



ODYSSEY™

Vision

User Guide



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7,567,233 7,747,960 7,818,076

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EMC Directive Statement

EMC Directive Compliance	This equipment was tested and found to conform to the Medical Directive 93/42/EEC for electromagnetic compatibility. Compliance with this Directive is based upon compliance with the following harmonized standards:
Emissions:	IEC 60601-1-2:2004 third-Ed., EN 60601-1-2:2007 EN55011:2007+A2:2007, EN61000-3-2:2006 EN61000-3-3:1995 +A1:2001 +A2:2005
Immunity:	IEC 60601-1-2:2007, IEC 60601-1-2:2004 third-Ed. EN61000-4-2:1995 + A1:1999 + A2:2001, EN61000-4-3:2006, EN61000-4-4:2004, EN61000-4-5:2005, EN61000-4-6:2007, EN61000-4-8:1993 + A1:2001, EN61000-4-11:2004

When operating this equipment, verify that other devices installed near it conform to the applicable EMC standards for that device.

Related documents

HDW-0311, *Odyssey Vision* User Guide
HDW-0209, *Odyssey Cinema* Client User Guide
HDW-0312, *Niobe* ES User Guide
PRO-727, *Odyssey Vision* System 1.5 Standard Lab Site Planning Guide (for safety information on connecting external systems to the *Odyssey* platform)
HDW-0188, *Odyssey* Quad HD Installation Manual
HDW-0310, *Odyssey* Quad HD Workstation Management and Service Manual
HDW-0295, *Vdrive* User Guide (if the optional *Vdrive* unit is installed)

Operating conditions

Temperature: 15°C to 30°C
Humidity: 20% to 75%, non-condensing
Atmospheric pressure (kPa): 700 hPa to 1060 hPa

Equipment classification

Equipment is classified as Class I Medical Electrical equipment.

Cover art

Cover art © 2012, 2023 Stereotaxis, Inc.

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Section 1: Overview

Intended Use

The Stereotaxis Odyssey Vision® (also called “*Vision*” in this user guide) is an optional display and user interface package designed to consolidate the point of control of the catheterization lab.

Intended Use

The Stereotaxis Odyssey Vision® system (also called “*Vision*”) is an optional display and user interface package designed to consolidate the point of control of the catheterization lab. This user guide describes how to operate the *Odyssey Vision* system. It does not describe how to operate the Navigant™ software or any other devices in an interventional lab.

Intended Patient Population

The intended patient population for the *Odyssey Vision* system is patients undergoing diagnostic and interventional procedures in the following areas: right and left heart, and the coronary, peripheral, and neurovasculature.

About the System

The primary goals of the *Odyssey Vision* system are to:

- Integrate with external data providers
- Simplify the user interface and allow customization
- Streamline clinical workflows
- Consolidate a multitude of video sources, keyboards, and mice to a combined output onto a single display controlled by a single mouse and keyboard

The user may employ the *Odyssey Vision* Solution with QuadHD monitors to view:

- Up to 16 video sources in the interventional lab on a single display
- Screen representations of video sources that are sized and positioned according to a workflow requested in Navigant™
- Screen representations of video sources that are sized and positioned according to layouts the user can customize (**Figure 1**)
- Status, caution, and warning messages display at all times on the *Odyssey Vision* system during a procedure
- Identical video content on both the *Odyssey Vision* Control Room display and Procedure Room display

Required Training

The Stereotaxis Training Department provides physician technologist and nurse training and associated materials for safe and effective use of the *Odyssey Vision* system's primary operating functions based on the intended use of the system.

