.

The “residual time” area indicates the new duration. Length of the operation-box on the OranJ planning screens changes accordingly (see paragraph 4 for more information about this feature).

To hide the four buttons, simply click the “residual time” area again.

2.10. The “staff” area

The “staff” area (Fig 49 **A**) indicates the names and relative roles of the room staff assigned to the operation.

Fig 49 - OranJ Home

You can record any changes in the room staff while the operation is in progress.

To record a change in the room staff

- click the “staff” area (Fig 49 **A**).

The page shown in Fig 50 opens.

2.10.1. “Room Staff” page description

The “Room Staff” page (Fig 50) is formed of four columns.

Fig 50 – Room staff

The “role” column (Fig 50 **A**) contains a list of the possible roles of the staff involved in the operation. Every role is characterized by a color.

The number and nature of the roles can be configured to reflect the real organization of the structure using the software.

After the role has been selected, the “personnel” column (Fig 50 **B**) contains the list of persons who are able to cover the required role (see the following paragraph for the selection procedure).

After the person has been selected the “Operation staff” column (Fig 50 **C**) contains the names of the personnel actually involved in the operation (see the following paragraph for the selection procedure).

When the staff is selected, the fourth column (Fig 50 **D**) contains a numeric keyboard which makes it possible to specify the room entrance and exit times of every member of staff.

The buttons containing the letters of the alphabet (Fig 50 **E**) make it possible to filter the list of names displayed. Click one of the letters to display the names that begin with that letter only. Click the **All** button to display the list of all the names.

The arrows at the bottom of the two central columns (Fig 50 **F**) make it possible to scroll up and down the list of names displayed.

The control bar of the page contains three buttons

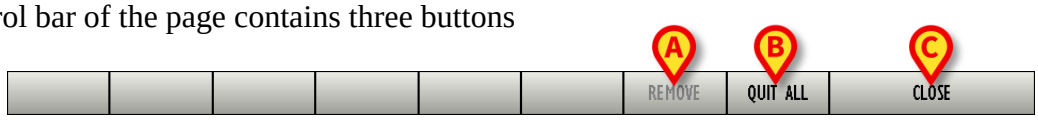


Fig 51 – Command bar of the "Room Staff" page

The **Close** button (Fig 51 **C**) closes the page. Click **Close** to return to the "OranJ Form" page (Fig 49).

The **Quit All** button (Fig 51 **B**) makes it possible to assign the whole staff the current time as the room exit time. For example, if an operation ends at 15.00, and the **Quit All** button is then clicked, 15.00 o'clock is indicated as the room exit time for the whole staff.

The **Remove** button (Fig 51 **A**) makes it possible to remove a member of the operation staff (see the following paragraph for the selection procedure).

2.10.2. Operating staff management

2.10.2.1. How to select a staff member

To select a member of the room staff

- click one of the roles indicated in the "role" column (Fig 50 **A**)

In the "staff" column, the list of all the people who can perform that function appears. For example, if I click "1er OP", the list of all the "first operators" appears in the second column (Fig 52).

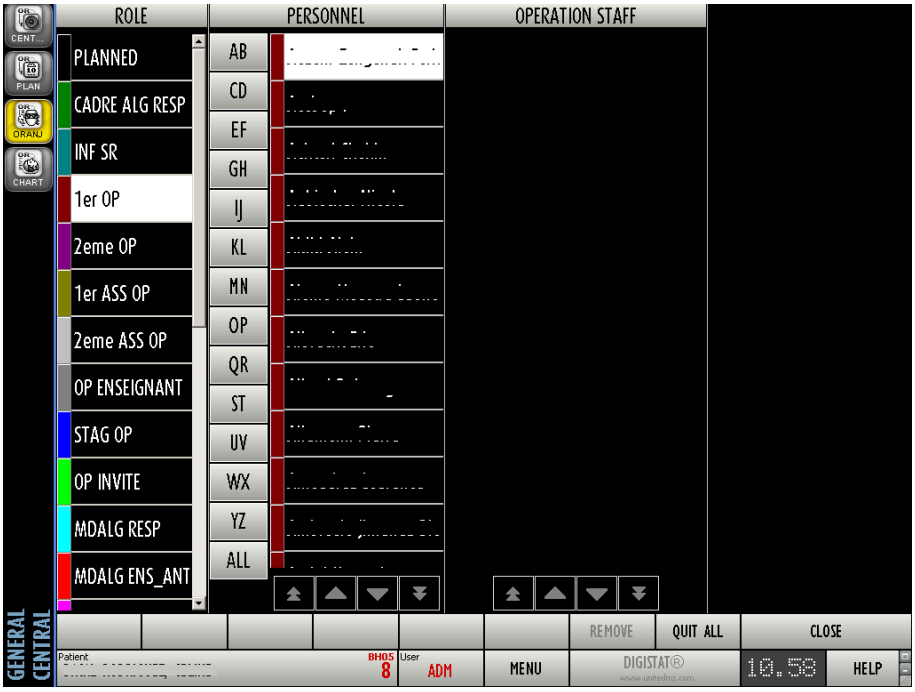


Fig 52 – List of operators

- Click the name of the person who will be part of the room staff.

The box corresponding to the person disappears from the “staff” column and appears in the “operation staff” column (Fig 53). The name of the person selected is marked by the color that characterizes his/her function.

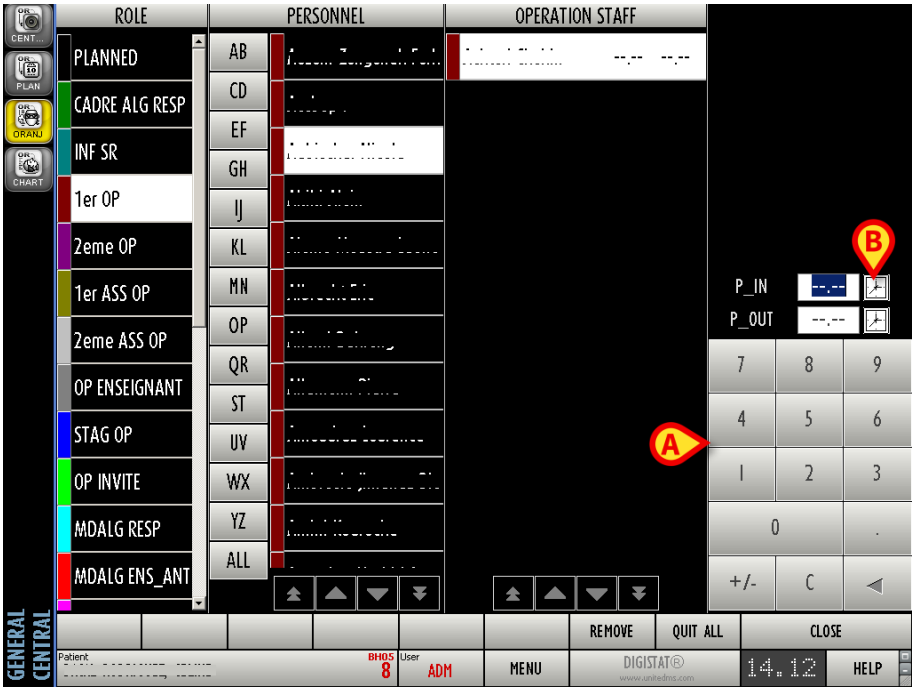


Fig 53 – Staff Selection

At the same time, a numeric keyboard appears in the column on the right, making it possible to specify the room entrance and exit time for the person specified (Fig 53 **A**).

The entrance and exit time should be entered when every member of staff actually enters or exits the room.

The small clocks  highlighted in Fig 53 **B** make it possible to automatically assign the person selected the current time as the entrance or exit time.

The staff selected appears in the “staff” area of the “OranJ Form” page (Fig 54).

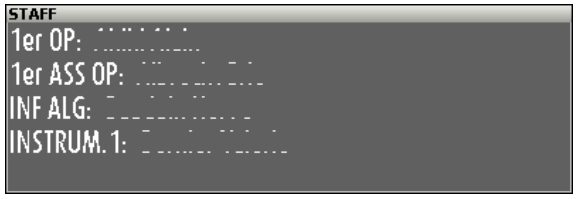


Fig 54 – Operation Staff

2.10.2.2. Recording the entrance and exit time of a member of staff

To record the entrance and exit time of a member of staff

- Click the person’s name.

The name is highlighted and the numeric keyboard appears on the screen.

- Enter the entrance or exit time using the buttons on the keyboard

- Click the field which is not being edited (i.e., if you have entered the entrance time, click the "exit" field; vice versa, if you have entered the exit time, click the "entrance" field).

In both cases the entrance/exit time will be recorded and appear alongside the name of the member of staff selected (Fig 55).

Fig 55 – Time Recording

In alternative, to record the current time as the room entrance/exit time for a member of staff, simply click the little clock alongside the corresponding field (Fig 53 **B**).

- Repeat the operation for every member of the operation staff to be entered.

2.10.2.3. Removing a member of the operating staff

To remove a member of the operating staff

- Click the member of staff you wish to remove.

The box containing his/her name is selected and will appear as highlighted.

The **Remove** button on the command bar becomes active (Fig 53 **C**).

- Click the **Remove** button.

User confirmation is required (Fig 56).

Fig 56

- Click **Yes** to confirm.

2.11. The “materials and resources” area

The “materials and resources” area (Fig 57 **A**) contains the list of all the resources and materials used during an operation

Fig 57 - OranJ Home

You can edit the quantities indicated and, if necessary, add new resources to the list of resources used at any time.

To add a new resource

- Click the materials and resources area.

The “Resources Used” page opens (Fig 59).

The procedure here described requires, where possible, scanning the barcode of the different resources to select them.

If barcode reading is not possible a manual procedure can be used. Manual procedure is described in paragraph 2.11.1.

Fig 58 – "Resources Used" page

- Scan the resource's barcode

The single resource can be configured to require, after barcode is scanned, to specify the resource's serial number for further verification.

In this case, after barcode is scanned, the following window appears.

Fig 59

- Scan the barcode corresponding to the resource's "Serial number".

or

- Enter the resource's "Serial Number" (Fig 59 **A**), then click the **Ok** button (Fig 59 **B**).

The window shown in Fig 59 does not show up if the resource is not configured to require "Serial number" specification.

The system adds the chosen resource to the "Resources used" list (Fig 60 **A**).

Fig 60 – Resource used

One item is recorded (as quantity). To edit quantity scan the barcodes of the additional resources.

To complete the procedure

- click the **Ok** button on the command bar (Fig 60 **B**).

The recorded resource's name and quantity is displayed in the "materials and resources" area of the "OranJ Form" page (Fig 61 **A**).

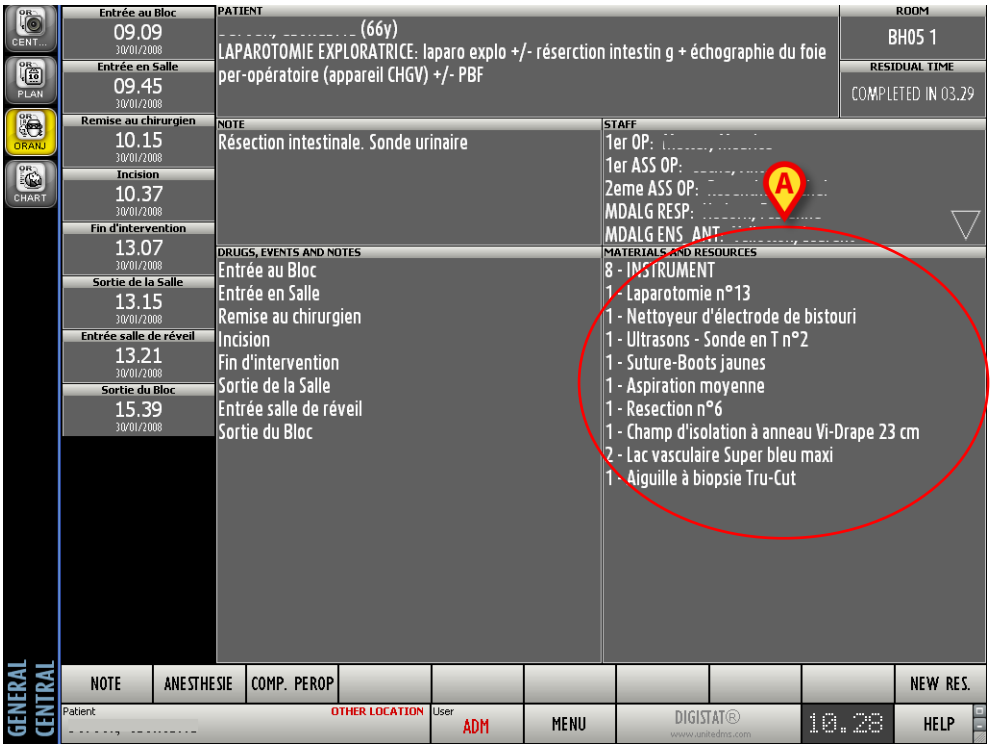


Fig 61

2.11.1. Manual procedure

To manually record a resource

- click the “Materials and Resources” area. The “Resources Used Screen” opens (Fig 60).
- Click the **Add New** button on the command bar (Fig 60 **C**). A page listing the available resources opens (Fig 62).

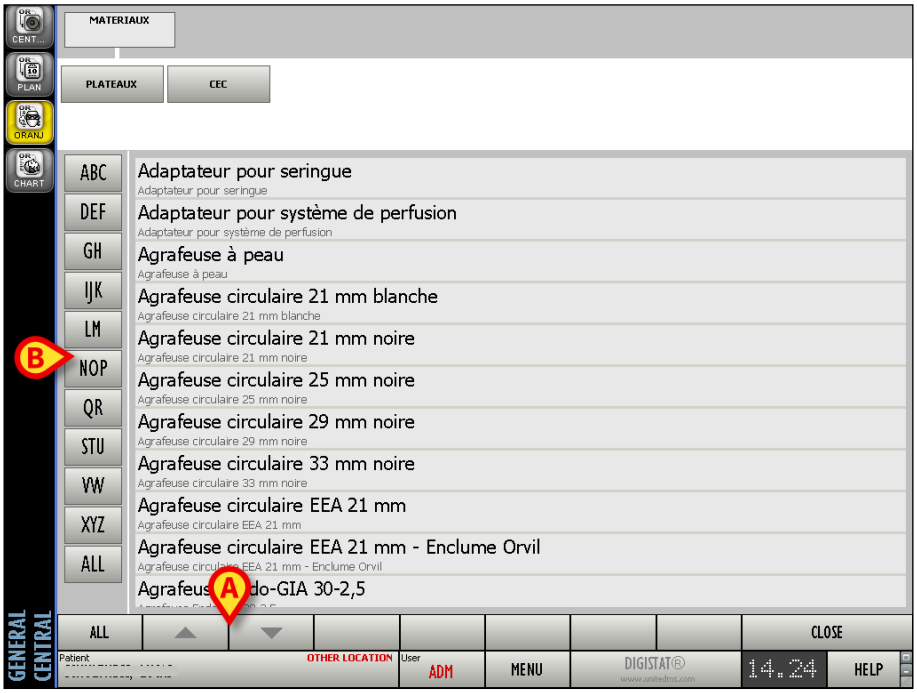


Fig 62 – List of Resources

In the example shown in Fig 62 the resources are grouped by type (“plateaux”, “CEC”). Click one of the boxes representing the type of resource to display all the resources of that type.

You can scroll the list using the arrows shown in Fig 62 **A**.
The buttons containing the letters of the alphabet (Fig 62 **B**) make it possible to filter the list displayed. Click one of the letters to display the resources whose names begin with that letter only. Click the **All** button to display the whole list.

To add a new resource

- Click the name of the resource you wish to add.

The system will open a specific window requesting specification of the resource’s “Serial Number” (if required by configuration - Fig 63).

“Serial Number” request depends on a configuration parameter.

Fig 63

- Enter the resource’s “Serial Number” manually (Fig 63 **A**) and then click the **Ok** button (Fig 63 **B**).

The system automatically adds the selected resource to the list of resources used (Fig 64).

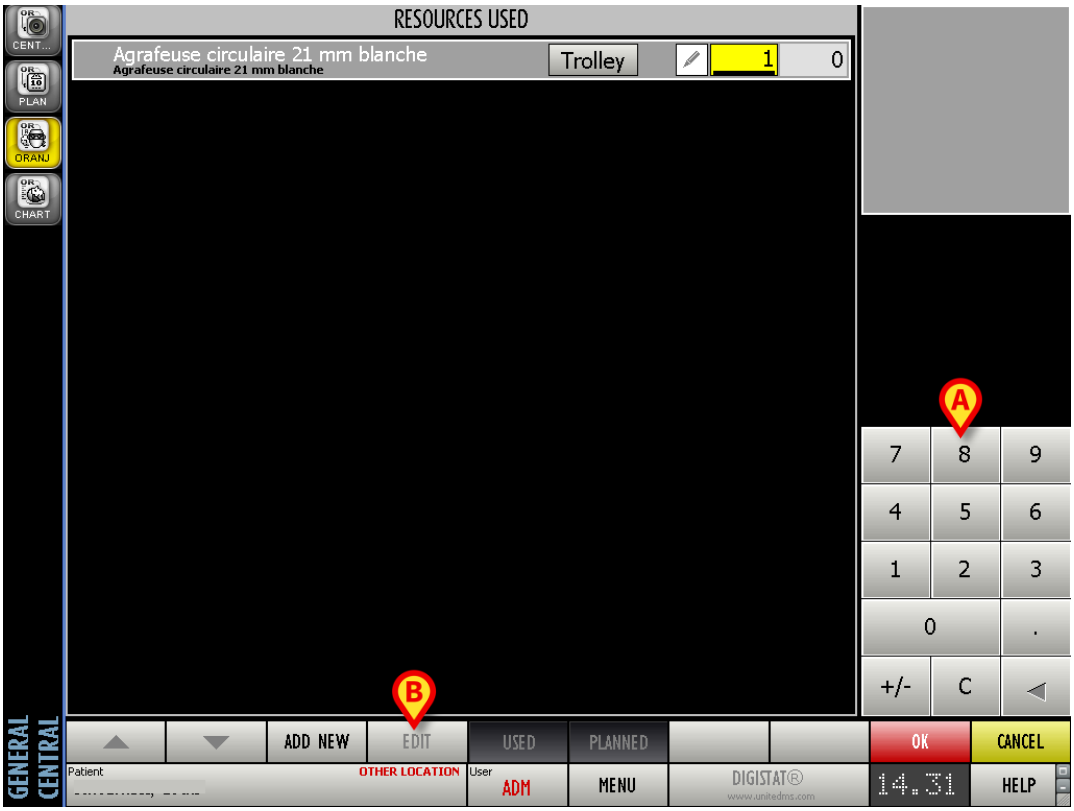


Fig 64 – Resource added

2.12. "Resources Used" screen description

On the "Resources used" screen (Fig 64) the resource is displayed on one line (Fig 65). Every line contains a variety of information.

Fig 65 – Information on the Resource

- The name of the resource is indicated on the left side (Fig 65 **A**).
- The **Trolley** button (Fig 65 **B**) makes it possible to indicate whether or not the resource can be fitted onto a trolley. Clicking and highlighting the button indicates that the resource can be fitted onto a cart.
- The  button (Fig 65 **C**) makes it possible to add a note to the resource selected.

Click it to open a virtual keyboard which makes it possible to add possible notes (Fig 66). The operation of the virtual keyboard is described in detail in paragraph 2.6.

Fig 66 – Add note to the resource

To save the notes added

- Click the **Ok** button (Fig 66) on the command bar.

When there is a note referring to one of the resources entered in the list of "resources used", the  button (Fig 65 **C**) appears highlighted in yellow.

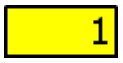
- Box  (Fig 65 **D**) indicates the quantity of resources to be added or removed.

This quantity is entered using the numeric keyboard in the bottom right corner of the "Resources Used" page (Fig 64 **A**, Fig 67).

Fig 67 – Numeric Keyboard

To specify the quantity of resources

- Click the **Edit** button (Fig 64 **B)**.

- Click box 

.

The cursor appears inside it.

- Click the numbers on the keyboard to enter the quantity.

The  button makes it possible to delete the digits in the box.

The 

button makes it possible to specify whether or not you intend to add or subtract the quantity of resources indicated. Click this button to make the number inside the box positive or negative.

- Box 

(Fig 65 **E**) indicates the quantity of resources previously programmed and from which you are subtracting (or to which you are adding) a specific number.

When you have programmed the quantity required

- Click **Ok** to record the new resource.

The resource selected appears, together with the relative quantity, in the "materials and resources" area of the "OranJ Home" page (Fig 68).

The information contained in the "materials and resources" area depends on the configuration chosen. Besides to the name and quantity, it is possible, for example, to show the date and time of addition or the serial number of the resource added.

Fig 68 – Resource Added

2.12.1. Editing the “Resources used” screen

To display the list of resources added in detail, or to edit this list

- Click the “materials and resources” area (Fig 68).

The page shown in Fig 64 (“Resources Used”) opens.

The names of resources entered previously are flanked by the  square (Fig 69).

If there are notes, the square is yellow  (Fig 69).

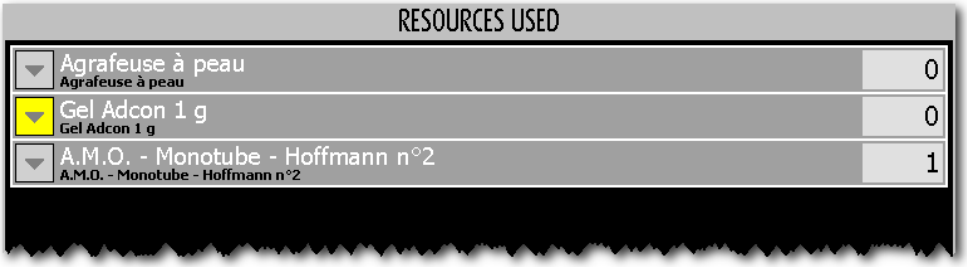


Fig 69

The square can be clicked. Click it to display the details of every editing (time of editing, notes added, name of the user who edited the resource - Fig 70 **A**).

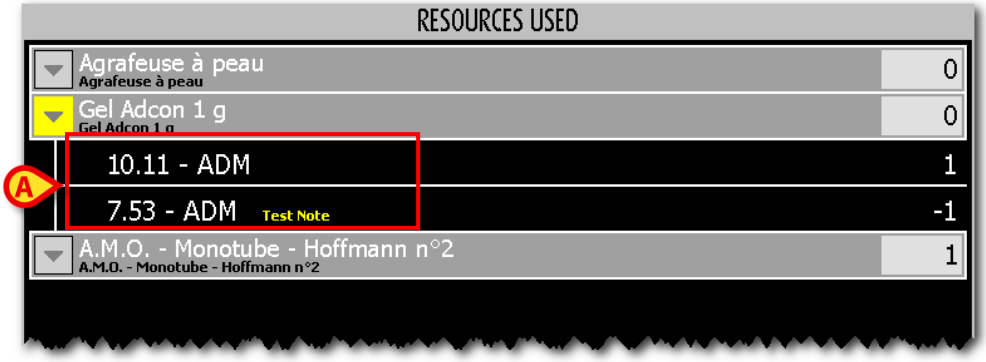


Fig 70 – Display Notes

It is possible to rapidly remove a resource using a specific button. To rapidly remove a resource

- Access the “Resources Used” screen (Fig 64)
- Click the **Edit** button (Fig 64 **B**)
- Click the  button placed near the resource you want to remove.

The corresponding line will change as in Fig 71.

- Click the  button (Fig 71 **A**).

- Click **Ok**.

The resource will disappear from the "Materials and Resources" area, the corresponding line will still be present on the resources screen, but the quantity will be changed.

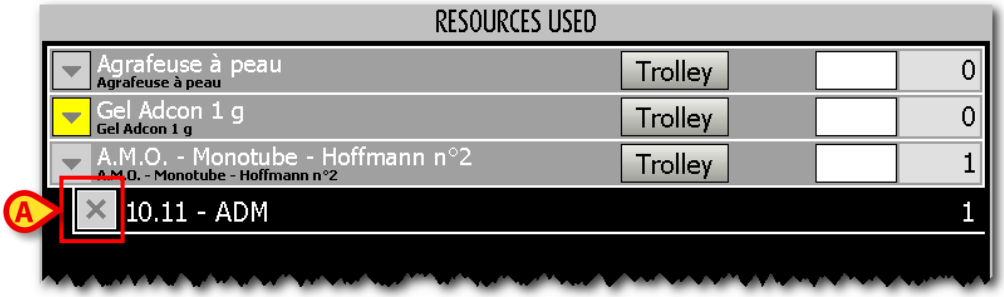


Fig 71

To change the quantity of an added resource,

> ***The following procedure depends on the configuration in use. Some configurations require the identification of every resource by serial number. In these cases, to modify the quantity of a specific resource it is necessary to repeat the procedure described in paragraph 2.11. Contact your system administrator to know the details of the configuration in use.***

- Click the "Materials and Resources" area (Fig 68).

The page shown in Fig 72 opens. The **Edit** button is enabled.

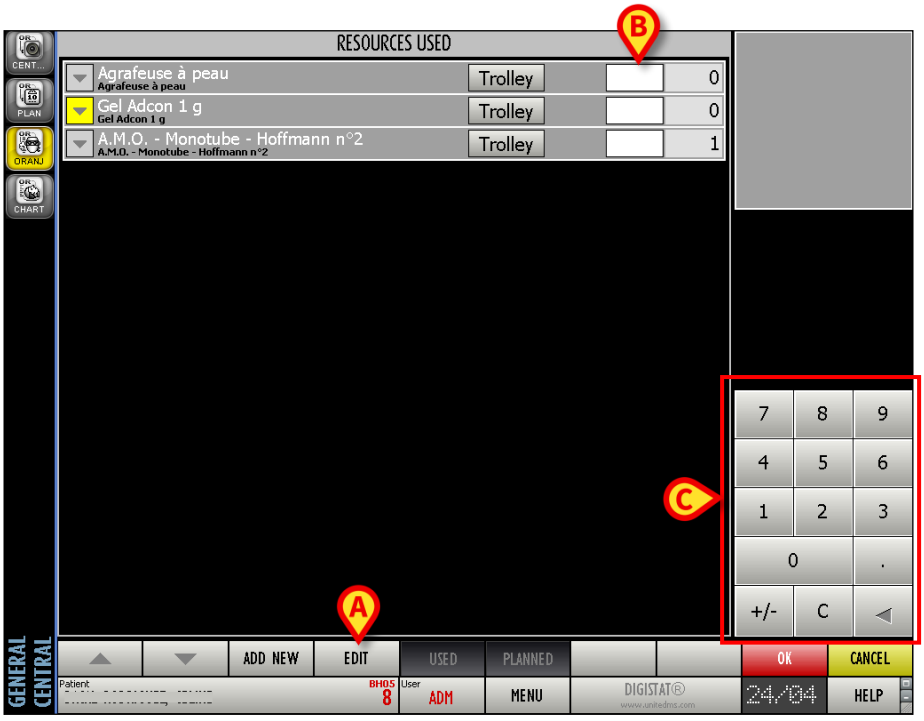


Fig 72 – Change Quantity

- Click the **Edit** button on the command bar (Fig 72 **A**).

Boxes which make it possible to program the quantity appear alongside every resource (Fig 72 **B**).

- Click the box corresponding to the resource you want to edit.

- Use the numeric keyboard (Fig 72 **C**) to enter the quantity of resources to be added to or deducted from the number previously programmed.

- Use the 

button of the numeric keyboard to specify weather the inserted number is positive or negative.

- Click the **Ok** button.

The new quantity will be calculated by the system and shown in the "materials and resources" area of the "OranJ Home" page (Fig 68).

2.12.2. How to move a specified resource set to another operation

It is possible to move the whole set of resources specified for an operation and directly associate it to another operation.

To do that

- click the "Materials and Resources" area (Fig 73 **A**).

Fig 73

The "Resources Used" screen will open (Fig 74).

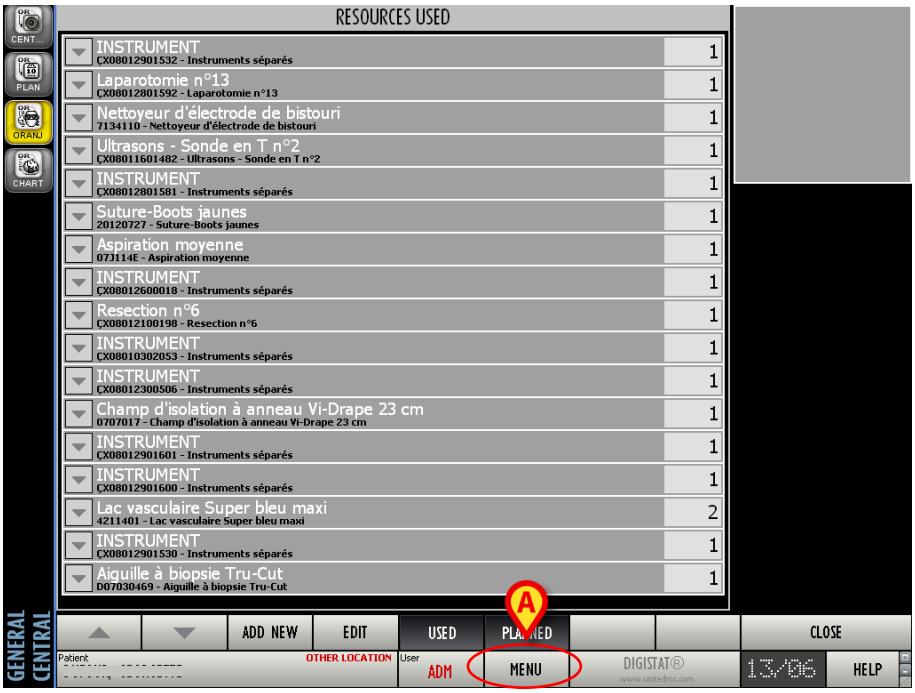


Fig 74

- Click the **Menu** button on the Control Bar (Fig 74 **A**).

The following menu is displayed (Fig 75 **A**).

Fig 75

- Click the **Clinical Configuration** button (Fig 75 **A**).

The following menu is displayed (Fig 76).

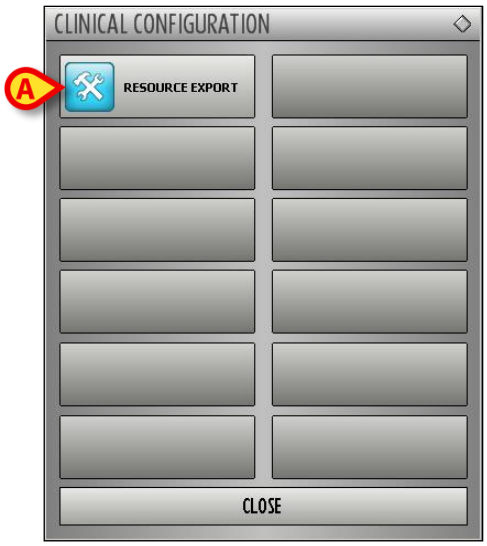


Fig 76

- Click the **Resource Export** button (Fig 76 **A**). User confirmation is required (Fig 77).

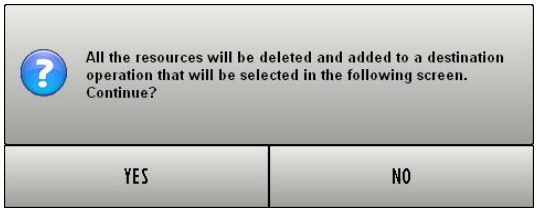


Fig 77

- Click **Yes** to confirm. The "Operation list" screen opens. The selection of the destination operation is now required (Fig 78 **A**).

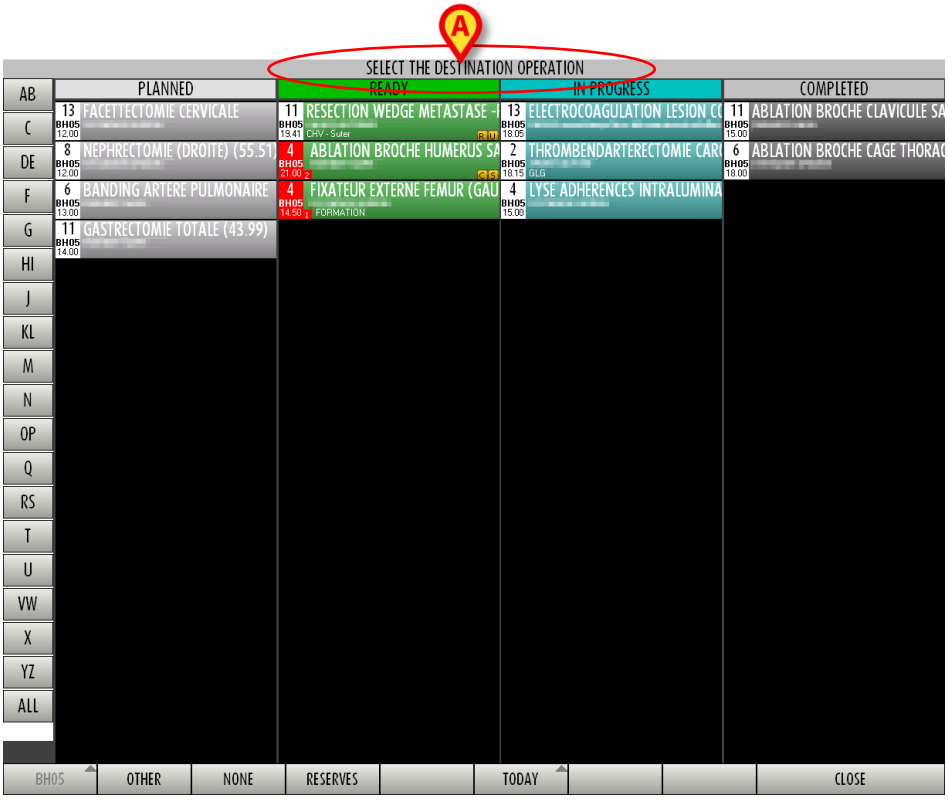


Fig 78

- Click the operation box corresponding to the destination operation.

The set of resources specified for the original operation is this way automatically associated to the destination operation.

3. Operation and patient management

The OranJ system makes it possible to manage the opartion and patient data. This chapter describes the related screens and procedures.

Specifically, within the OranJ context, it is possible to

1) schedule a new operation for a patient (paragraph 3.1.2);
2) display and possibly edit the data relating to an operation (paragraph 3.1.3);
3) display and possibly edit the patient's personal data (paragraph 3.1.1).

When OranJ is used together with the DIGISTAT® Smart Scheduler system the scheduling procedure is usually performed through Smart Scheduler. The actual workflow depends on the specific hospital procedures in use.

To access these functionalities

- click the "Patient" area on the "OranJ Home" screen (Fig 79 **A**).

Fig 79 - OranJ Home

The "Patient and Operation Details" screen opens (Fig 80).

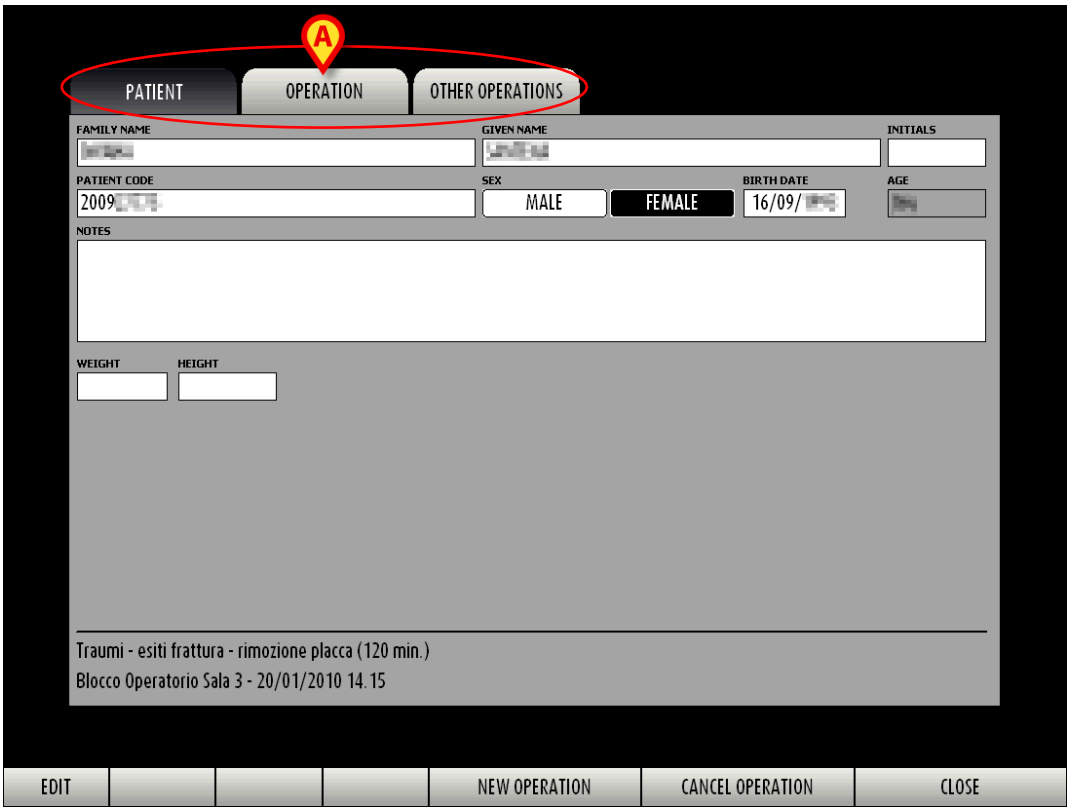


Fig 80 - Patient and operation details

This screen includes three "tabs" (Fig 80 **A**). Each "tab" makes it possible to access a specific subset of information and functionalities.

The "Patient" tab contains the selected patient data (see paragraph 3.1.1).
The "Operation" tab contains the selected operation data (paragraph 3.1.2).
The "Other operations" tab contains the data regarding the possible other operation of the selected patient (paragraph 3.1.3).

3.1.1. Patient

The “Patient” screen (Fig 81) contains the patient’s main data.

To access this screen,

- click the “Patient” tab (Fig 81 **A**).

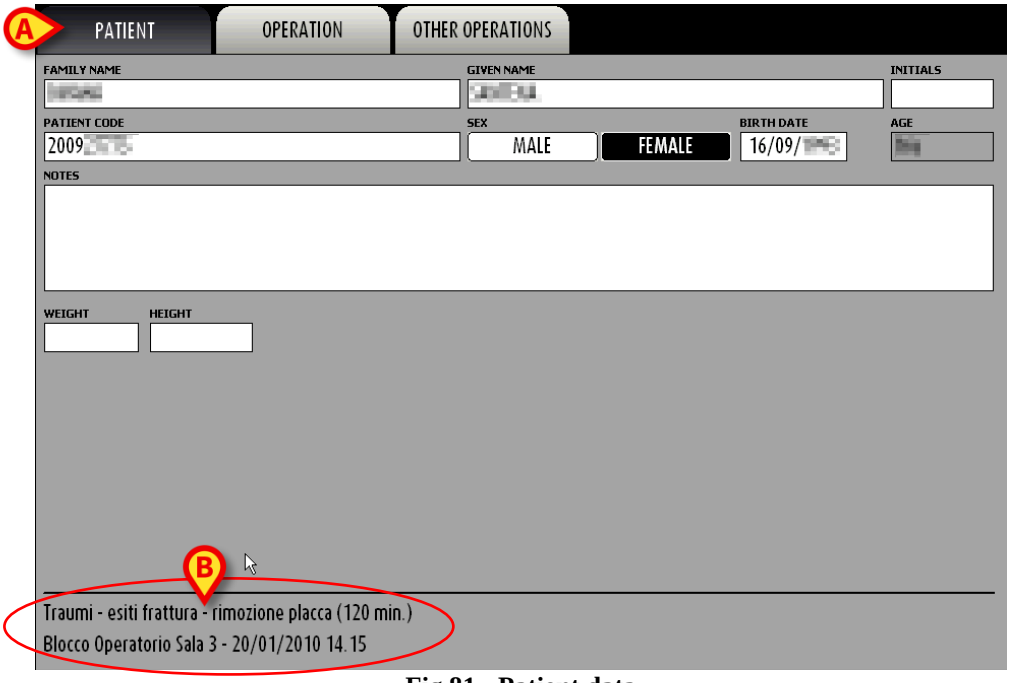


Fig 81 - Patient data

Information that can be here specified is:

- Family name
- Given name
- Initials
- Patient code
- Sex
- Birthdate
- Age
- Notes
- Weight
- Height

If there’s an operation planned for the selected patient the main operation data (type of operation, planned duration, planned block, room and time) appear at the bottom-left corner of the screen (Fig 81 **B**).

To specify new data or to modify the existing ones

- click the **Edit** button on the command bar (Fig 82).

Fig 82

The screen will turn to "Edit mode". It will be now possible to modify the patient data.
The **Cancel** and **Update** buttons appear on the command bar (Fig 83).

Fig 83

After editing, click the **Update** button to save the changes made.

3.1.2. Operation

The "Operation" screen makes it possible to display all the data related to the main operation. It also displays the list of the possible related operations.

To access this screen

- click the "Operation" tab (Fig 84 **A**).

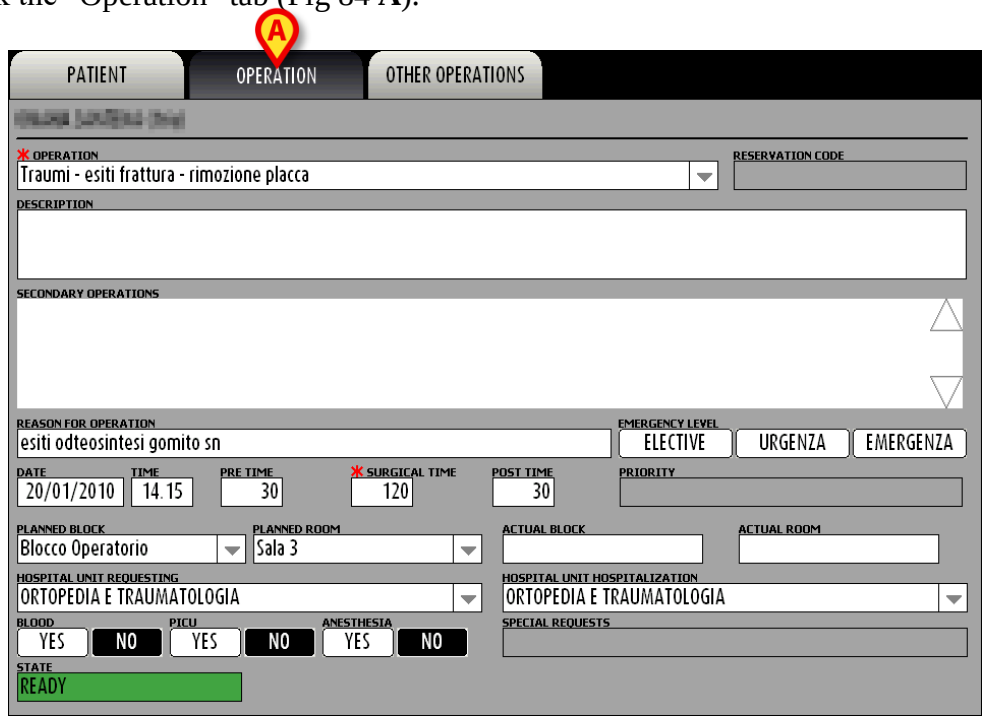


Fig 84 - Operation data

The information required is signaled by the * symbol. The other information is optional, i.e. it is not possible to schedule an operation without specifying the operation name and the planned duration.

The information that can be specified on this page is

- Name of the operation
- Reservation code
- A brief description of the operation
- A list of the possible related operations
- The reason for operating
- The urgency level
- Planned date
- Planned time
- Planned pre-surgical time
- Planned surgical time
- Planned post surgical time
- Planned block
- Planned room
- Actual block
- Actual room
- Hospital unit requesting the operation
- Hospital unit of hospitalization
- Possible necessity of blood
- PICU (Pediatric Intensive Care Unit)
- Possible necessity of anesthesia
- Special requests
- Reason for cancellation (if the operation is canceled)
- State - The “State” box specifies whether the operation is scheduled - SCHEDULED, ready - READY, in progress - IN PROGRESS or completed COMPLETED IN 06.09.

To specify new data or to modify the existing ones

- click the **Edit** button on the command bar (Fig 85).

Fig 85

The screen will turn to “Edit mode”. It will be now possible to modify the patient data.
The **Cancel** and **Update** buttons appear on the command bar (Fig 86).

Fig 86

After editing, click the **Update** button to save the changes made.

When editing the screen, some fields can be filled through specific pre-defined menus. These menus can be opened by the button.
For example, the button alongside the "operation" field opens a list of possible operations from which to choose.
To select one of the items on the list click on the item's name. The clicked item will be displayed on screen in the appropriatre field. This procedure is possible every time the button appears.

3.1.3. Other operations

The "Other operations" screen provides a list of all the past, present and future operations of a patient.

To access this page

- click the "Other operations" tab (Fig 87 **A**).

The following screen opens.

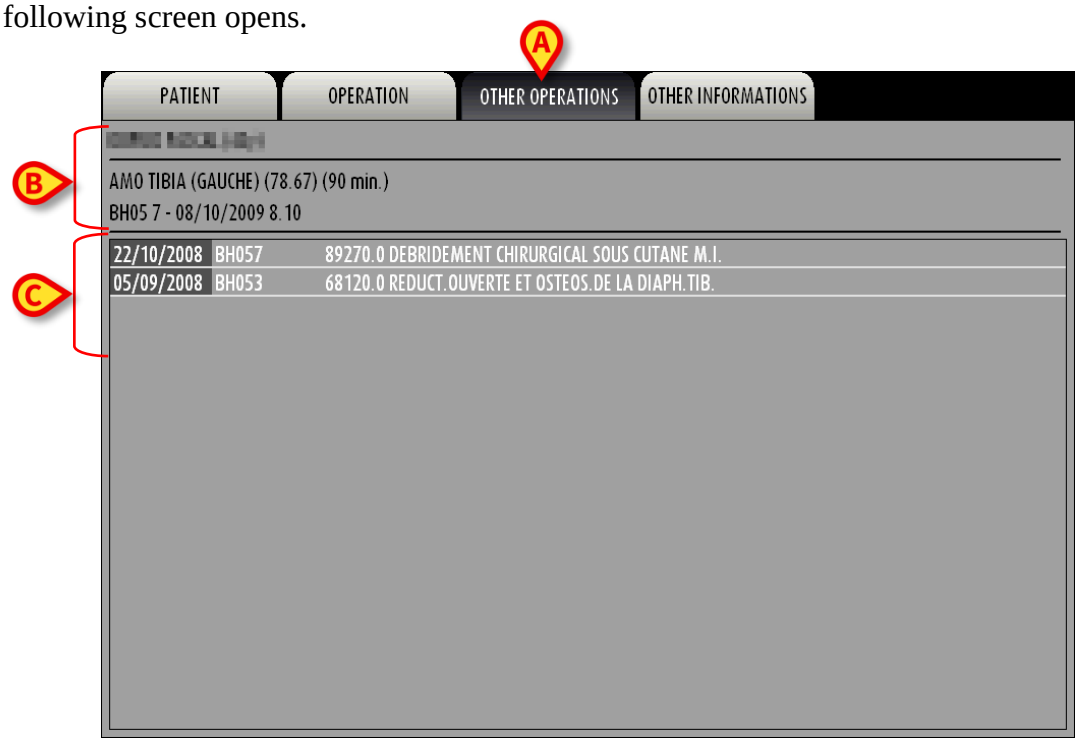


Fig 87 - Other operations

The name of the patient and the selected operation main data are an the top-left corner of the screen (Fig 87 **B**).

The different operations are displayed in chronological order, most recent on top (Fig 87 **C**).

Fig 88

Each line corresponds to an operation (Fig 88).

The information provided for each operation is:

- Date (05/11/2007 in the example)
- Block (BH05)
- Room (2)
- Type of operation (Fermeture de…).

Additional information is provided by the colour of the cell containing the date of the operation. The color of this cell depends on the state of the operation, and follows the color coding used throughout the whole OranJ system. Thus the cell is dark grey if the operation is “completed”, it is cyan when the operation is “in progress”, green when it is “ready” and light grey when it is “scheduled”.

Each line can be clicked to display a window containing a summary of all the operation data.

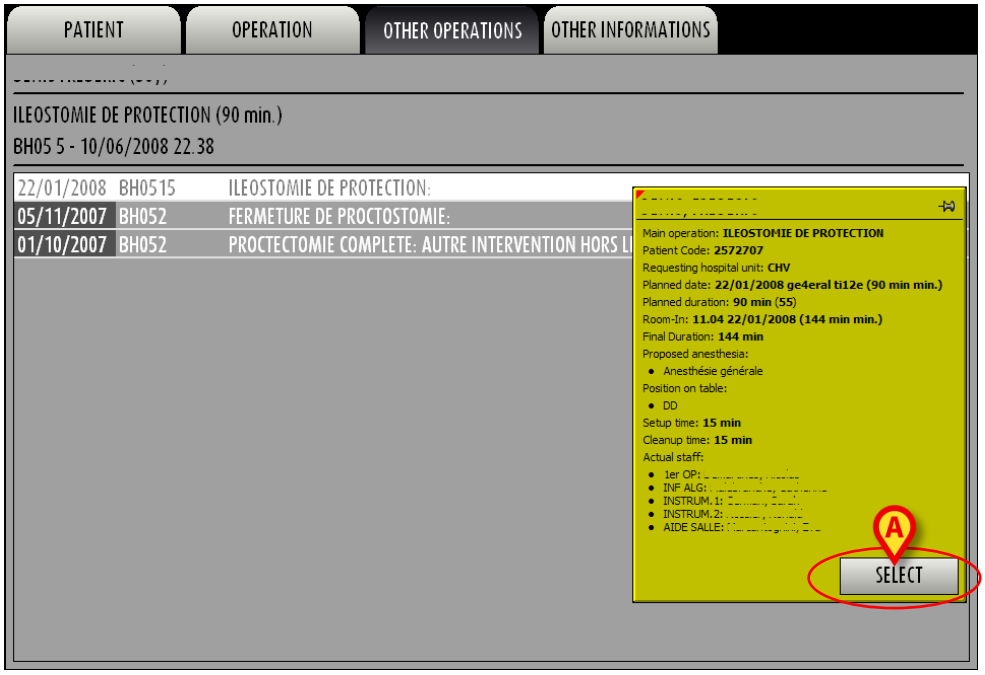


Fig 89

The **Select** button (Fig 89 **A**) on the information window can be clicked to access the “OranJ Home” page for the specific operation. See paragraph 2.1 for a description of the “OranJ Home” screen,

The info window shown in Fig 89 can be customized by the system administrator, i.e. the type and amount of information contained in the window is decided by the user. Therefore, it varies with every single configuration.

3.1.4. Other information

Some configurations use an additional tab to display more relevant data. The “Other informations” page contains a set of additional information regarding a selected patient/operation that are considered useful (Fig 90).

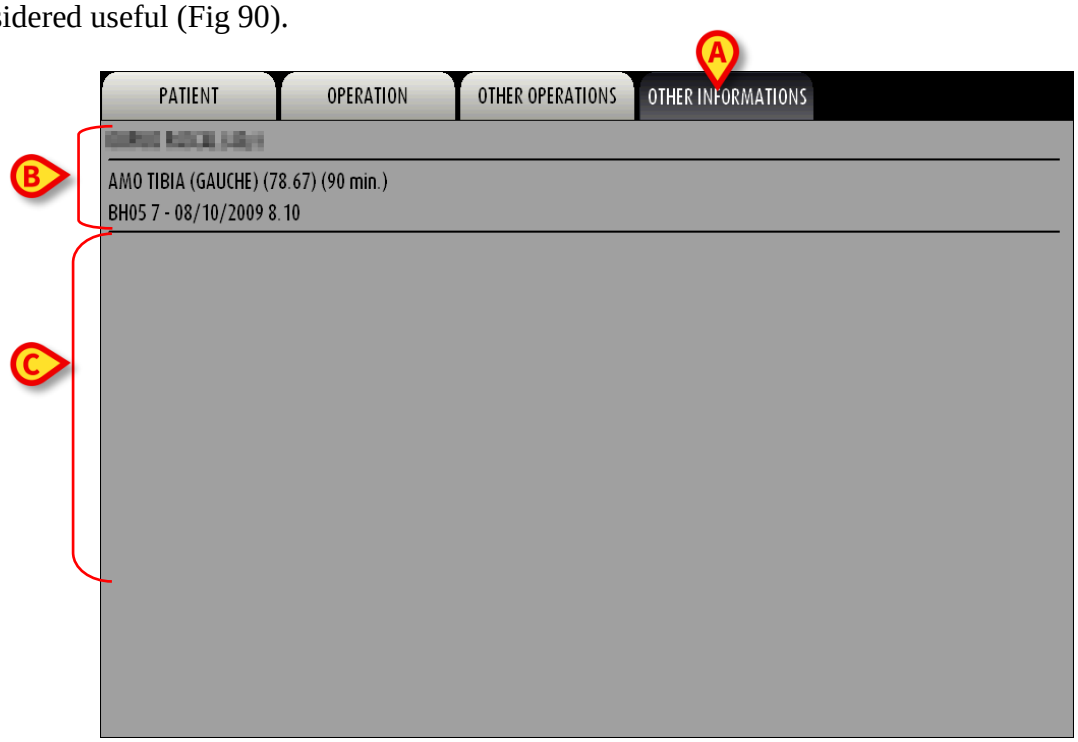


Fig 90

To access this screen

- click the “Other informations” tab indicated in Fig 90 **A**.

The patient and operation main data are displayed on the top left corner of the page (Fig 90 **B**).

The additional information is displayed in the area indicated in Fig 90 **C**.

The nature and kind of information displayed depends on a specific query created by the system administrators. The information displayed therefore varies with the specific query. Please refer to the system administrator to know exactly what kind of information is displayed on this page on the specific system you are using.

3.2. How to schedule a new operation

The “OranJ” system makes it possible to schedule a new operation for a selected patient.

To schedule a new operation

- Select the patient for whom the operation will be scheduled.

The“OranJ Home” screen relating to the selected patient will open (Fig 91 - See paragraph 2.1 for a detailed description of this screen).

Fig 91 – OranJ Home

- Click the “patient” area (Fig 91 **A**).

The “Patient and Operation detail” screen opens (Fig 92).

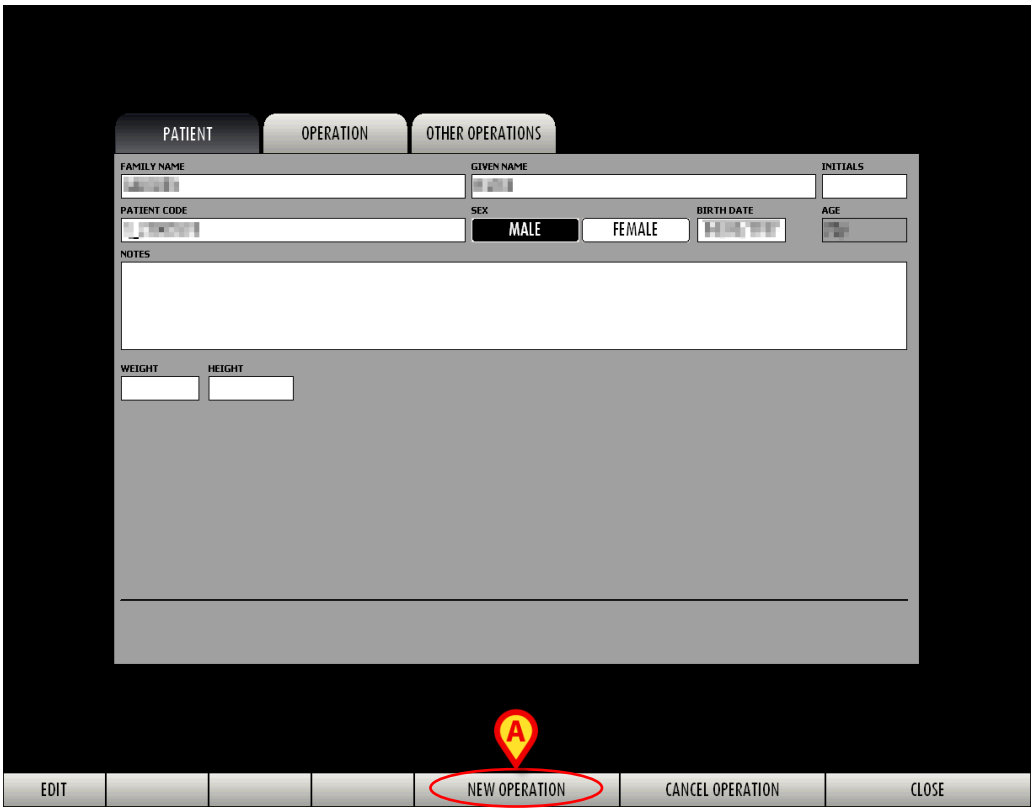


Fig 92

The "Operation" tab will be automatically selected, that will be in "edit" mode. It will be here possible to specify the new operation data (Fig 93).

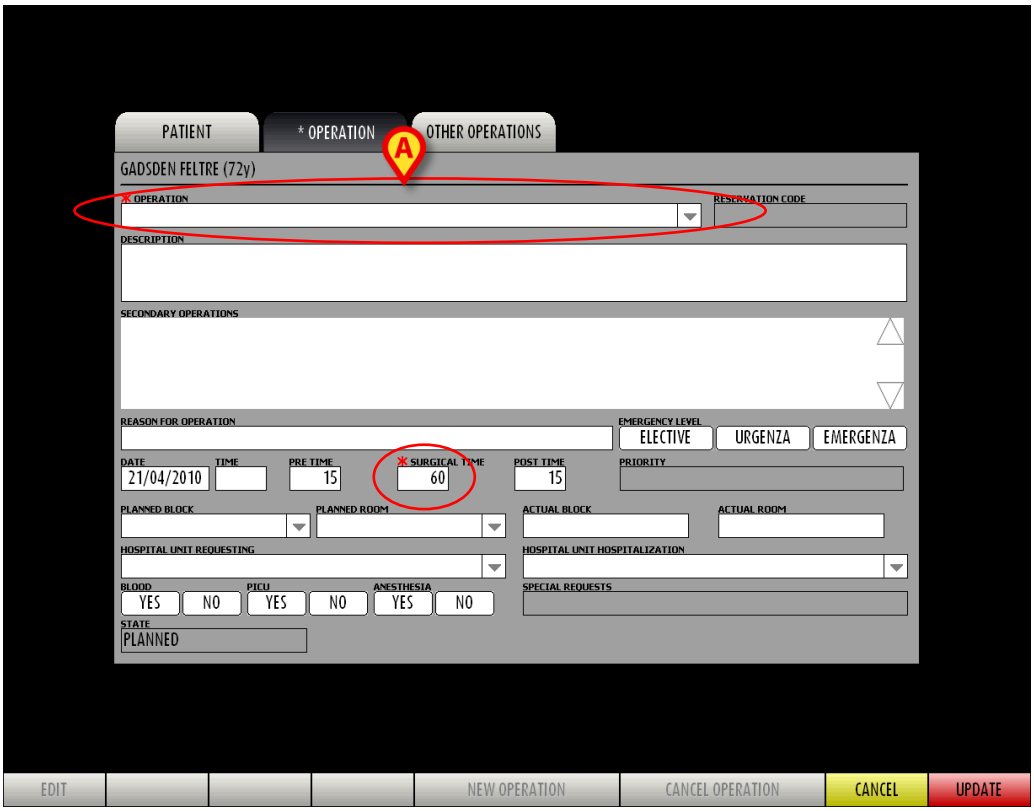


Fig 93 – New operation data specification

- Specify the operation details (operation name and planned duration - indicated in Fig 93 - are required)

Where the button is present, a list of options from which to choose can be opened (by clicking this button).

For example, the button alongside the "operation" field (Fig 93 **A**) opens a list of possible operations from which to choose (Fig 94).

- Use the arrows on the right of the list (Fig 94 **A**) to scroll the list, or type the initial letter of the wanted operation to jump to the list of operations beginning with that letter.

- Click the name of the wanted operation to select it.

The operation name is displayed in the "Operation" field.

The pre surgical, surgical and post surgical time can be associeted to the selected operation by configuration. When this is the case these values are automatically inserted when the operation is selected.

The same procedure can be used wherever the button is present.

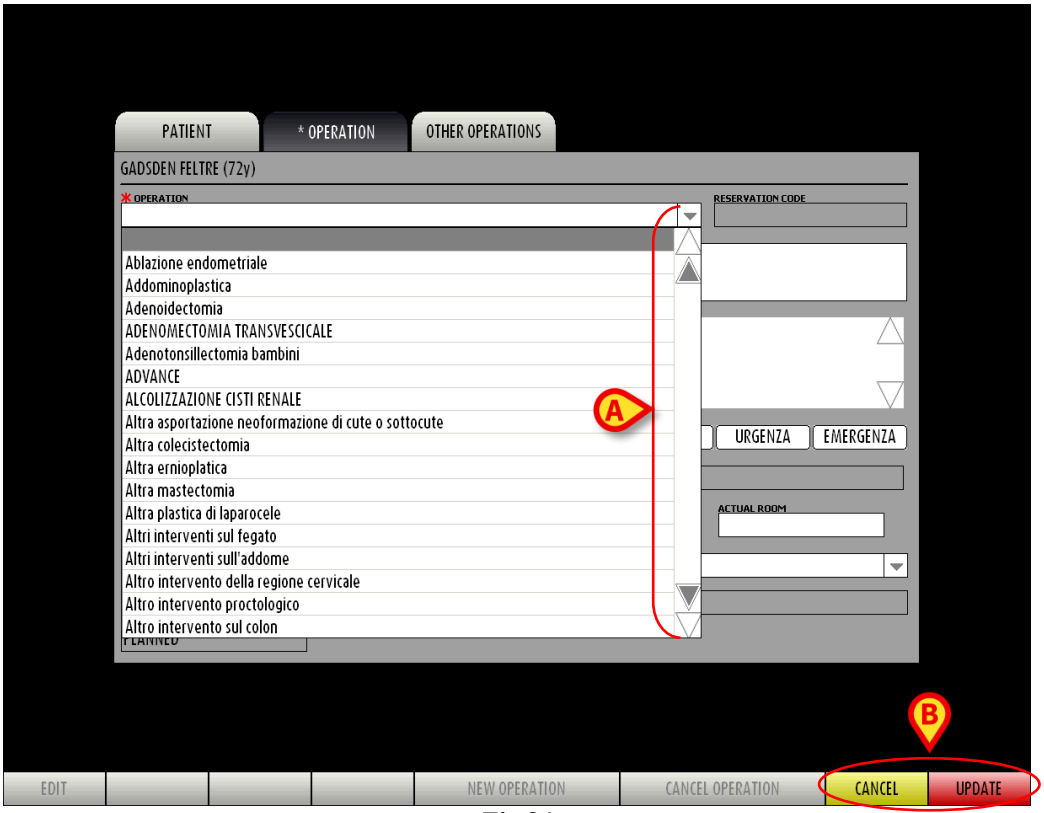


Fig 94

After entering all the data

- Click the **Update** button to save the data entered (Fig 94 **B**, Fig 95).

This schedules the operation. The operation will be present in the other pages and modules of the OranJ system as well.

Otherwise, if you wish to cancel the data entered

- Click the **Cancel** button (Fig 94 **B**, Fig 95).

Fig 95

3.2.1. How to cancel a scheduled operation

To cancel a scheduled operation

- Select the operation that must be cancelled.

The "OranJ Home" screen relating to the selected operation opens (Fig 96).

Fig 96 - OranJ Home

- Click the "Patient" area (Fig 96 **A**).

The "Patient and Operation details" screen opens (Fig 97).

Fig 97

- click the **Cancel Operation** button on the command bar (Fig 97 **B**)

User confirmation is required (Fig 98).

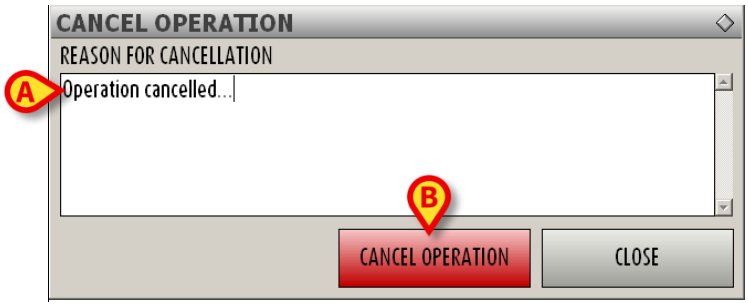


Fig 98 – Operation cancellation

The cancellation reason can be here specified.

- Specify the cancellation reason (Fig 98 **A**)
- Click the red **Cancel Operation** button (Fig 98 **B**)

Once the reason has been entered, it is displayed on the cancelled operation record in the "Reason for cancellation" field.

The operation state is now “Cancelled” (Fig 99 **A**).

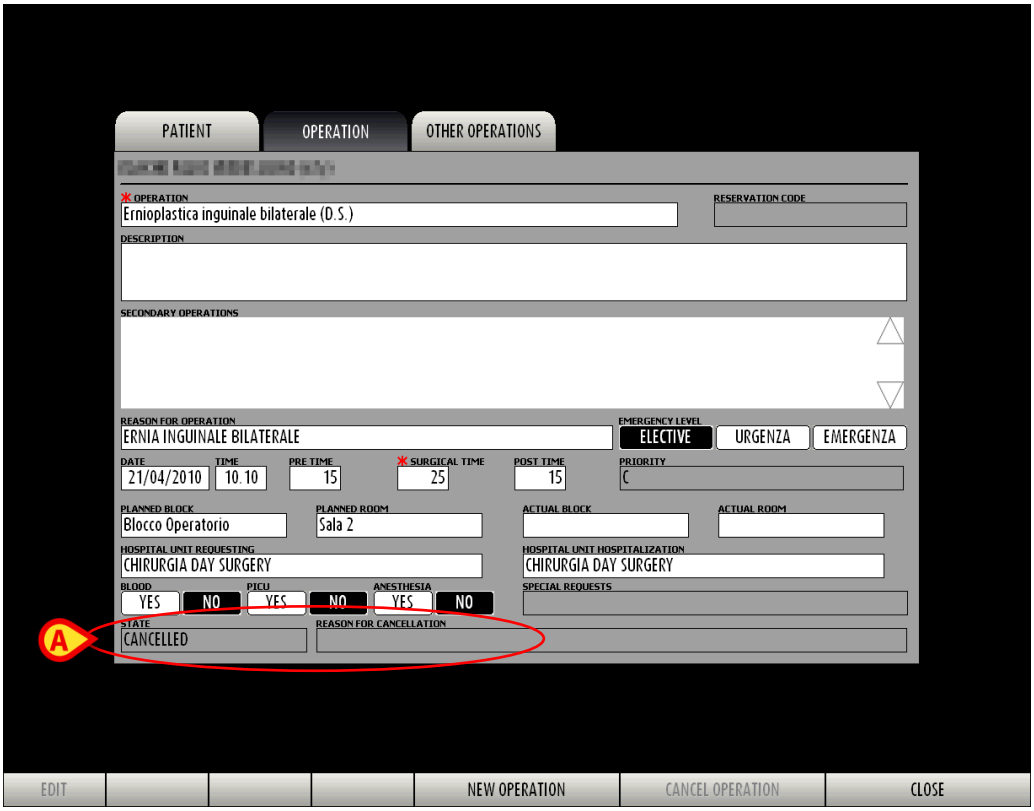


Fig 99 - Cancelled operation

Once cancelled, the operation disappears from all the pages of the OranJ system modules.

4. The OranJ “Plan” module

The “OranJ Plan” module makes it possible to monitor the activities in one or more operating block(s). To select the “OranJ Plan” module

- Click the corresponding icon 

on the DIGISTAT® lateral bar (Fig 100).

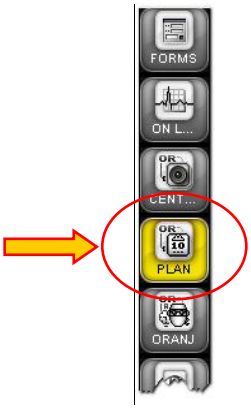


Fig 100

The “OranJ Plan” module screen opens. Fig 101 shows an example. The screen shows the state and the trends of the actual operations on a block in the current day.

Fig 101 - Operating day (example)

4.1. Screen description

Every numbered line represents an operating room. The box at the beginning of the line states the number of the room. In Fig 102 **A** rooms 1 e 2 are indicated.

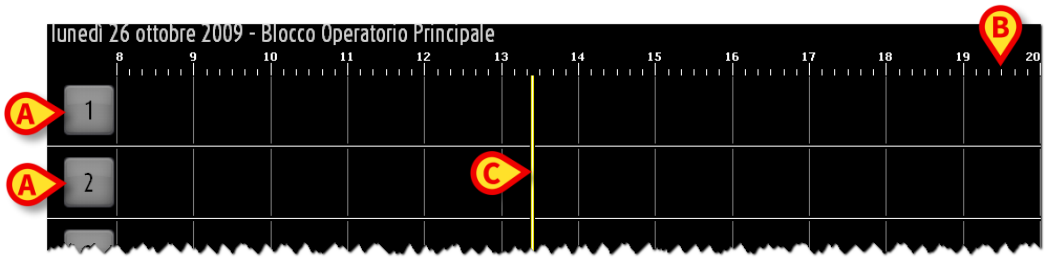


Fig 102

If enabled by configuration, the colour of that box provides information on the state of the operation that is more relevant at present time.

There are four possible configuration options regarding the room number box colour:

- room numbers are always grey;
- only operation states are highlighted;
- only late and close to end operations are highlighted;
- both operation states and late/close to end operations are highlighted .

In this last case the room number colour changes according to the following priorities:

- if an operation is late the box turns red;
- if an operation is close to the end (30 minutes or less in the configuration here described) the box turns yellow;
- if an operation is in progress the box turns cyan;
- if an operation is ready (and no operation is in one of the above mentioned states) the box turns green;
- if an operation is planned (and no operation is in one of the above mentioned states) the box turns light grey;
- if there are no operations or all the operations in the room are completed the box turns dark grey.

Fig 101 and Fig 103 show some examples.

Fig 103

The hours are indicated on top and bottom of the screen (Fig 102 **B**).

The yellow bar shown in Fig 102 **C** indicates the current time. In Fig 102 it is about 13:20. The bar runs as time goes by.

Possible yellow letters placed near the room box (Fig 104) indicate the devices that are in the room. The relation between a letter and a device is set by configuration.

Fig 104

The rectangles displayed on screen represent the various operations (Fig 105).

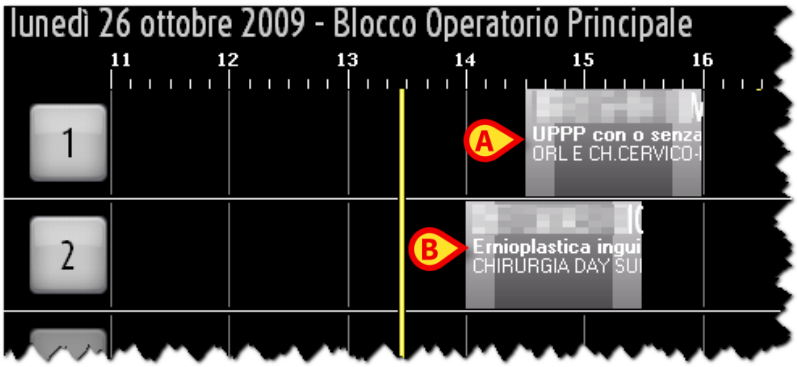


Fig 105

The rectangles on the right of the yellow time-bar represent scheduled operations (they are placed on a future time); their values (duration, room, time etc…) are planned values. The rectangles on the left of the yellow time-bar represent completed operations (they are placed on a past time); their values are actual values. The rectangles intersecting the yellow bar represent operations in progress. In Fig 101 some examples of all kinds are visible.

The position of every rectangle indicates the scheduled time and the room where the operation will be performed (or was performed if completed). In Fig 105, for example, an operation is planned at 14:30 in room 1 and an operation is planned at 14:00 in room 2.

The size of every rectangle is proportional to the scheduled duration of the corresponding operation (actual duration if the operation is completed). For example: the planned duration of the operation indicated in Fig 105 **A** is 90 minutes (from 14:30 to 15:00); the planned duration of the operation indicated in Fig 105 **B** is 90 minuts as well (from 14:00 to 15:30). The duration represented this way includes pre-surgical, surgical and post-surgical times.

These times are indicated by different shades of color (Fig 106).

Fig 106

The lighter part on the left (Fig 106 **A**) represents the pre-surgical time; the darker part in the middle (Fig 106 **B**) represents the surgical time; the lighter part on the right represents the post-surgical time (Fig 106 **C**).

Each rectangle displays certain operation information, depending on the configuration in use. In the configuration here described the patient name, the operation and the hospital unit requesting the operation are displayed in the rectangle (see Fig 107 for an instance).

The rectangle colour indicates the operation state.

Four different operation states are possible in the OranJ system.

- Planned – the operation has been scheduled; at least the operation day was specified. Light grey indicates the “Planned” state (Fig 107).

Fig 107 - “Planned” operation

- Ready – the patient has undergone block check-in. Green colour indicates the “Ready” state (Fig 108).

Fig 108 - “Ready” operation

- In Progress – the patient has entered the operating room. Cyan indicates the “In progress” state (Fig 109).

Fig 109 - “In progress” operation

- Completed – the operation has been completed; the patient is out of the operating room. Dark grey indicates the “Completed” state (Fig 110).

Fig 110 - “Completed” operation

When an operation changes state the color of the corresponding rectangle changes.

The changes in the operation state are linked to the recording of certain markers on the “OranJ Home” screen (see paragraph 2.4 for a description of the “Markers”).

- The “Block In” marker recording implies passage from “Planned” state to “Ready” state.
- The “Room In” marker recording implies passage from “Ready” state to “In progress” state.
- The “Cut” marker recording implies the end of the pre-surgical time and the beginning of the surgical time. When this marker is recorded the operation rectangle looks like the one shown in Fig 109; here the different shading differentiate pre surgical and surgical times.
- The “Suture” marker implies the end of surgical time and the beginning of post surgical time. When this marker is recorded the operation rectangle looks like the one shown in Fig 111, the different shading here differentiate pre surgical, surgical and post surgical times.

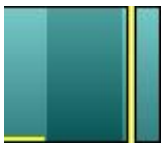


Fig 111

- The “Room out” marker implies passage from “In progress” state to “Completed” state.

The kind of information displayed on the operation-rectangles depends on the configuration in use and can be changed and/or translated. Therefore they can appear different from those shown in the figures.

If enabled by configuration, the possible operation delay is visible on a yellow bar placed at the bottom of the operation-rectangle (Fig 112).

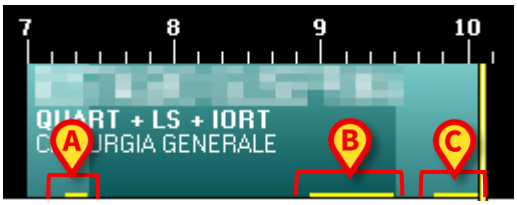


Fig 112

A configuration parameter makes it possible to display separately the possible delays in pre surgical, surgical and post surgical durations. That is the case shown in Fig 112. In the figure here displayed the three yellow bars indicate

1) a 12 minutes delay in the pre surgical planned duration (Fig 112 **A**);
2) a 40 minutes delay in the surgical planned duration (Fig 112 **B**);
3) a 21 minutes delay in the post surgical planned duration (Fig 112 **C**).

The operation shown in the figure is still in progress. Total delay is 73 minutes so far. This value is indicated in the "residual time" area on the "OranJ Home" screen (see paragraph 2.9).

The operations scheduled after the delayed ones are, if necessary, automatically postponed.

The operations indicated as "Emergencies" on the "Patient and operation detail" screen (Fig 84 - or, if installed, on the DIGISTAT® "Smart Scheduler" system, or scheduled using a possible configured emergency procedure) are characterized by a red stripe on the left (Fig 113). The small box indicated in Fig 113 **A** specifies the emergency level. In the configuration here described there are three possible emergency levels.

Fig 113 - Emergency

Every operation box can be clicked. Click one of the boxes to open a window (Fig 114) containing the main data of the operation.

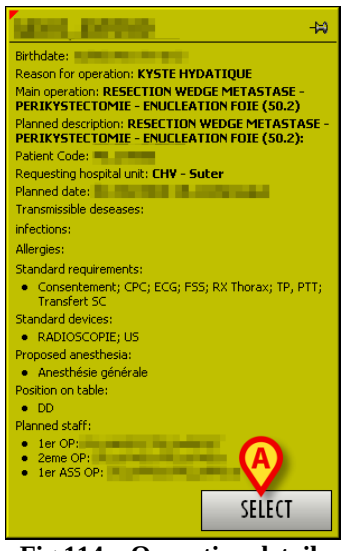


Fig 114 – Operation details

Click the **Select** button in the window (Fig 114 **A**) to access the "OranJ Form" page relating to the operation clicked (Fig 11).

4.2. The "OranJ Plan" command bar

The command bar on the bottom of the OranJ Plan screen is formed of buttons making it possible to perform different procedures. These buttons are listed and shortly described in this paragraph. The procedures are described in detail in the indicated paragraphs.

Fig 115

This button makes it possible to edit the operation plan. The button must be selected before any editing procedure. See paragraph 4.2.1.

This button makes it possible to display the plan of a different block. This button is only active if working on a "General Central" station. See paragraph 4.2.2.

This button makes it possible to display a different time span. See paragraph 4.2.3.

This button makes it possible to display the plan of a different day. See paragraph 4.2.4.

Scroll buttons - They make it possible to display a plan either preceding or following the one currently displayed. If, for example, a time span going from 12:00 to 24:00 is displayed, one click on the right arrow displays a time span going from 15:00 to 3:00 (next day). Similarly, one click on the left arrow displays a time span going from 9:00 to 21:00.

This button is a filter for the operations in the "not assigned" area. If selected, only the operations of the currently selected block are displayed in this area, if not selected all the not assigned operations of all the blocks configured in the system are displayed. See paragraph 4.3.

4.2.1. How to edit the operation plan

The operation plan can be edited directly on the "OranJ Plan" module main screen. Before any editing it is necessary to click the **Edit** button (Fig 116).

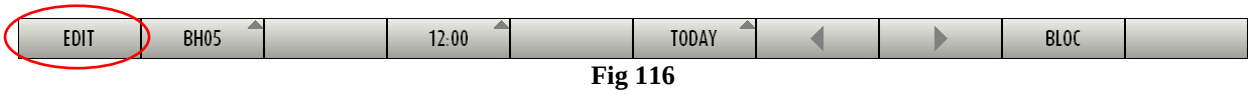


Fig 116

When the button is selected the screen is in "edit" mode. The selected button colour changes to dark grey.

Once the editing is performed the button automatically deselects. It is necessary to click it again to edit the screen again. To edit the plan

- click the **Edit** button,

The “drag and drop” functionalities are this way enabled.

- Drag the operation rectangle to the point required on the plan (or in the “not assigned” area).

The rectangle stays where dragged, whereas the button deselects. The changes (operation time and room) are recorded on the other OranJ modules.

The term “drag and drop” indicates the possibility to physically take one of the rectangles corresponding to an operation, drag it to the point required and release it. Remember that the position of a box on the page indicates the room and the time scheduled for the corresponding operation, so moving a box from one position to another means assigning or changing time and/or operating room.

If working on a “touch screen” the same operation can be performed using the fingers.

The **Edit** button makes it possible to:

- change the time and/or room scheduled for an operation,
- add one of the operations from the “not assigned” area to the daily schedule,
- remove one of the operations from the daily schedule and add it to the “not assigned” area.

4.2.2. How to change the block displayed

This button is only active if the workstation on which you are working is configured to display more than one surgical block (i.e., if it is a GENERAL CENTRAL STATION).

To display the page relating to another surgical block

- Click, on the command bar, the button indicated in Fig 117 (the button displays the name/code of the block currently displayed).

Fig 117

A list of all the blocks configured in the OranJ system opens (Fig 118).

Fig 118 – Block selection

- Click one of the names on the list. The corresponding block is this way displayed.

4.2.3. How to change the time range displayed

To change the time range displayed

- click the time button on the command bar (Fig 119 - the button displays the time range currently selected).

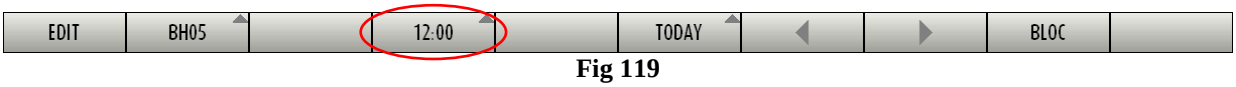


Fig 119

A drop-down menu offering three different options (6:00 – 12:00 – 24:00) opens (Fig 120).

Fig 120 – Time interval options

- Click the required option.

The screen changes accordingly. Click **6:00**, for instance, to display a 6 hours time range.

4.2.4. How to change the day displayed

The **Today** button (Fig 121) on the command bar makes it possible to change the date displayed.

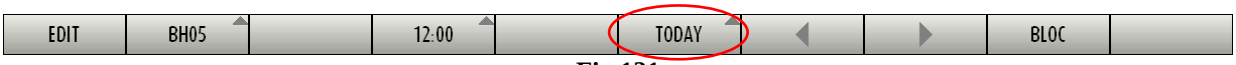


Fig 121

To do that

- Click the **Today** button.

A calendar window (current month) opens (Fig 122).

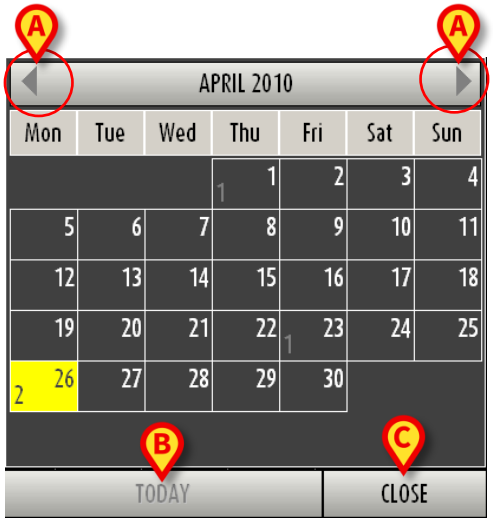


Fig 122 – Calendar

The current day is highlighted yellow. Inside every day the number of operations completed during that day is shown (dark gray).
Use the arrows (Fig 122 **A**) to change month. If it is April, for example, click the right arrow to display the calendar for May and the left arrow to display the calendar for March.

After selecting the month

- Click the day you wish to display.

The day selected on the calendar turns yellow. The page relating to the selected day is displayed.
If you select a different day from the current one, the **Today** button displays the date of the selected day. To return to the current day

- Click the **Today** button on the calendar (Fig 122 **B**).

To close the calendar window

- Click the **Close** button on the calendar (Fig 122 **C**).

4.3. The “not assigned” area

The “Not assigned” area on the right of the “OranJ Plan” screen (Fig 123 **A**, Fig 124), contains operations which have not been assigned a block, room or time.

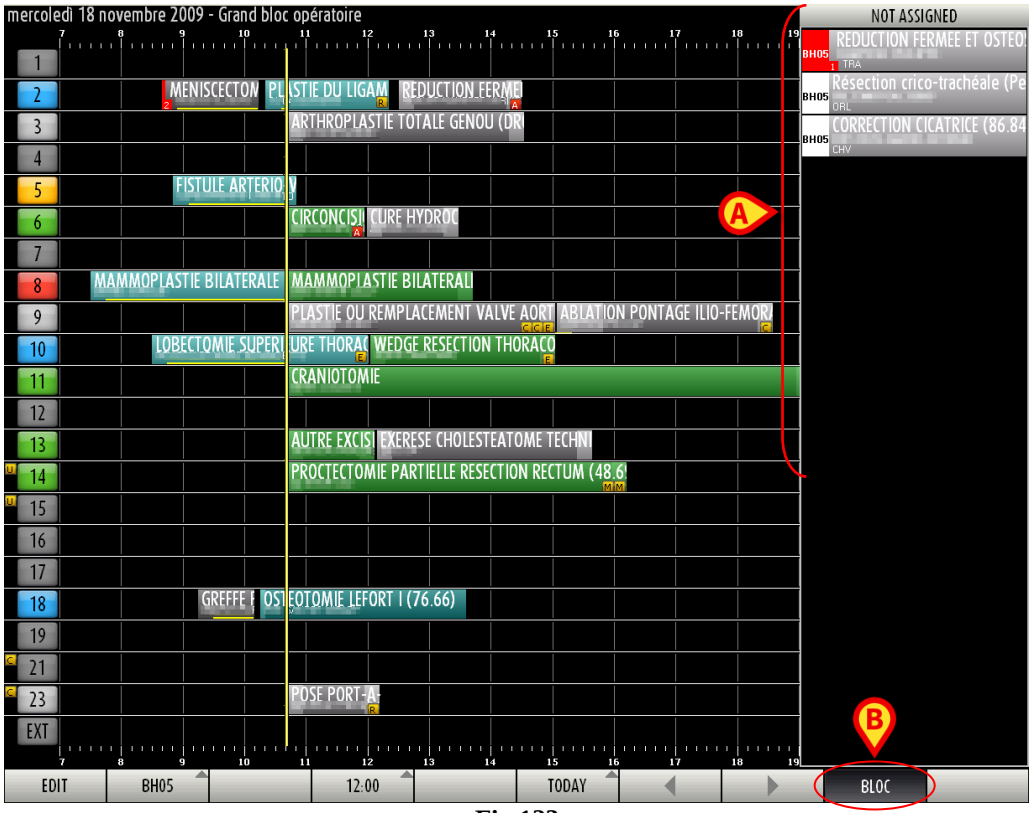


Fig 123

This area can be used to add urgent operations to the daily schedule. The criterion observed for these urgent cases is “as soon as a room is free, the operation goes ahead”; the “not assigned” area makes it possible to display the operations waiting to be added to the daily schedule.

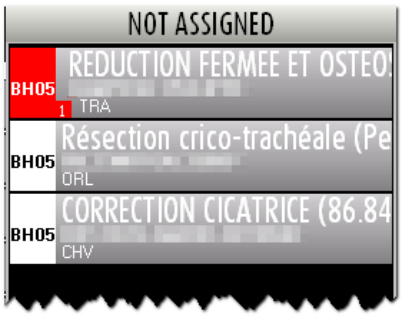


Fig 124 – “Not assigned” area

A scheduled operation is in the “not assigned” column when

- the block is not specified;
- the room is not specified;

- the time is not specified;
- the block and room are not specified;
- the time and room are not specified;
- the time, block and room are not specified.

In the DIGISTAT® systems, these operations are called Reserves.

The "not assigned" area also displays operations which are indicated as "emergencies". These operations, regardless of the time, block and room specification, are marked red and are not only displayed on the day for which they are scheduled, but also on the days to come (so that the emergency is always visible. All the emergencies are grouped together on top of the list.
The small box indicated in Fig 125 **A** specifies the emergency level.

Fig 125

The **Block** button on the command bar (Fig 123 **B**) makes it possible to filter the operations of the "not assigned" group. If selected, only the operations relating to the block currently displayed are displayed. If not selected, all the "not assigned" operations of the surgical area are displayed. When you access the page, the Block button is selected by default.
The emergencies, when inserted in the plan, are characterized by a red stripe on the left (Fig 126).

Fig 126 - Emergency

When a day in the past is displayed on the plan, the "not assigned" area contains the list of the operations that were planned for that day but were not performed. Fig 127, for instance, shows the area referred to a day in the past. Note the title "planned" on top of the list instead of "not assigned".

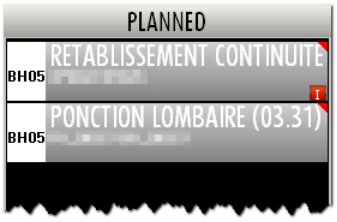


Fig 127

The operation boxes that appear in the not assigned area in the way indicated in Fig 128 **A** are reserves that were planned for a day that is different from the current day.

Fig 128

4.3.1. Planning a "Reserve" operation

To add a "Not assigned" operation to the daily plan

- Click the **Edit** button on the command bar.
- Drag the operation-rectangle and drop it to the position corresponding to the wanted room and time.

4.4. Room Plan

You can display the details of the schedule of every single operating room by clicking the box containing the room number (Fig 129).

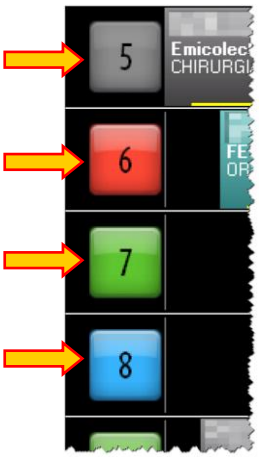


Fig 129

4.4.1. Scheduling the single room

Click one of the boxes indicated in Fig 129 to access a page showing information relating to the daily schedule of the single room (Fig 130).

Fig 130 – Room Plan

The figure shows the details of room 4.

4.4.2. Room schedule

There is a time line in the upper part of the page, schematically representing the schedule of the operating day (Fig 130 **A**, Fig 131).

Fig 131

The box on the left (Fig 131 **A**) displays the room number. If enabled by configuration, the colour of that box provides information on the state of the operation that is more relevant at present time.

There are four possible configuration options regarding the room number box colour:

- room numbers are always grey;
- only operation states are highlighted;
- only late and close to end operations are highlighted;

- both operation states and late/close to end operations are highlighted .

In this last case the room number colour changes according to the following priorities:

- if an operation is late the box turns red;
- if an operation is close to the end (30 minutes or less in the configuration here described) the box turns yellow;
- if an operation is in progress the box turns cyan;
- if an operation is ready (and no operation is in one of the above mentioned states) the box turns green;
- if an operation is planned (and no operation is in one of the above mentioned states) the box turns light grey;
- if there are no operations or all the operations in the room are completed the box turns dark grey.

Possible letters placed beside the room number (Fig 132) indicate the room devices. The relationship between a letter and a device is defined by configuration.

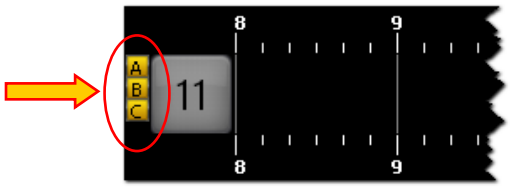


Fig 132

The numbers along the line represent the hours of the day. The boxes inside the line represent the operations scheduled, in progress or completed in that room. The color of the boxes corresponds to the operation state. The association between color and operation state is explained in paragraph 4.2

The lenght of every box is proportional to the scheduled duration of the corresponding operation. The longer the box, the longer the scheduled duration of the operation.
The position of every box indicates the scheduled time for the operation. The left side of the box is positioned in line with the start time scheduled for the operation.
For example, the box indicated in Fig 131 **B** corresponds to an operation which should start at 13:40 and should last one hour.

If the data relating to an operation is changed, i.e., if the scheduled time or duration is changed, the system automatically moves the corresponding box on the page and/or changes its dimensions.
See paragraph 3 to know how to change the data of a scheduled operation.

The vertical yellow cursor indicates the current time (Fig 131 **C**). In the example shown in the figure, the yellow cursor is in line with 11:50. The cursor runs across the page as time goes by.
If the cursor meets the start time established for an operation (i.e., the left side of a box) and the operation does not start at the established time, the box moves together with the cursor.

In general:

- completed operations (dark gray) are all on the left of the time cursor,

- scheduled operations (light gray) and those that have only undergone block check-in (green) are all on the right of the time cursor,

- in progress operations (cyan) are across the time cursor.

Data relating to completed operations (duration, start time, end time etc…) are actual data; data relating to scheduled operations are planned data.

If enabled by configuration, the possible operation delay is visible on a yellow bar placed at the bottom of the operation-rectangle (Fig 133).

Fig 133

A configuration parameter makes it possible to display separately the possible delays in pre surgical, surgical and post surgical durations. That is the case shown in Fig 133. In the figure here displayed the three yellow bars indicate

1) a 5 minutes delay in the pre surgical planned duration (Fig 133 **A**);
2) a 15 minutes delay in the surgical planned duration (Fig 133 **B**);
3) a 10 minutes delay in the post surgical planned duration (Fig 133 **C**).

The operation shown in the figure is still in progress. Total delay is 30 minutes so far. This value is indicated in the "residual time" area on the "OranJ Home" screen (see paragraph 2.9).
The operations envisaged after the overrunning operation will be automatically postponed by the system. The operations scheduled after the delayed ones are, if necessary, automatically postponed.

The operations indicated as "Emergencies" are characterized by a red stripe on the left (Fig 134). The small box indicated in Fig 134 **A** specifies the emergency level. In the configuration here described there are three possible emergency levels.

Fig 134 - Emergency

Every operation box can be clicked, whether on the page or the “not assigned” column (see paragraph 4.3). Click one of the boxes to open a window (Fig 135) containing the main data of the operation.

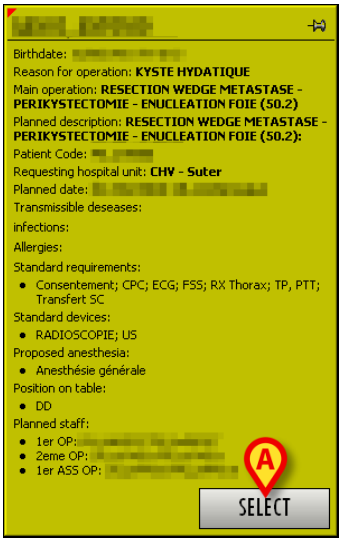


Fig 135 – Operation details

Click the Select button in the window (Fig 135 **A**) to access the “OranJ Form” page corresponding to the operation clicked (Fig 11).

4.4.3. The command bar

Fig 136 – Room Plan module command bar

On the control bar, the three buttons **6 Hours**, **12 Hours**, **24 Hours** (Fig 136 **A**) make it possible to change the time range displayed. By clicking the **6 Hours** button, for example, the time range of 6 hours is displayed, while the **12 Hours** button displays the time range of 12 hours.

The arrow buttons (Fig 136 **B**) make it possible to move backwards and forwards in the time range displayed. If, for example, you are displaying the time range going from 12:00 to 24:00, click once the right arrow to display the time range going from 15:00 to 3:00 of the following day. Likewise, click once the left arrow to display the time range going from 9:00 to 21:00.

The **Edit** button (Fig 136 **C**) makes it possible to edit the page contents. See paragraph 4.4.6 for a description of this function.

The **Not Assigned** button (Fig 136 **D**) makes it possible to select a scheduled operation and bring it to the “Not assigned” area. The related procedure is described in paragraph 4.4.6.

4.4.4. The “daily program” area

The “daily program” area (Fig 137 **A**) displays in textual form information on the schedule of the selected operating room.

Fig 137

Every row corresponds to an operation (Fig 138).

Fig 138

The color of the row indicates the operation state (see paragraph 4.2 for the association between colors and operation state in OranJ).
The left part of every row contains the start time scheduled for the operation (Fig 138 **A**). The rest of the row shows:

- the planned duration of the operation (Fig 138 **B**);
- the patient’s name (Fig 138 **C**);
- the type of operation scheduled (Fig 138 **D**).

If specified, the hospital unit which requested the operation is also indicated.

If the left part is highlighted red (Fig 139) it means that the operation is an “Emergency”.

Fig 139 - Emergency

4.4.5. The “not assigned” area

The module displays the list of not assigned operations. These are operations for which no start time, room or block have been scheduled (these operations are called “reserves”, see paragraph 4.3 for a description of these operations and the related procedures).

The “not assigned” area of this page contains the same operations displayed in the “not assigned” area of the OranJ “Plan” screen (Fig 124).

Each row of this section shows the scheduled duration for the operation, the name of the patient, the type of operation scheduled and, if specified, the department which requested the operation (Fig 137 **B**).
All the rows of the “daily program” and “not assigned” areas can be clicked. Click a row to open the window shown in Fig 135, containing the main data of the operation.

4.4.6. How to edit the operations schedule

You can edit the main page of the Room Plan module to change the operations schedule

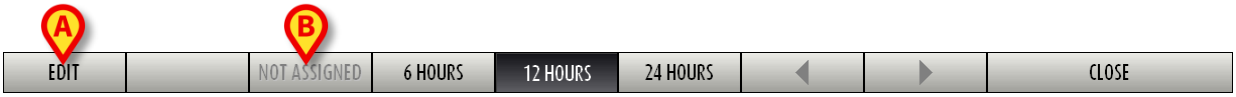


Fig 140 – Room Plan module command bar

To make any change it is necessary, first, to click the **Edit** button (Fig 140 **A**). When this button is clicked it appears as selected.

To edit the page:

- click the **Edit** button.
- make the change required.

Once the page is edited, the **Edit** button is automatically deselected. To edit the page again it is necessary to click it again.

When the **Edit** button is selected, the “drag and drop” functions are enabled.
The term “drag and drop” indicates the possibility to physically take one of the boxes corresponding to an operation, drag it to the point required on the time line and release it. Remember that the position of a box indicates the time scheduled for the corresponding operation, so moving a box from one position to another on the time line means changing the time of the corresponding operation. The changes will be automatically displayed on the other OranJ modules.

If you are working on a touch screen and there is no mouse, you can perform the same procedure using your fingers.

Likewise, you can add an operation from the "not assigned" list to the daily schedule by dragging the corresponding box.
You can also remove an operation from the daily schedule and add it to the "not assigned" list. To do so you have to

- click the **Edit** button.
- On the list of scheduled operations (Fig 137 **A**), click the row corresponding to the operation you wish to remove.

The rectangle on the left (the one displaying the scheduled time) turns yellow (Fig 141)

Fig 141

The **Not Assigned** button on the command bar activates.

- Click the **Not Assigned** button (Fig 140 **B**).

The operation is this way moved to the "not assigned" list.

Hence, use the **Edit** button on the on the main page of the Room Plan module to

- change the time scheduled for an operation.
- add one of the operations from the "not assigned" list to the daily schedule.
- remove one of the operations from the daily schedule and add it to the "not assigned" list.

4.4.7. Room markers

The markers relating to the room events (Fig 142) are displayed and recorded in the column on the left side of the page (Fig 130 **B**).

Fig 142 – Room markers

These markers make it possible to record any occurrence which is considered significant and of which a record is required. The system makes it possible to record the event and the time at which it occurred.
The number and nature of room events change according to the needs of the organization and depend on the particular configuration of the system used. Remember that the procedures explained in this paragraph are only an example of configuration. The room markers in this configuration are

- Room opens
- Start of maintenance
- Start of cleaning
- End of cleaning
- End of maintenance
- Room closes

The markers are displayed on the left side of the screen as a sequence of boxes. The boxes are arranged in chronological order.

The box relating to the marker initially appears in ochre yellow and does not contain any information on the moment (the time and day) in which the event took place. This means that the marker has not yet been recorded, the corresponding event has not yet occurred (Fig 143).

Fig 143 – First room marker

To record a marker, simply click the corresponding box. The box turns gray and records the time at which it was clicked. A new ochre yellow box (or several boxes, depending on the configuration) indicating no time appears below it. New boxes refer to subsequent markers (Fig 144).

Fig 144 – Second room marker

In general, to record a marker you have to

- click the corresponding box.

The system automatically records the time at which the box is clicked.

4.4.8. How to edit the room markers

To change the time of a marker after it has been recorded

- Click the box corresponding to the marker for which the time has to be changed.

A numeric keyboard is displayed (Fig 145).

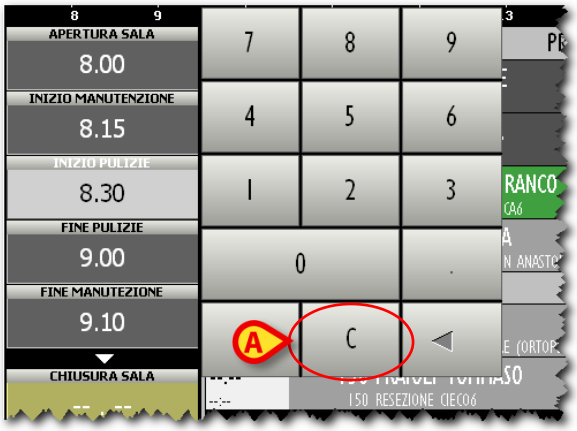


Fig 145 – Numeric keyboard

- Enter the time required using the keyboard.

To record the new time.

- Click again the box corresponding to the event.

The numeric keyboard disappears and the new time is displayed in the box.

If the time entered is impossible, the following error message pops-up (Fig 146).

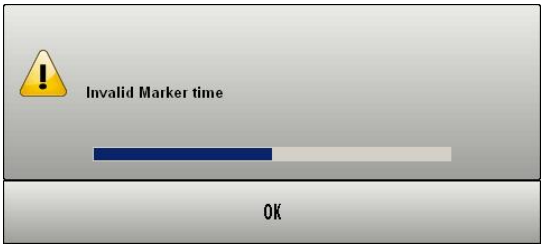


Fig 146

To delete a marker

- Click the box corresponding to the marker to be deleted.

The numeric keyboard appears (Fig 145).

- Click the **C** button on the keyboard (Fig 145 **A**).

User confirmation is required (Fig 147).

Fig 147

- Click Yes to delete the marker.

The deleting of an event implicates the deleting of all subsequent events.

The box corresponding to the event deleted becomes ochre yellow again, indicating no time, meaning that the event has not yet occurred.

5. The OranJ Central module

The OranJ Central module provides a general summary of the situation of the whole surgical area or block. OranJ Central can be used for monitoring the state and availability of the operating structures in real time.

The OranJ Central module is installed on the BLOCK CENTRAL STATION and GENERAL CENTRAL STATION workstations.

5.1. The main page

The main page of this module (Fig 148) represents a surgical block.

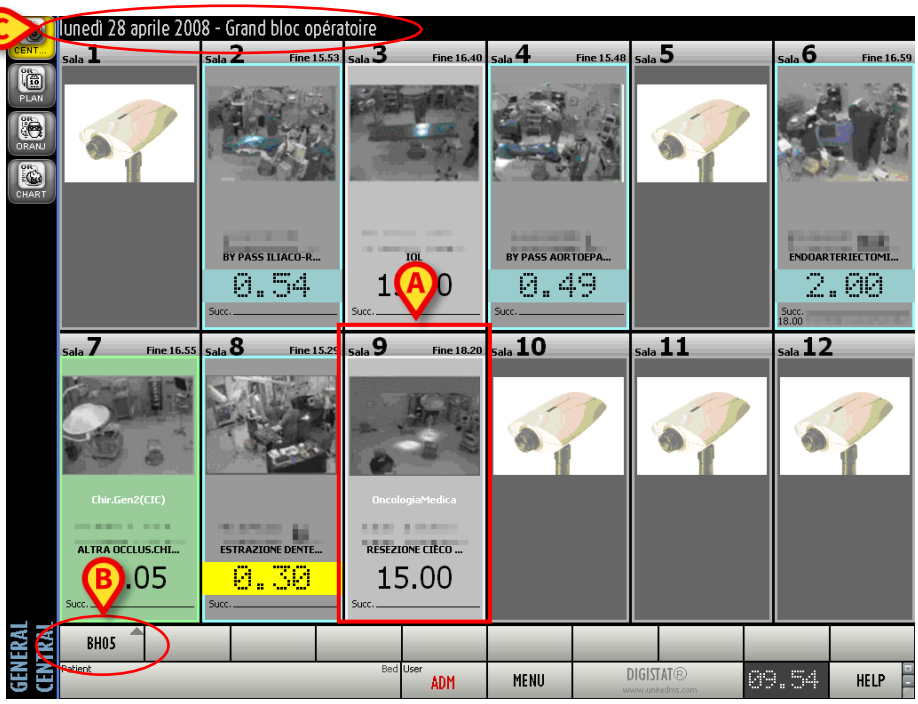


Fig 148 – OranJ Central

The **BH05** button on the command bar (Fig 148 **B**) makes it possible to select different blocks. It is only enabled when working with a General Central Station workstation, covering several surgical blocks. The name of the block displayed is displayed on the button (Fig 148 **C**).
If you are working on a Block Central Station workstation, which covers only one surgical block, this button is not enabled.

Every cell (Fig 148 **A**, Fig 149) represents an operating room.

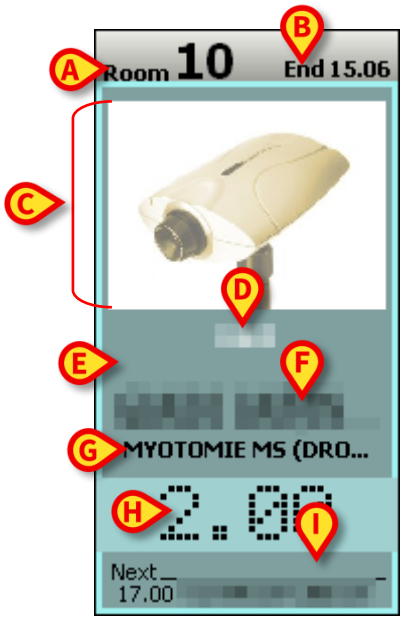


Fig 149 – Operating room detail

Every cell can contain the following information (Fig 149).

- The room number (Fig 149 **A**).
- The time envisaged for the end of the operation in progress (Fig 149 **B**).
- The picture of the operating table. This is only possible if a webcam is installed in the room (Fig 149 **C**).
- The name of the hospitalization unit requesting the operation (if specified - Fig 149 **D**).
- The name of the operating surgeon (if already assigned - Fig 149 **E**).
- The patient's name (Fig 149 **F**).
- The type of operation (Fig 149 **G**).
- The time remaining until the end of the operation in progress according to the planned duration (if the operation is in progress, this is the case shown in Fig 149 **H**).
- The scheduled operation start time (if the operation has not yet started, this is the case shown in Fig 148 **A**)
- The patient's name and the type of operation, if any, which will follow the one in progress (Fig 149 **I**).

When there is less than half an hour until the envisaged end of the operation the corresponding part of the cell becomes yellow and starts flashing.

When an operation exceeds the time envisaged, the corresponding part of the cell turns red, indicating, with a negative number, the delay time. The color of the cell indicates the current “state” of the operation.

Four different operation states are possible.

- Scheduled – the operation has been scheduled; i.e., an operation has been associated to a patient.
- Ready – the patient has undergone block check-in
- In progress – the patient has entered the operating room
- Completed – the operation has been completed.

On the pages of OranJ, each of these four states is identified by a color.

- Light gray: indicates that the operation is scheduled (Scheduled)
- Green: indicates that the patient has undergone block check-in (Ready)
- Blue: indicates that the patient has entered the operating room (In progress)
- Dark gray: indicates that the operation has been completed (Completed)

Completed operations are not displayed on the main page of the OranJ Central module. Therefore, there will be no dark gray cells.

Click the box containing the picture of the room (or the picture of the webcam) to access a page containing detailed information of the selected operating room (Fig 151).

Click any other part of the cell to open a window (Fig 150) containing the main data of the operation.

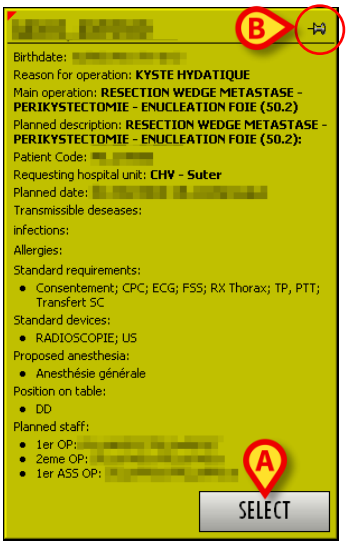


Fig 150 – Operation details

Click the **Select** button (Fig 150 **A**) to access the "OranJ Form" page relating to the operation clicked (Fig 11). The window shown in Fig 150 disappears after a few seconds. Click on it to make it disappear immediately. Click the "thumbtack" indicated in Fig 150 **B** to "pin" it to the page.

5.2. Operating Room detail

The page shown in Fig 151 displays all the details of the selected operating room.

Fig 151 – Operating room monitor

To access this page it is necessary to

- Click the area of the cell showing the picture of the room or the picture of the webcam (Fig 149 **C**).

The area on top shows the name of the surgical block, the room number, the patient's name and the type of operation (Fig 151 **A**).

Beneath it there is a time line displaying the daily schedule of the room (Fig 151 **B**).

5.3. Room schedule

There is a time line in the upper part of the page, schematically representing the schedule of the operating day (Fig 151 **B,** Fig 152).

Fig 152

The box on the left (Fig 152 **A**) contains the room number. If enabled by configuration, the colour of that box provides information on the state of the operation that is more relevant at present time.

There are four possible configuration options regarding the room number box colour:

- room numbers are always grey;
- only operation states are highlighted;
- only late and close to end operations are highlighted;
- both operation states and late/close to end operations are highlighted .

In this last case the room number colour changes according to the following priorities:

- if an operation is late the box turns red;
- if an operation is close to the end (30 minutes or less in the configuration here described) the box turns yellow;
- if an operation is in progress the box turns cyan;
- if an operation is ready (and no operation is in one of the above mentioned states) the box turns green;
- if an operation is planned (and no operation is in one of the above mentioned states) the box turns light grey;
- if there are no operations or all the operations in the room are completed the box turns dark grey.

Possible letters placed beside the room number (Fig 153) indicate the room devices. The relationship between a letter and a device is defined by configuration.

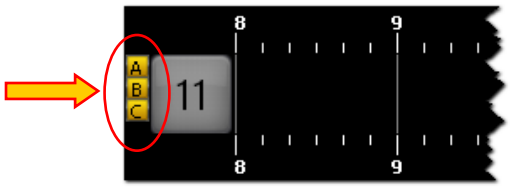


Fig 153

The numbers along the line represent the hours of the day.

The boxes placed on the line represent the operations either scheduled, in progress or completed in that room. The color of the boxes corresponds to the operation state. The association between color and operation state is explained in paragraph 4.2

The size of every box is proportional to the scheduled duration of the corresponding operation. The longer the box, the longer the scheduled duration of the operation.

The position of every box indicates the scheduled time for the operation. The left side of the box is positioned in line with the start time scheduled for the operation.
For example, the box indicated in Fig 152 **B** corresponds to an operation which should start at 13:40 and should last one hour.

If the data relating to an operation is changed, i.e., if the scheduled time or duration is changed, the system automatically moves the corresponding box on the page and/or changes its size.
See paragraph 3 to find out how to change the data of a scheduled operation.

The vertical yellow cursor indicates the current time (Fig 152 **C**). In the example shown in the figure, the yellow cursor is in line with 11:50. The cursor moves with time. If the cursor meets the start time established for an operation (i.e., the left side of a box) and the operation does not start at the established time, the box moves in time together with the cursor.

In general

- completed operations (dark gray) are all on the left of the time cursor,
- scheduled operations (light gray) and those that have only undergone block check-in (green) are all on the right of the time cursor,
- in progress operations (cyan) are across the time cursor.

Data relating to completed operations (duration, start time, end time etc…) are actual data; data relating to scheduled operations are planned data.

If enabled by configuration, the possible operation delay is visible on a yellow bar placed at the bottom of the operation-rectangle (Fig 154).

Fig 154

A configuration parameter makes it possible to display separately the possible delays in pre surgical, surgical and post surgical durations. That is the case shown in Fig 154. In the figure here displayed the three yellow bars indicate

1) a 5 minutes delay in the pre surgical planned duration (Fig 154 **A**);
2) a 15 minutes delay in the surgical planned duration (Fig 154 **B**);
3) a 10 minutes delay in the post surgical planned duration (Fig 154 **C**).

The operation shown in the figure is still in progress. Total delay is 30 minutes so far. This value is indicated in the "residual time" area on the "OranJ Home" screen (see paragraph 2.9).

The operations envisaged after the overrunning operation is automatically postponed by the system. The operations scheduled after the delayed ones are, if necessary, automatically postponed.

The operations indicated as "Emergencies" are characterized by a red stripe on the left (Fig 155). The small box indicated in Fig 155 **A** specifies the emergency level. In the configuration here described there are three possible emergency levels.

Fig 155 - Emergency

Every operation box can be clicked, whether on the page or the "not assigned" column (see paragraph 4.3).

Click one of the boxes to open a window (Fig 156) containing the main data of the operation.

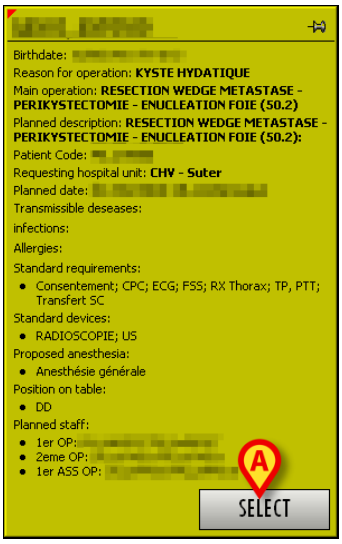


Fig 156 – Operation details

Click the **Select** button in the window (Fig 156 **A**) to access the “OranJ Form” page relating to the operation clicked (Fig 11).

5.4. The command bar

Fig 157 – Room monitor screen command bar

On the control bar, the three buttons **6 Hours**, **12 Hours**, **24 Hours** (Fig 157 **A**) make it possible to change the time range displayed. By clicking the **6 Hours** button, for example, the time range of 6 hours is displayed, while a click the **12 Hours** button displays the time range of 12 hours.

The arrow buttons (Fig 157 **B**) make it possible to move backwards and forwards in the time range displayed. If, for example, you are displaying the time range going from 12:00 to 24:00, click once the right arrow to display the time range going from 15:00 to 3:00 of the following day. Likewise, click once the left arrow to display the time range going from 9:00 to 21:00.

The **Close** button closes the window.

5.5. "Room monitor" page contents

The central part of the page (Fig 151 **C**) displays, on the left, the enlarged picture of the operating room taken by the webcam, if installed. The details of the operation in progress are displayed on the right. In particular, in this section of the screen you can read the start time scheduled for the operation, the patient's name and the type of operation.
The time specified is that at which the operation should have started and not that at which it actually starts.

The lower part of the page (Fig 151 **D**, Fig 158)) displays data relating to the operation in progress.

Fig 158 - Operating times detail

The area shown in Fig 158 is described in the following paragraphs.

5.6. Operating times detail

The area indicated in Fig 151 **A** and Fig 159 provides detailed information on both the room times and the current operation progresses.

Fig 159

There are three sections in the area:

1) the section indicated in Fig 159 **A** is formed of four timers displaying the currently selected operation times. These timers are described in paragraph 5.6.1;
2) the section indicated in Fig 159 **B** displays the chronologic list of all the markers and the events recorded for the currently selected operation;
3) the section indicated in Fig 159 **C** is formed of two timers displaying the overall operating room times. These timers are described in paragraph 5.6.2.

5.6.1. Operation times

Operation times indicated on the bottom-left corner of the screen (Fig 159 **A**, Fig 161) refer to the operation that is either in progress in the operating room or is the next planned operation. The operation main data are displayed near the screen header (Fig 160).

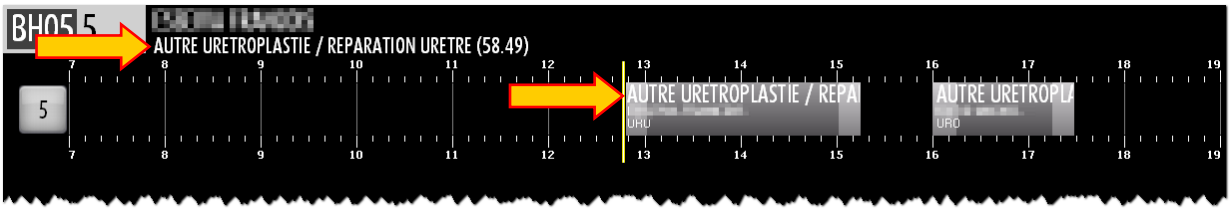


Fig 160

There are four timers indicating the operation times (Fig 159 **A**, Fig 161).

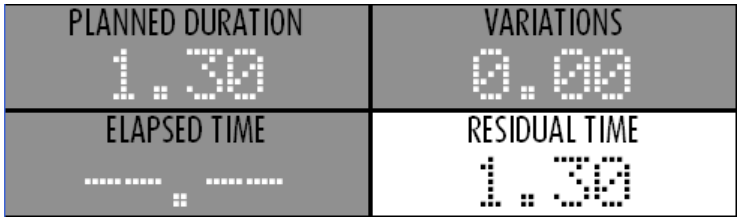


Fig 161

1) The "PLANNED DURATION" timer displays the planned duration of the selected operation and indicates the sum of the pre-surgical, surgical and post-surgical times. The value displayed on this timer changes only when the successive operation is selected.

2) The “ELAPSED TIME” timer displays the time actually elapsed since the beginning of the operation. This timer starts when the operation switches to the “In progress” state, i.e. when the “Room-in” marker is recorded on the “OranJ Home” screen.

3) The “VARIATIONS” marker displays the additional time possibly requested by the operating room staff on the “OranJ Home” screen through the relevant buttons on the “Residual time” area.

4) The “RESIDUAL TIME” timer displays the time remaining to the end of the operation (calculated both on the planned times and on the possible variations requested by the operating staff, those displayed on the “VARIATIONS” timers).
This timer displays the same time displayed on the “OranJ Home” screen, on the “Residual time” area.

Please note that the sum of the times displayed on the “PLANNED DURATION” and “VARIATIONS” timers is equal to the sum of the times displayed on the “ELAPSED TIME” and “RESIDUAL TIME” timers.

Times shown in Fig 161 correspond to an operation that is either in “Planned” or “Ready” state (i.e. the operation hasn’t started yet).

Next paragraphs explain the behaviour of the “Operating room monitor” screen timers and show the relation with the relevant markers recording on the “OranJ Home” screen.

5.6.1.1. Operation beginning - “Room in” marker

The operation switches to the “In progress” state (Fig 162 **A**) when the “Room in” marker is recorded on the “OranJ Home” screen. The “Room in” marker implies the beginning of the pre-surgical time.
When the pre-surgical time begins the “ELAPSED TIME” and “RESIDUAL TIME” timers start displaying their values (Fig 162 **B**).

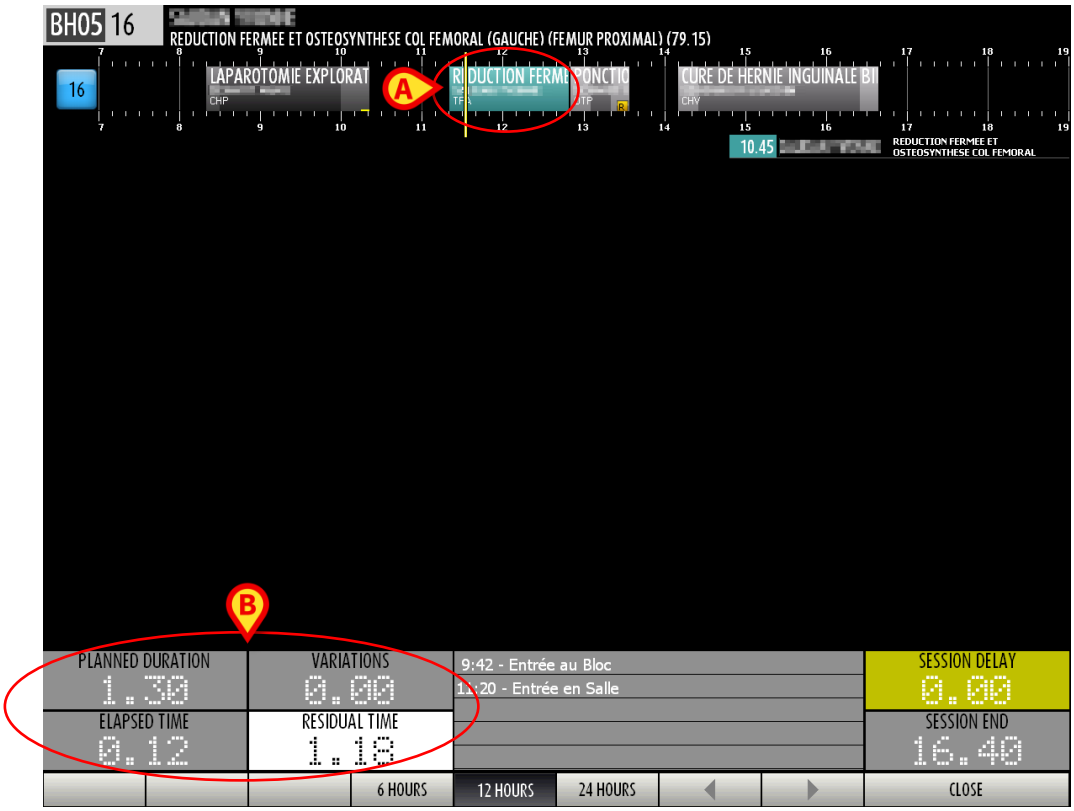


Fig 162

5.6.1.2. Surgical time beginning - “Cut” marker

Pre-surgical time ends when the “Cut” marker is recorded on the “OranJ Home” screen. If enabled by configuration, a yellow bar at the bottom of the operation-rectangle indicates the possible delay on the pre-surgical time (Fig 163 **A**). The yellow bar length is proportional to the delay amount.

Fig 163 - Pre-surgical time delay

The “Cut” marker implies the beginning of the surgical time. This change is highlighted on the operation-rectangle by a change in the colour shade (Fig 164 **A**).

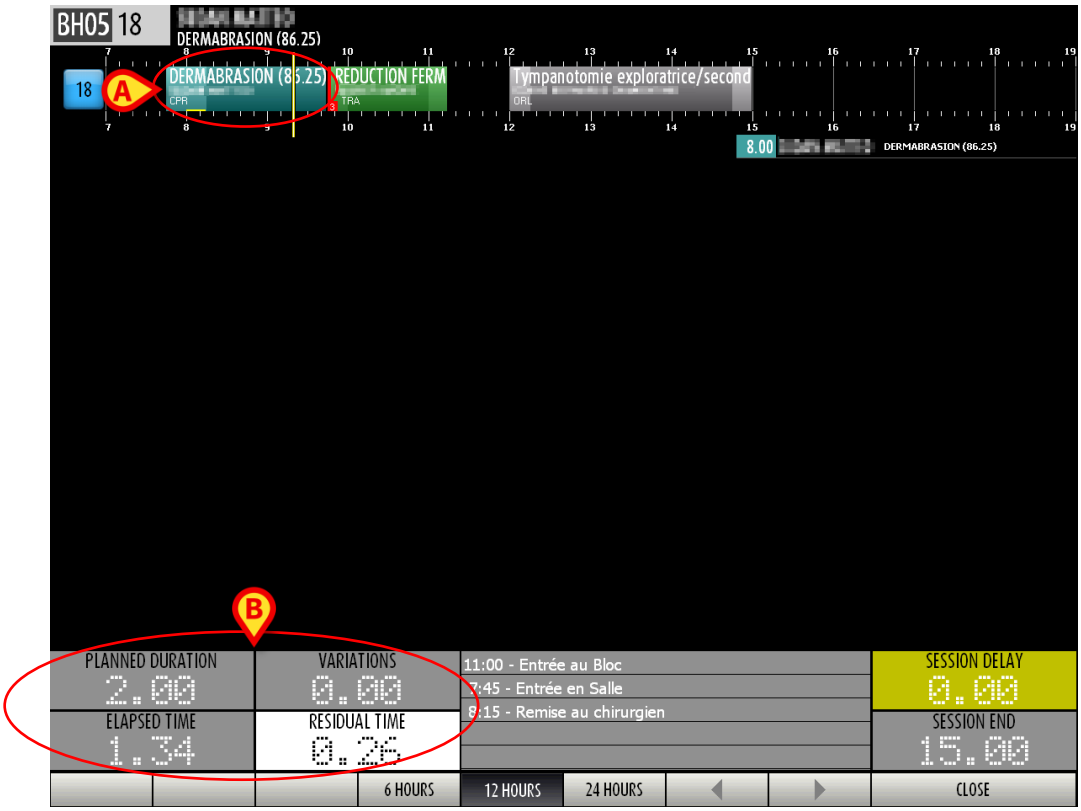


Fig 164

In Fig 164 **B** timers indicate that:

- 1 hour and 34 minutes passed since the operation began (ELAPSED TIME);
- planned residual operation duration is 26 minutes (RESIDUAL TIME);
- no additional time was requested by the operating staff (VARIATIONS);
- operation planned duration ***was*** 2 hours (PLANNED DURATION).

The “PLANNED DURATION” timer does not change until the current operation is completed. It displays in fact the duration that was planned before the operation started and does not depend on the possible variations recorded during the operation.

The time actually elapsed is displayed on the “ELAPSED TIME” timer.

If enabled by configuration, when the planned surgical time ends, the system starts indicating the delay with a yellow bar at the bottom of the operation-rectangle. The yellow bar length is proportional to the delay amount (Fig 165 **A**).

Fig 165 - Surgical time delay

5.6.1.3. Post-surgical time beginning - “Suture” marker

Surgical time ends when the “Suture” marker is recorded on the “OranJ Home” screen. A different shade of the operation-rectangle colour indicates this switch (Fig 166 **A**).
The “Suture” marker implies the beginning of the post-surgical time.

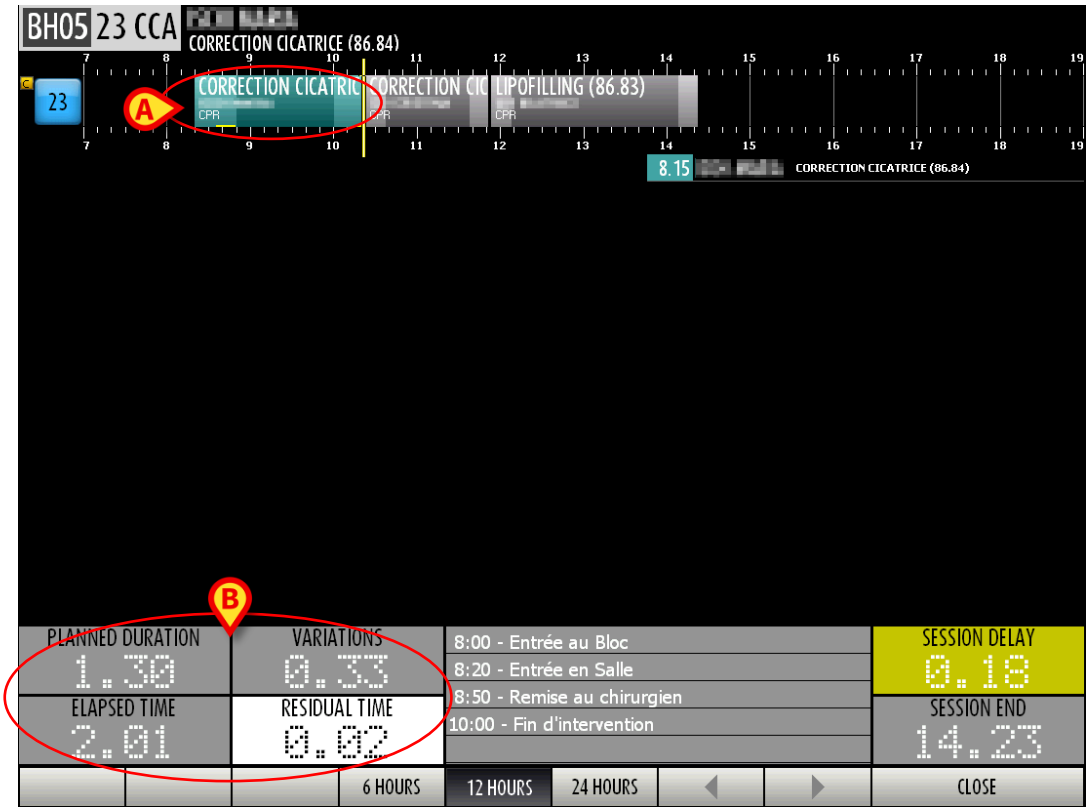


Fig 166

In Fig 166 **B** timers indicate that

- 2 hours and 01 minutes passed since the operation began (ELAPSED TIME);

- RESIDUAL TIME is 2 minutes. Residual time is calculated on the sum of the PLANNED DURATION value plus the VARIATIONS value (01:30h plus 00:33h in the example shown in Fig 166 **B**), less the ELAPSED TIME value (elapsed time is 02:01h, therefore residual time is 2 minutes).
  A negative value displayed on this timer indicates the possible delay amount. See for instance Fig 167 **A**.

- 33 additional minutes were requested by the operating staff (VARIATIONS);
- operation planned duration ***was*** 1 hour and 30 minutes (PLANNED DURATION).

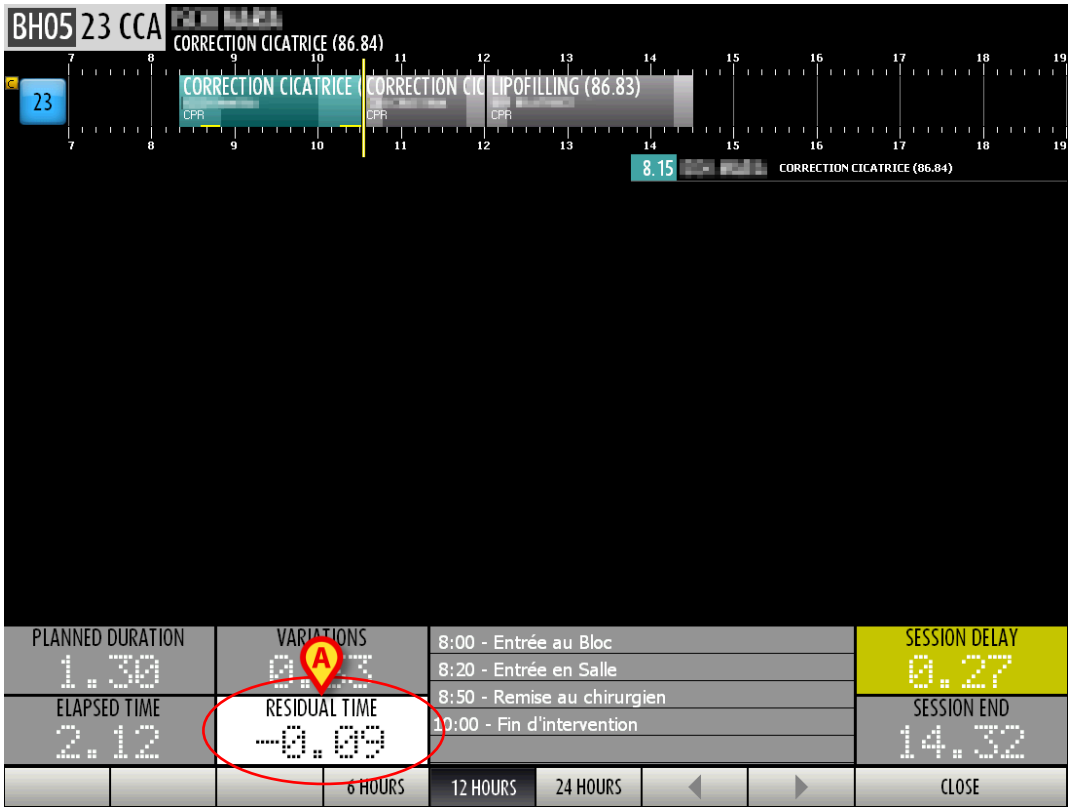


Fig 167 - Operation delay

If enabled by configuration, a yellow bar at the bottom of the operation-rectangle indicates the possible delay on the post-surgical time. The yellow bar length is proportional to the delay amount (Fig 168 **A**).

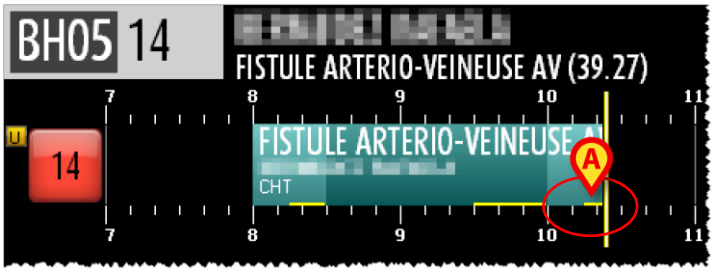


Fig 168 - Post-surgical time delay

The overall operation delay does not depend on the specific delays on the pre-surgical, surgical and post-surgical times indicated by the yellow bars at the bottom of the operation-rectangle.
In Fig 167, for instance, the overall operation delay is 9 minutes, but the post-surgical time delay is 17 minutes (planned post-surgical time was 15 minutes and it is in progress since 32 minutes).

5.6.1.4. Operation end - “Room out” marker

Operation ends when the “Room out” marker is recorded on the “OranJ Home” screen. The operation switches to “Completed” state. The operation-rectangle represents now the actual operation times and indicates both the overall duration and the specific durations and the delays (if enabled by configuration) of the pre-surgical, surgical and post surgical times (Fig 169 **A**)

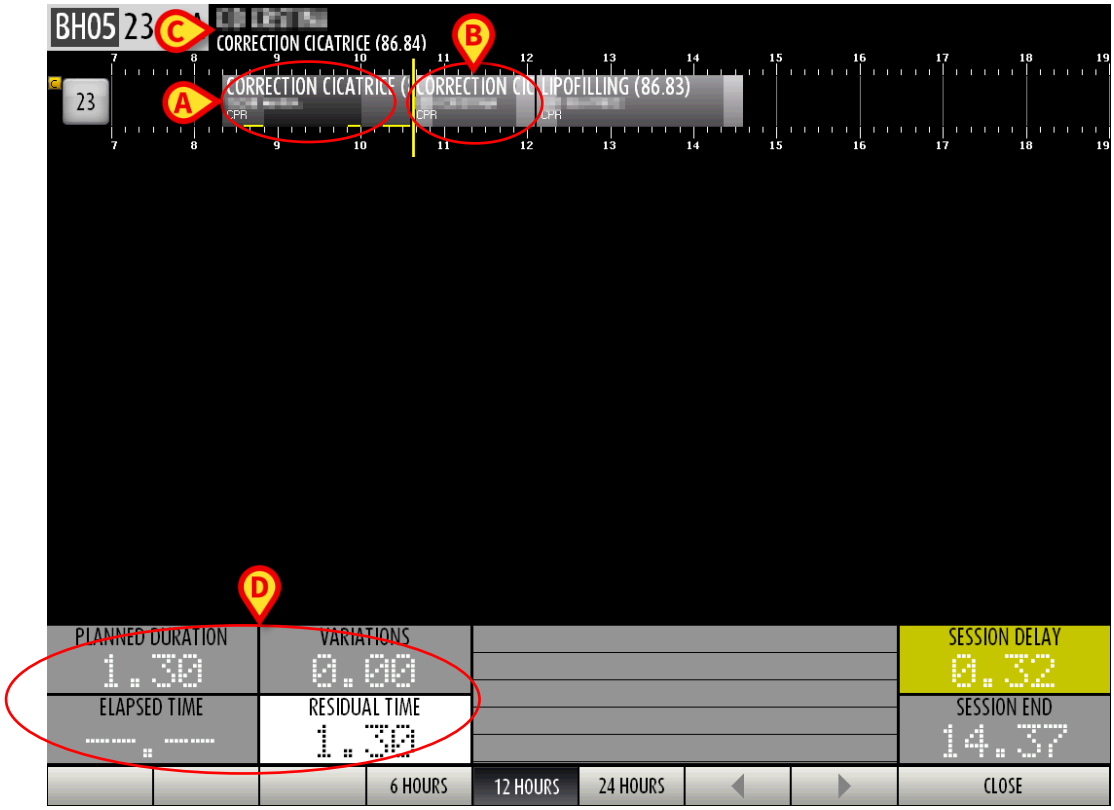


Fig 169

The successive operation is automatically selected (Fig 169 **B**), its main data are displayed alongside the screen header (Fig 169 **C**). Timers display the times of the selected operation (Fig 169 **D**).

5.6.1.5. Variations requests

The operating staff, when the operation is in progress, can request any moment additional time.

Duration variation requests are managed on the “OranJ Home” screen (paragraph 2.1).

The next two figures (Fig 170 and Fig 171) illustrate the changes on the operating room timers after a time variation request.

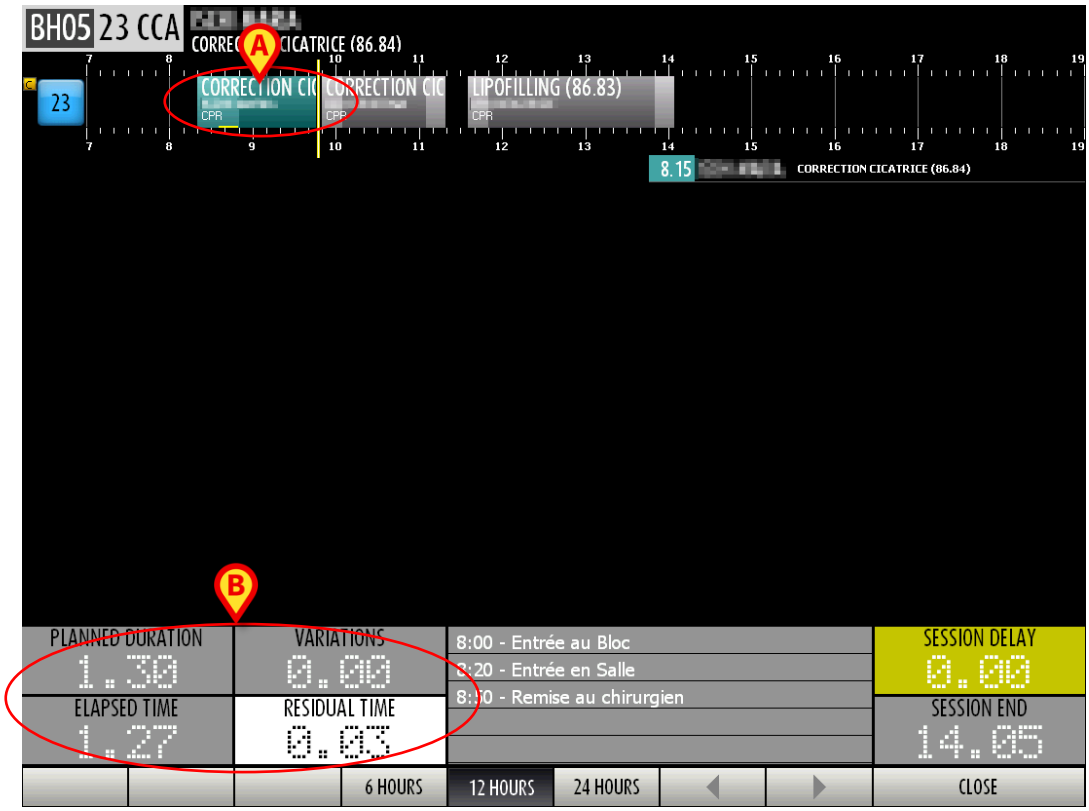


Fig 170 - Times before variation request

Before requesting additional time the "Operating room details" screen timers display the following values (Fig 170 **B**):

- 1 hour and 27 minutes passed since the operation began (ELAPSED TIME);
- planned residual operation duration is 3 minutes (RESIDUAL TIME);
- no additional time was requested by the operating staff (VARIATIONS);
- operation planned duration ***was*** 1 hour and 30 minutes (PLANNED DURATION).

The operating staff requests 33 additional minutes. The "Room monitor" screen displays this change in the following way (Fig 171).

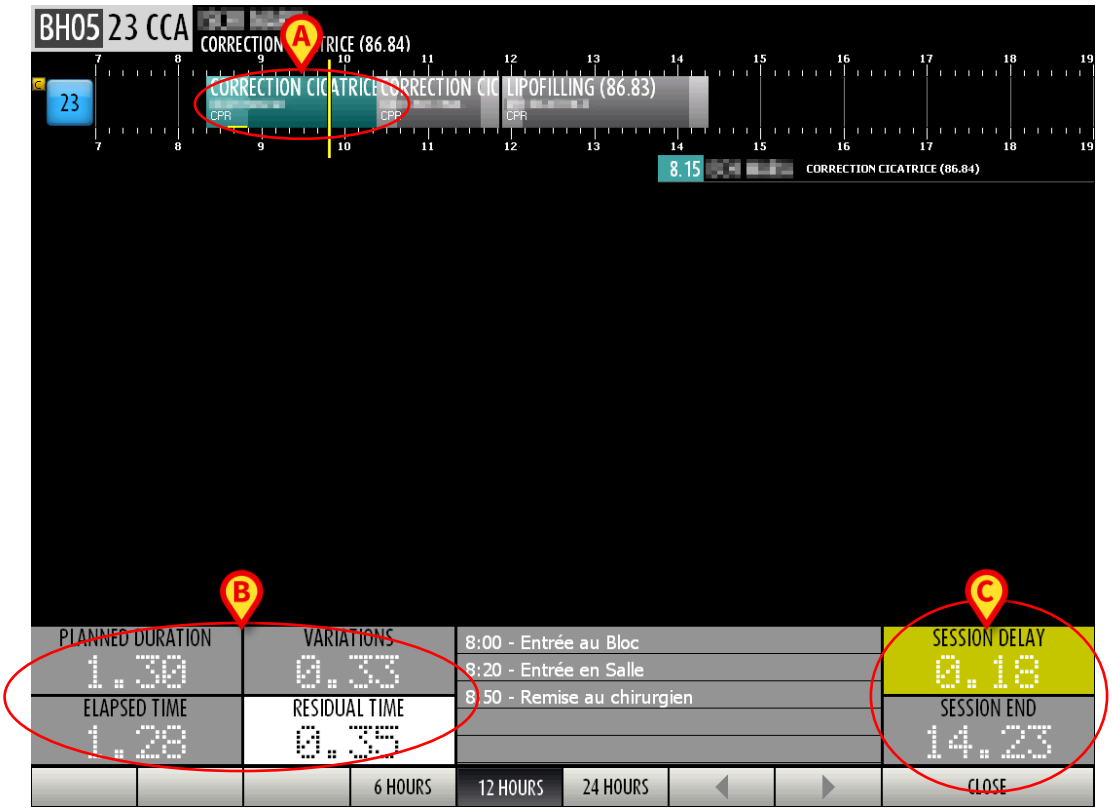


Fig 171 - 30 minutes variation

After requesting additional time the "Operating room monitor" screen timers display the following values (Fig 171 **B**):

- 1 hour and 28 minutes passed since the operation began (ELAPSED TIME);
- planned residual operation duration is 35 minutes (RESIDUAL TIME);
- 33 additional minutes were requested by the operating staff (VARIATIONS);
- operation planned duration ***was*** 1 hour and 30 minutes (PLANNED DURATION).

The corresponding operation-rectangle length indicates the overall duration (2 hours and 3 minutes, Fig 171 **A**).

Note that the variation causes a delay in the planned session end time (it was 14:05 before the variation). The new planned session end time and the session delay amount are now displayed on the timers on the right (Fig 171 **C** - see next paragraph 5.6.2 for the "Room times" timers description).

5.6.2. Room times

Room times refer to the overall timing of the operative session. Two timers display the relevant times: session delay and session end (Fig 159 **C**, Fig 172).

Fig 172

5.6.2.1. Session end

The SESSION END timer displays the planned end time of the last operation in the room. The time indicated by the SESSION END timer always corresponds to the right limit of the last operation-rectangle shown on the time bar (Fig 173 **A**)

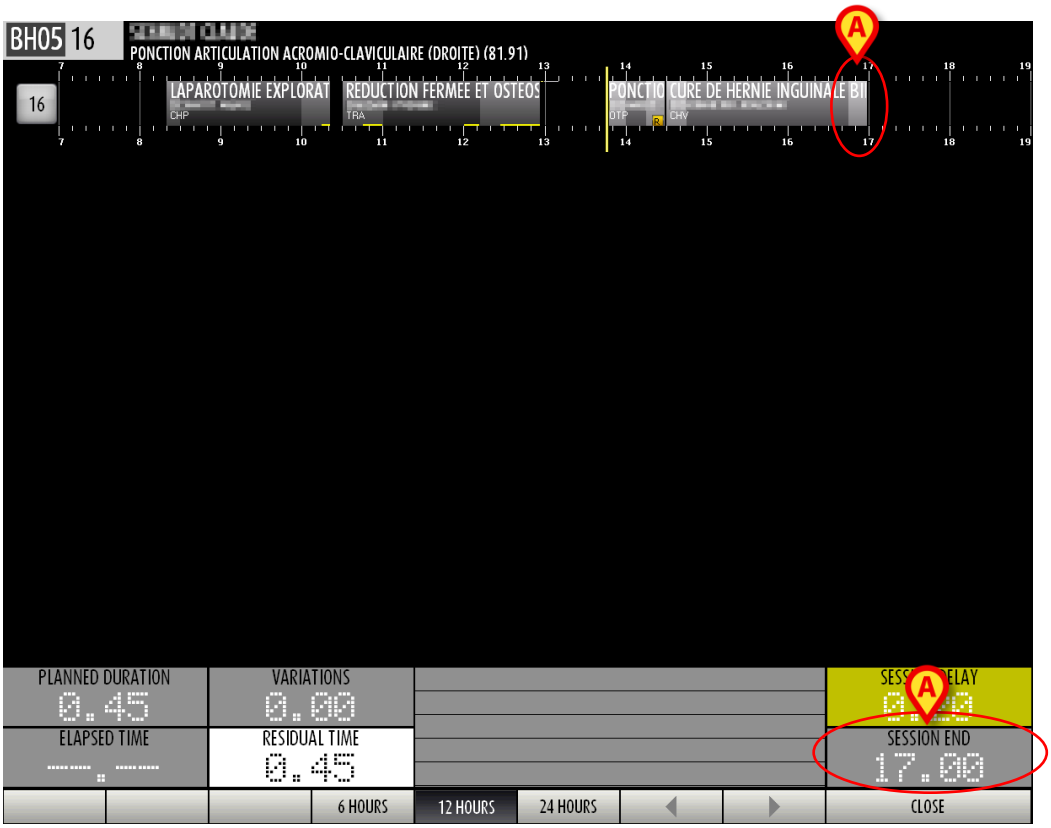


Fig 173 - Session end

5.6.2.2. Session delay

The SESSION DELAY timer indicates if the operations planned in the room are likely to cause a delay in the operative session and, in case, displays the possible delay amount. See for instance Fig 174 **A**.

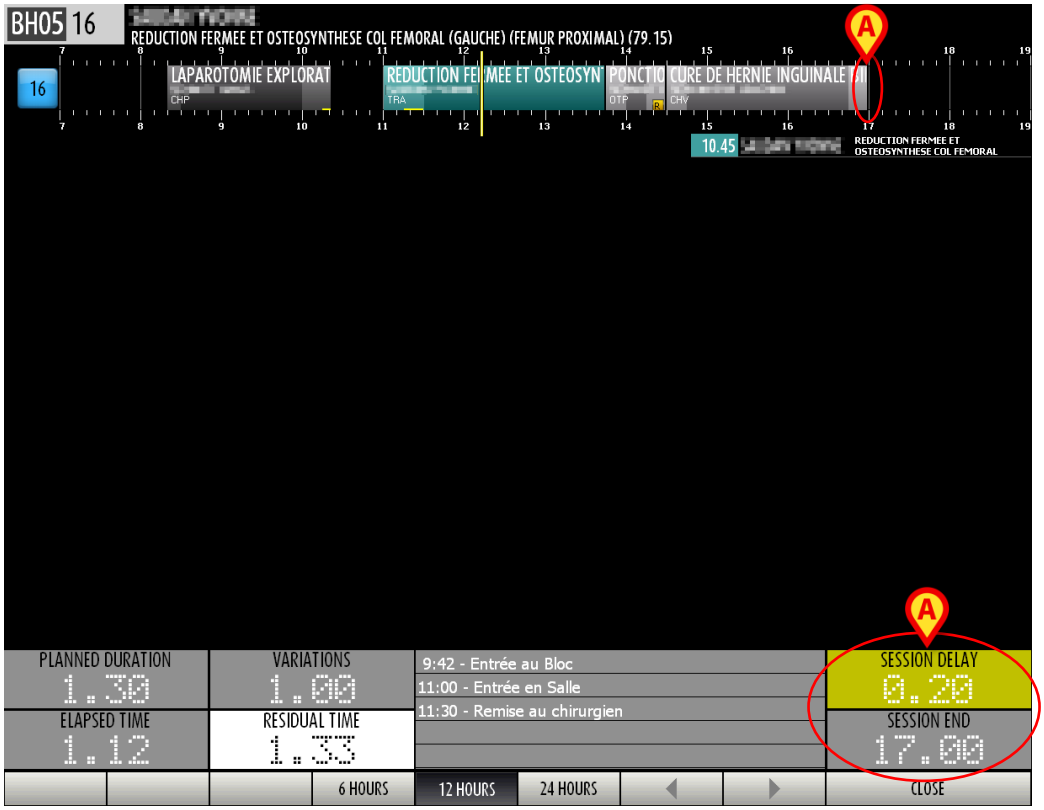


Fig 174 - Session delay

In Fig 174 the planned session end was 16:40 when the room opened. The delay caused by the operation times variations made the planned end of the last operation become 17:00.
The SESSION DELAY timer displays therefore a 20 minutes delay.
As long as the room is open and the operative session goes on it is a ***planned*** time, not an actual one. In case the operations in the room last longer than planned, this time increases, in case they last less, this time decreases.
When the last planned operation is completed the SESSION DELAY time becomes an actual value.

When the SESSION DELAY time is negative it means that the planned end of the last operation is anticipated.

6. OranJ Chart module

The OranJ Chart module provides a graphic representation in real time of some of the patient data collected during the operation; at the same time, this module makes it possible to display the events recorded on a time line.
The module is present on GENERAL CENTRAL STATION and OPERATING ROOM workstations.
The main page of the module can change considerably depending on the configuration chosen. That shown in Fig 175 is an example of configuration.

6.1. Page features

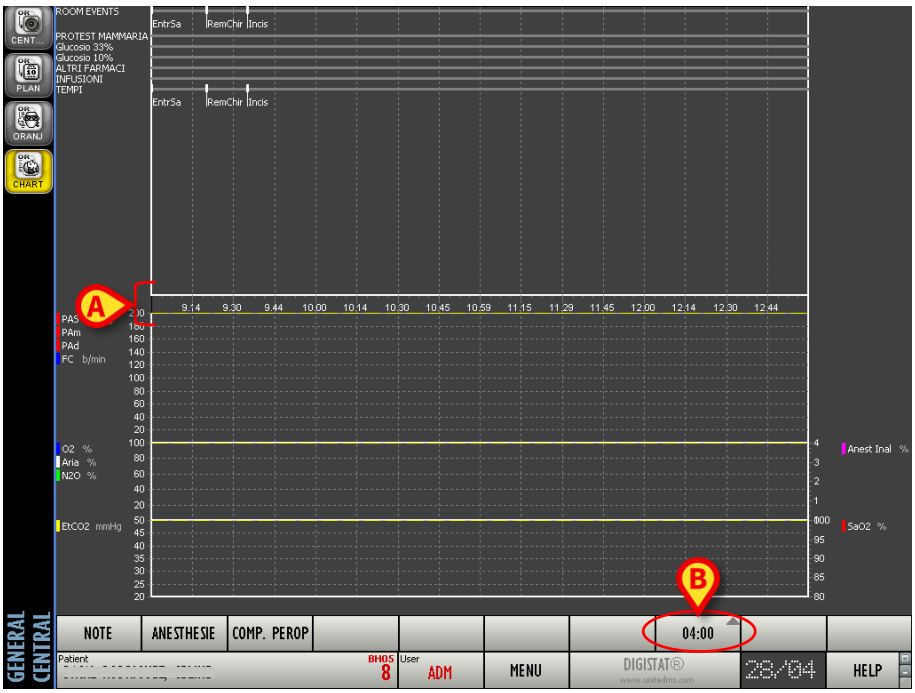


Fig 175 – OranJ Chart

The series of numbers highlighted in Fig 175 **A** indicates the time of the day. If the operation for which the data is displayed is still in progress, a vertical yellow cursor indicates the current time.

You can change the time range displayed using the button on the command bar highlighted in Fig 175 **B**.
Click the button to open a pull down menu that makes it possible to select 2, 4, 8, 12 or 24 hours (Fig 176).

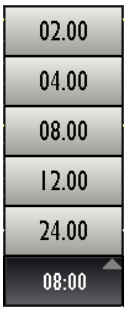


Fig 176 – Time range selection

The option selected is displayed on the button. In Fig 175, for example, an 8-hour time range is displayed.

You can display time ranges subsequent or prior to the current range using the mouse. To do so, simply move the mouse to the area of the chart for which you wish to change the display mode, left click it and, keeping the button pressed, move left/right as needed. The page moves together with the cursor of the mouse. If you are working with a touch screen, you can perform the same operation with fingers. The page is split into two areas: the "Events" area and the "Chart" area.

6.1.1. The "Events" area

The upper part of the screen (Fig 177) shows on different time lines the events recorded.

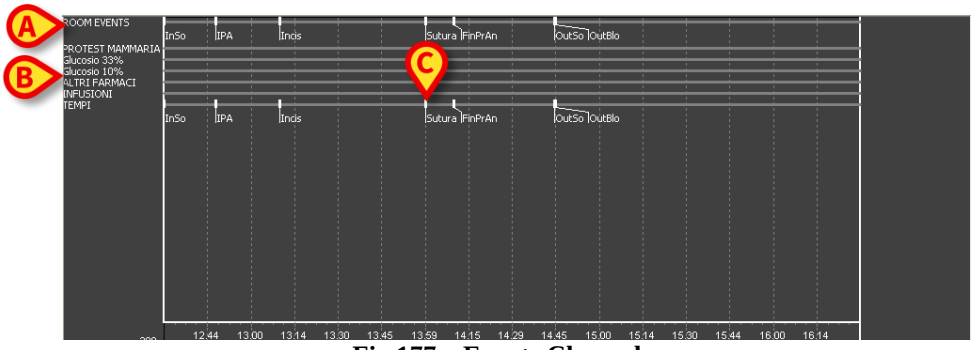


Fig 177 – Events Chronology

Both the markers (Fig 177 **A**) and other room events such as the drugs administered, any infusions, anesthesiological and surgical procedures implemented, etc. are shown (Fig 177 **B**). The number and nature of the events displayed depend on the configuration selected and the user's requirements. See paragraph 2.4 for details on the various types of event.
An event is marked on the time bar in correspondence with the moment in which it is recorded. In the figure, for example, the "Suture" event was recorded at 13:59 (Fig 177 **C**).

In the example chart, the markers are abbreviated this way:

- Block entrance - InBlo
- Room in - InSo
- Start of Anesthesiology Procedure - IPA
- Skin incision - Incis

- Suture - Sutura
- End of Anesthesiology Procedure - FinPrAn
- Room out - OutSo
- Block exit - OutBlo

Remember that the number and nature of the markers change according to the configuration chosen.

6.1.2. The “Chart” area

The lower part of the screen (Fig 178) displays the trends of the parameters acquired by the room devices.

Fig 178 - Charts

The charts are created in real time and updated every minute.
The number and nature of the parameters acquired change according to contingent requirements.

The side areas list the kind of data that can be displayed in the charts in the current configuration (Fig 178 **A**). Alongside every type of datum the color used to trace the line of the chart for that datum is displayed.

You can display different quantity ranges using the mouse. To do so, simply move the mouse to the area of the chart for which you wish to change the display mode, left click and, keeping the button pressed, move up or down as needed. The page moves together with the cursor of the mouse.

If you are working with a touch screen, you can perform the same operation using fingers.

6.1.3. The command bar

Fig 179 – OranJ Chart screen command bar

The buttons on the command bar (Fig 179) make it possible to record the configured room events directly from the OranJ Chart module.

The number and nature of the buttons depend on configuration. The procedure required to add a specific event is described in paragraph 2.5.

7. Check-In configuration

The Check-In configuration of the DIGISTAT® OranJ system is used to identify the patient at block check in and check out.
Identification is usually performed by scanning the patient's barcode. If barcode reading function is not enabled a manual procedure is available.
"Barcode" procedure is described in paragraph 7.2.1, manual procedure is described in paragraph 7.2.2.

Barcode technology is recommended when identifying a patient. Scanning the patient's barcode, instead of selecting it manually, statistically reduces the selection errors possibility.

7.1. Modules in use

The check-in configuration usually includes two modules: the OranJ Plan module, making it possible to monitor the state of the operating block, and the OranJ Check-in module, making it possible to identify the patient when entering the operating block.

7.1.1. OranJ Plan

The OranJ Plan module offers a birds-eye view of the state of the operations in the operating block.

To select the module

- click the corresponding icon 

on the DIGISTAT® lateral bar (Fig 180).

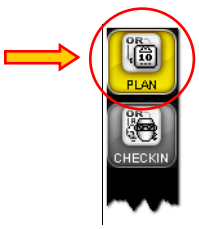


Fig 180

The following screen will is displayed (Fig 181).

Fig 181 - OranJ Plan

The OranJ Plan module is described in chapter 4 in this manual. See chapter 4 for a description of the module's functionalities.

Some buttons on the command bar are disabled because this configuration only enables monitoring one block on the current day. Thus it is not possible to use the "Edit" functionalities to change the operating plan; it is not possible to change the day displayed; it is not possible to display a different block.

The time span display functionalities are still active (i.e. it is possible to use the **12:00** button on the command bar to display either 6, or 12 or 24 hours on the same screen).

7.1.2. OranJ Check-In

The OranJ Check module can be used to identify the patient at block check in and check out. To select the module

- click the corresponding icon 

on the DIGISTAT® lateral bar (Fig 182).

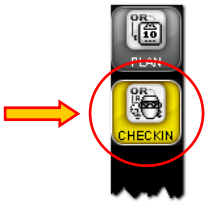


Fig 182

The following screen is displayed (Fig 183).

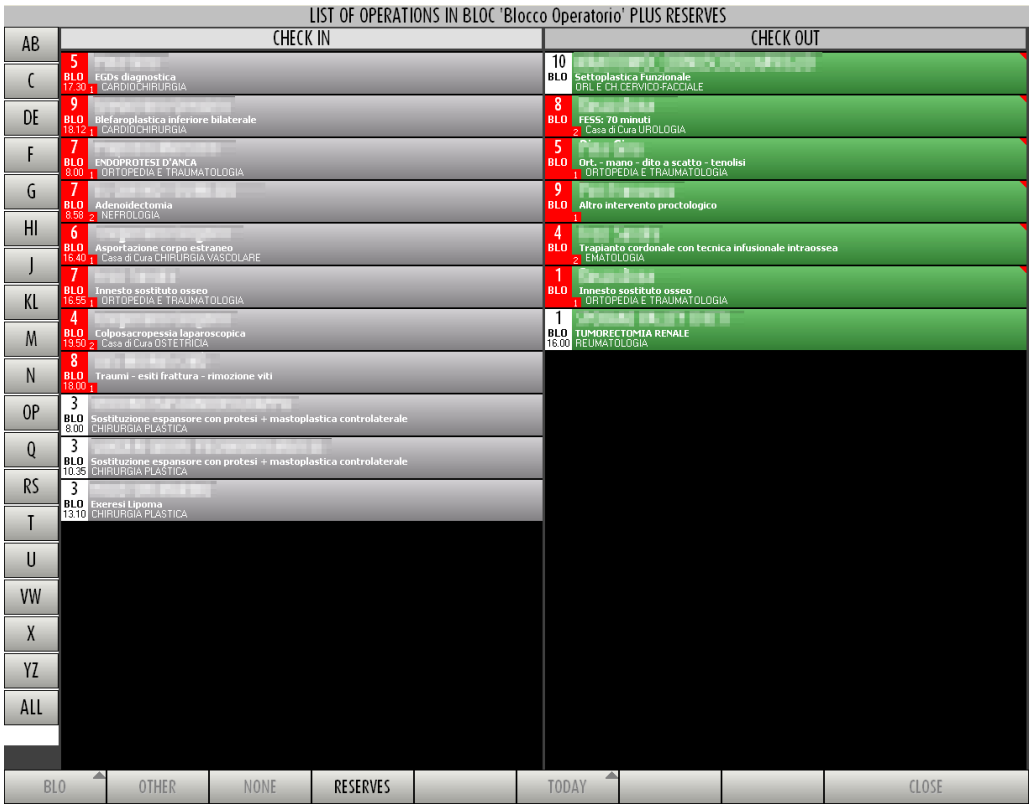


Fig 183 - OranJ Check-in

The screen is split in two columns. The operations for which the block check-in has not yet been performed are listed on the left column (Check-In). These operations are all in "Planned" state. The column on the right lists the operations for which the block check-out has not been performed yet.

In the OranJ system an operation is completed when the "Room out" marker is recorded. See paragraph 2.4 for the explanation of the "markers" in the DIGISTAT® OranJ system.

The **Reserves** button on the command bar can be selected to display, on the left column, the "Reserves" operations as well, for which the check-in procedure has not been completed. See paragraph 4.3 for an explanation of the meaning of "Reserve" operation.

7.2. How to perform the patient check-in

7.2.1. Check-in procedure by barcode reading

If barcode selection functionalities are enabled, to perform the patient check-in

- access the "Check-in" screen (Fig 183).
- scan the barcode of the patient who is entering the operating block.

A patient identification window is displayed (Fig 184).

Fig 184 - Patient identification

The patient code is visible in the field indicated in Fig 184 **A**.

- Click the **Identify** button (Fig 184 **B**).

The window changes in the following way (Fig 185).

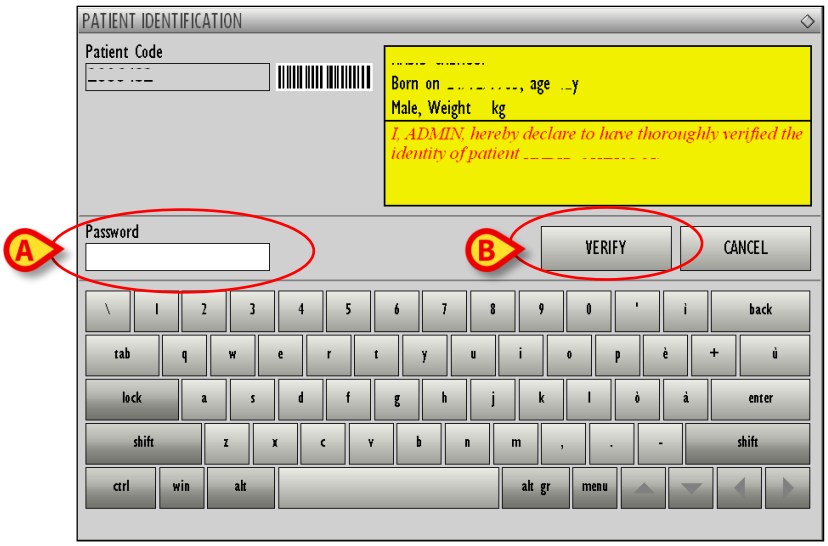


Fig 185 - User identification

The window shown in Fig 185 requires user identification. The logged user declares this way that he/she personally verified the patient identity.

- Insert user password in the field indicated in Fig 185 **A**.
- Click the **Verify** button (Fig 185 **B**).

The block check-in is this way completed. The corresponding operation-rectangle disappears from the "Check in" column on the screen. On the "OranJ Home" screen (Fig 11) the "Block-in" marker is this way recorded. The operation turns to "Ready" state; the corresponding rectangle is now green (Fig 186).

Fig 186

See paragraph 1.3 for a description of the possible operation states and the associated colours.

See paragraph 2.1 for a detailed description of the "OranJ Home" screen.

7.2.2. Manual check-in procedure

Manual check-in is possible if barcode selection is not available. To perform this procedure

- click the 

icon on the lateral bar to access the OranJ "Check in" module (Fig 187).

Fig 187 - OranJ "Check in"

On the left column ("Check in" column),

- click the rectangle corresponding to the patient/operation that is checking-in (Fig 187 **A**). A patient identification window opens (Fig 188).

Fig 188 - Patient identification

- Type the patient code in the field indicated in Fig 188 **A**.
- Click the **Identify** button (Fig 188 **B**).

The window changes in the following way (Fig 189).

Fig 189 - User identification

The window shown in Fig 189 requires user identification. The logged user declares this way that he/she personally verified the patient identity.

- Insert user password in the field indicated in Fig 189 **A**.
- Click the **Verify** button (Fig 189 **B**). The block check-in is this way completed.

The corresponding operation-rectangle disappears from the "Check in" column on the screen shown in Fig 187. On the "OranJ Home" screen (Fig 11) the "Block-in" marker is this way recorded. The operation turns to "Ready" state; the corresponding rectangle is now green (Fig 190).

Fig 190

See paragraph 1.3 for a description of the possible operation states and the associated colours.

See paragraph 2.1 for a detailed description of the "OranJ Home" screen.

7.3. How to perform the patient check-out

The “Check-in” module makes it possible to record the patient check-out from the operating block. To do that:

- click the  icon on the lateral bar to access the OranJ “Check in” module (Fig 191).

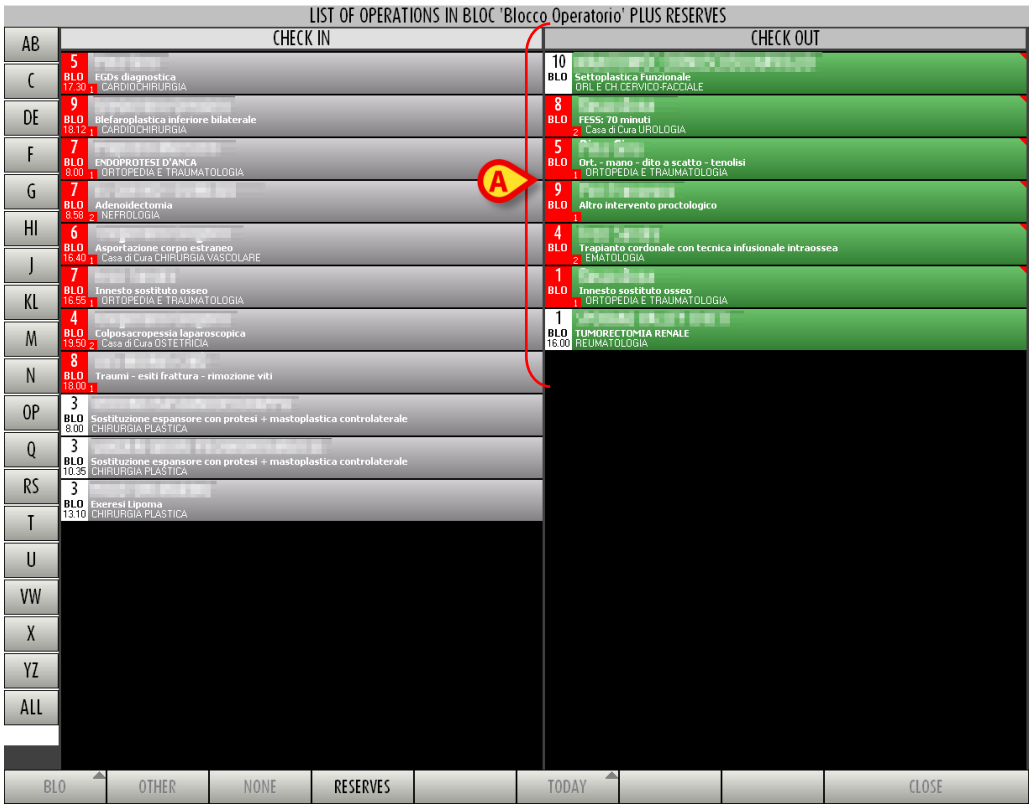


Fig 191 - OranJ “Check in”

On the column on the right (“Check out” column),

- click the rectangle corresponding to the patient/operation that is checking-out (Fig 191 **A**). User confirmation is required (Fig 192).

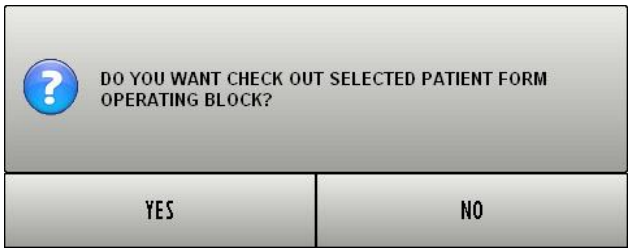


Fig 192

- Click **Yes** to record the patient’s check-out.

On the “OranJ Home” screen (Fig 11) the “Block Out” marker is this way recorded.

8. OranJ - “Bedside”Configuration

The OranJ system can be configured to be used inside the operating room and be this way dedicated entirely to the management of the single room. In these cases the system has specific characteristics and functionalities. This type of configuration is called “bedside”.
The bedside configuration of the OranJ system is formed of three modules:

- OranJ
- Charts
- Room Plan

In this case all the information is related to the configured room.

8.1. The Room Plan module

The main page of the Room Plan module (Fig 193) displays information on the daily schedule of the room for which the workstation is configured.

Fig 193 – Room Plan

The figure above shows the daily program of room 4.

8.1.1. Room schedule

There is a time line in the upper part of the page, schematically representing the schedule of the operating day (Fig 193 **A**, Fig 194).

Fig 194

The box on the left (Fig 194 **A**) contains the room number. If enabled by configuration, the colour of that box provides information on the state of the operation that is more relevant at present time.

There are four possible configuration options regarding the room number box colour:

- room numbers are always grey;
- only operation states are highlighted;
- only late and close to end operations are highlighted;
- both operation states and late/close to end operations are highlighted .

In this last case the room number colour changes according to the following priorities:

- if an operation is late the box turns red;
- if an operation is close to the end (30 minutes or less in the configuration here described) the box turns yellow;
- if an operation is in progress the box turns cyan;
- if an operation is ready (and no operation is in one of the above mentioned states) the box turns green;
- if an operation is planned (and no operation is in one of the above mentioned states) the box turns light grey;
- if there are no operations or all the operations in the room are completed the box turns dark grey.

Possible letters placed alongside the room number (Fig 195) indicate the room devices. The relationship between a letter and a device is defined by configuration.

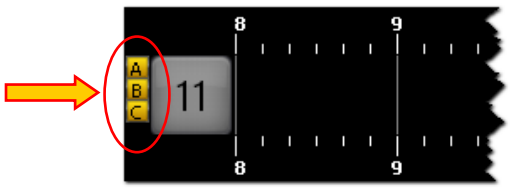


Fig 195

The numbers along the line represent the hours of the day.

The boxes inside the line represent the operations scheduled, in progress and completed in that room. The color of the boxes corresponds to the operation state. The association between color and operation state is explained in paragraph 4.2

The size of every box is proportional to the scheduled duration of the corresponding operation: the longer the box, the longer the scheduled duration of the operation. The position of every box indicates the scheduled time for the operation. The left side of the box is positioned in line with the start time scheduled for the operation.
For example, the rectangle indicated in Fig 194 **B** corresponds to an operation that should start at 13:40 and should last one hour.

If the data relating to an operation is changed, i.e., if the scheduled time or duration is changed, the system automatically moves the corresponding box on the page and/or changes its dimensions.
See paragraph 3 to find out how to change the data of a scheduled operation.

The vertical yellow cursor indicates the current time (Fig 194 **C**). In the example shown in the figure, the yellow cursor is positioned at 11:50. The cursor runs across the page as time goes by.
If the cursor meets the start time established for an operation (i.e., the left side of a box) and the operation does not start at the established time, the box moves together with the cursor.

In general

- completed operations (dark gray) are all to the left of the time cursor,
- scheduled operations (light gray) and those that have only undergone block check-in (green) are all to the right of the time cursor,
- in progress operations (cyan) are across the time cursor.

Data relating to completed operations (duration, start time, end time etc…) are actual data; data relating to scheduled operations are planned data.

If enabled by configuration, the possible operation delay is visible on a yellow bar placed at the bottom of the operation-rectangle (Fig 196).

Fig 196

A configuration parameter makes it possible to display separately the possible delays in pre surgical, surgical and post surgical durations. That is the case shown in Fig 196. In the figure here displayed the three yellow bars indicate

1) a 5 minutes delay in the pre surgical planned duration (Fig 196 **A**);
2) a 15 minutes delay in the surgical planned duration (Fig 196 **B**);

3) a 10 minutes delay in the post surgical planned duration (Fig 196 **C**).

The operation shown in the figure is still in progress. Total delay is 30 minutes so far. This value is indicated in the "residual time" area on the "OranJ Home" screen (see paragraph 2.9).
The operations scheduled after the delayed ones are, if necessary, automatically postponed.

The operations indicated as "Emergencies" are characterized by a red stripe on the left (Fig 134). The small box indicated in Fig 197 **A** specifies the emergency level. In the configuration here described there are three possible emergency levels.

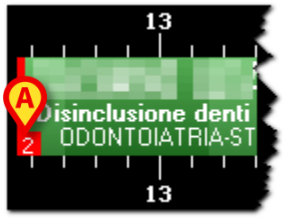


Fig 197 - Emergency

Every operation box can be clicked. Click one of the boxes to open a window containing the main data of the operation (Fig 198).

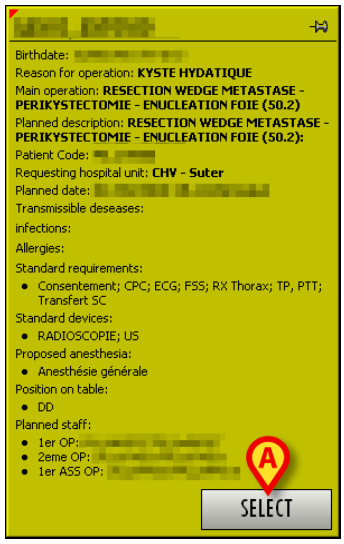


Fig 198 – Operation details

Click the **Select** button in the window (Fig 198 **A**) to access the "OranJ Form" page relating to the operation clicked (Fig 11).

8.1.2. The command bar

Fig 199 – Room Plan module command bar

On the control bar, the three buttons **6 hours**, **12 hours**, **24 hours** (Fig 199 **A**) make it possible to change the time range displayed. By clicking the **6 hours** button, for example, a time range of 6 hours is displayed.

The arrow buttons (Fig 199 **B**) make it possible to move backwards and forwards in the time range displayed. If, for example, you are displaying the time going range from 12:00 to 24:00, click the right arrow once to display the time range going from 15:00 to 3:00 of the following day. Likewise, click the left arrow once to display the time range going from 9:00 to 21:00.

The **Edit** button (Fig 199 **C**) makes it possible to edit the data on the page. See paragraph 8.1.5 for a detailed description of this functionality.

The **Not Assigned** button (Fig 199 **D**) makes it possible to select a scheduled operation and bring it to the "Not assigned" area. The related procedure is described in paragraph 8.1.5.

8.1.3. The "daily program" area

The "daily program" area (Fig 200 **A**) provides information on the schedule of the selected operating room.

Fig 200

Each row corresponds to an operation (Fig 201).

Fig 201

The color of the row indicates the operation state and follows the color-code used by all OranJ system modules (see paragraph 4.2 for the association between colors and operation state in OranJ).

The left part of every row contains the start time scheduled for the operation (Fig 201 **A**).The remainder of the row displays:

- the planned duration of the operation (Fig 201 **B**);
- the patient's name (Fig 201 **C**);
- the type of operation scheduled (Fig 201 **D**).

If specified, the hospital unit which requested the operation is also indicated.

If the left part is highlighted red (Fig 202), it means that the operation was indicated as "Emergency".

Fig 202 - Emergency

8.1.4. The "not assigned" area

The "Not assigned" operations are always visible on this module. Those are operations for which no start time, room or block have been scheduled (these operations are known as "reserves", see paragraph 4.3 for a description of these operations and the procedures connected to them).

Since we are working on a "Bedside" workstation, only the operations that could be scheduled for the current room will be displayed (that is: the emergencies, the room reserves, the block reserves and the general reserves - the reserves assigned to other blocks are not displayed).

Each row of this section shows the scheduled duration for the operation, the name of the patient, the type of operation scheduled and, if specified, the hospital unit which requested the operation (Fig 200 **B**).

All the rows of the "daily program" and "not assigned" pages can be clicked. Click a box to open the window shown in Fig 198 , containing the operation main data.

8.1.5. How to edit the operation plan

It is possible to edit the operation plan.

Fig 203 – Command bar

To make any change it is necessary, first, to click the **Edit** button (Fig 203 **A**).
When this button is clicked it appears as selected. To edit the page, it is necessary to

- click the **Edit** button.
- make the change required.

Once the change has been made the **Edit** button is automatically deselected. It is necessary to click it again to edit the page again.

When the **Edit** button is selected, the "drag and drop" functionalities are enabled.
The term "drag and drop" indicates the possibility to physically take one of the boxes corresponding to an operation, drag it to the point required on the time line and release it. Remember that the position of a box indicates the time scheduled for the corresponding operation, so moving a box from one position to another on the time line means changing the time of the corresponding operation. The changes are automatically displayed on the other OranJ modules.

If you are working with a touch screen and there is no mouse, you can perform the same operation with fingers.

Likewise, it is possible to add an operation from the "not assigned" list to the daily schedule by dragging the corresponding box.
It is also possible to remove an operation from the daily schedule and add it to the "not assigned" list. To do so it is necessary to:

- click the **Edit** button.
- On the list of scheduled operations (Fig 203 **A**), click the row corresponding to the operation you wish to remove.

The rectangle on the left turns to yellow (Fig 204)

Fig 204

The **Not Assigned** button on the command bar activates.

- Click the **Not Assigned** button (Fig 203 **B**).

The operation is this way moved to the “not assigned” list.

Hence, you can use the **Edit** button on the on the main page of the Room Plan module to

- change the time scheduled for an operation.
- add one of the operations from the “not assigned” list to the daily schedule.
- remove one of the operations from the daily schedule and add it to the “not assigned” list.

8.1.6. Room markers

The markers relating to the room events (Fig 205) are displayed and recorded in the column on the left side of the page (Fig 193 **B**).

Fig 205 – Room markers

These markers make it possible to record any occurrence which is considered significant and of which a record is required. It is possible to record the event and the time at which it occurred.

The number and nature of room events change according to the needs of the specific hospital and depend on the particular configuration of the system used. The procedures explained in this paragraph are only an example of configuration.

The room markers in this configuration are :

- Room opens
- Start of maintenance
- Start of cleaning
- End of cleaning
- End of maintenance

- Room closes

The markers are displayed on the left side of the screen as a sequence of boxes. The boxes are in chronological order.

The box relating to the marker initially appears in ochre yellow and does not contain any information on the moment (the time and day) in which the event took place. This means that the marker has not yet been recorded, the corresponding event has not yet occurred (Fig 206).

Fig 206 – First room marker

To record a marker, click/touch the corresponding box. The box turns to gray and records the time at which it was clicked. A new ochre yellow box (or several boxes, depending on the configuration) indicating no time is displayed below it. New boxes refer to subsequent markers (Fig 207).

Fig 207 – Second room marker

In general, to record a marker it is necessary to

- Click/touch the corresponding box.

The system automatically records the time at which the operation is performed.

8.1.7. How to edit the room markers

To change the time of a marker after it has been recorded

- Click the box corresponding to the marker for which the time has to be changed.

A numeric keyboard is displayed (Fig 208).

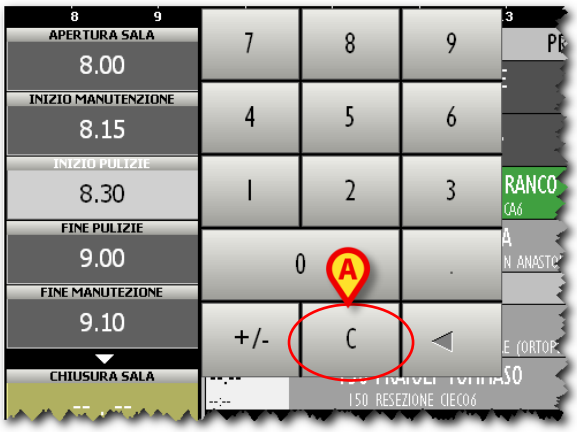


Fig 208 – Numeric keyboard

- Enter the time required using the keyboard. To record the new time.
- Click the box corresponding to the event again.

The numeric keyboard disappears and the new time is displayed in the box. If the time entered is impossible, the following error message pops-up (Fig 209).

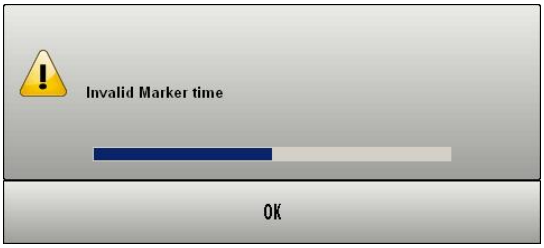


Fig 209

To delete a marker recorded

- Click the box corresponding to the marker to be deleted.

A numeric keyboard is displayed (Fig 208).

- Click the **C** button on the keyboard (Fig 208 **A**).

User confirmation is required (Fig 210).

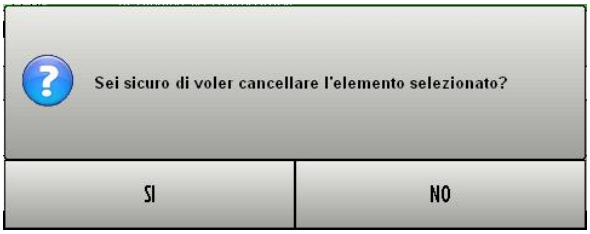


Fig 210

- Click **Yes** to delete the marker.

The deleting of an event implicates the deleting of all subsequent events.

9. Contacts

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