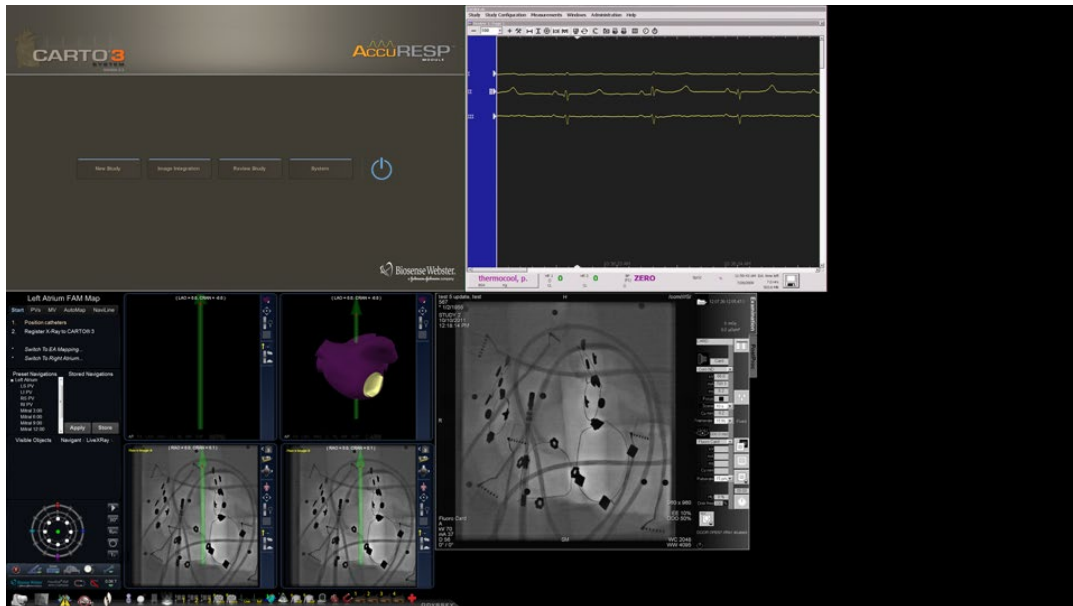








Figure 1: Sample *Odyssey Vision* screen

Warnings/Precautions

-  **WARNING:** Federal (USA) law restricts this device to sale by or on the order of a physician.
-  **WARNING:** The *Odyssey Vision* system should be used only by qualified medical professionals who have been thoroughly trained in its use.
-  **WARNING:** Only third party devices that have been validated by Stereotaxis should be connected to the *Odyssey Vision* system.
-  **WARNING:** The user should not attempt to upgrade, configure, or run any other software programs on the *Odyssey Vision* system, other than those specifically installed by Stereotaxis personnel or authorized representative.
-  **WARNING:** There are no user serviceable parts inside the *Odyssey Vision* system. The user should not remove any covers, guards, or attempt to disassemble any portion of the workstation.
-  **CAUTION:** Please ensure the *Odyssey Vision* keyboard and mouse control the appropriate window before performing any function using the workstation.





Refer to the *Niobe* ES User Guide for a full list of warnings and precautions associated with magnetic navigation.

Electrical Safety Compliance

It is the customer’s responsibility to ensure the whole system, when other devices are connected to the *Odyssey Vision* system, complies with IEC 60601-1-1.

Electromagnetic Compatibility Information

-  **WARNING:** The use of accessories, transducers, and cables other than those specified, with the exception of transducers and cables sold by Stereotaxis, Inc., may result in increased emissions or decreased immunity of the *Vision* system.
-  **WARNING:** The *Vision* system should not be used adjacent to or stacked with other equipment and, if adjacent or stacked use is necessary, the *Vision* system should be observed to verify normal operation in the configuration in which it will be used.

Emissions

The *Vision* system is intended for use in the electromagnetic environment specified in the following tables. The customer or the user of the *Odyssey Vision* system should ensure that it is used in such an environment.

The following table provides guidance and Stereotaxis’ declaration on **electromagnetic emissions** for the *Vision* system:

Emissions	Compliance	Electromagnetic environment—guidance
RF emissions CISPR 11	Group 1	The <i>Vision</i> system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A Complies	
Harmonic emissions IEC 61000-3-2		
Voltage fluctuations/ flicker emissions IEC 61000-3-3		

Immunity—General Electromagnetic Effects


The following table provides guidance and Stereotaxis' declaration on **electromagnetic immunity** regarding general electromagnetic effects for the *Vision* system:

Immunity test	IEC 60601 test level*	Compliance level*	Electromagnetic environment—guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	<5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the <i>Vision</i> system requires continued operation during power mains interruptions, it is recommended that the <i>Vision</i> system be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

* U_T is the a.c. mains voltage before application of the test level.

Immunity—RF Interference

The following table provides guidance and Stereotaxis’ declaration on **electromagnetic immunity** regarding RF frequency for the *Vision* System:

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment—guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	<p>Portable and mobile RF communications equipment should be used no closer to any part of the <i>Vision</i> system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P} \text{ 80 MHz to 800 MHz}$ $d = 2.3\sqrt{P} \text{ 800 MHz to 2.5 GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p>
Radiated RF IEC 61000-4-3	3 V/m 80 kHz to 2.5 GHz	3 V/m	<p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol :</p> <div style="text-align: center;">  </div>

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the *Vision* system is used exceeds the applicable RF compliance level above, the *Vision* system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the *Vision* system.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Separation Distances

The *Vision* system is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the *Vision* system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the *Vision* system as recommended in the following table, according to the maximum output power of the communications equipment.

The table provides **recommended separation distances** between portable and mobile RF communications equipment and the *Vision* system.

Rated maximum output power of transmitter* W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

* For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

About This User Guide




This user guide describes how to operate the *Odyssey Vision*. It does not describe how to operate the *Navigant* platform or any other devices in an interventional lab.

The manual is divided into six sections:










1. Overview
2. Basics that apply to all configurations
3. User information for a non-magnetic lab with a QuadHD monitor
4. User information for a *Niobe* magnetic lab with a QuadHD monitor
5. *Odyssey Cinema*® (“*Cinema*”)
6. System information

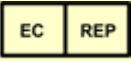






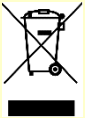
Graphics and Symbols



Warnings and Cautions precede the text and any procedure involving a clear risk to the operator(s), the patient, or the equipment. General warnings are listed in the Warnings and Precautions summary, which can be found in the *Safety* section. Pay close attention to the instructions that accompany the warnings, notes, and symbols.

WARNING		WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION		CAUTION indicates a potentially hazardous situation which, if not avoided, could result in injury to patient or operator or damage to the equipment.
Note		Note identifies information that could affect the outcome or results of the procedure.

The following graphics and symbols are used in this user guide and/or on equipment associated with this product.

Symbol	Name	Description
	AC Power	Alternating current.
REF	Catalogue Number	Catalogue/part number.
	Caution	Indicates the need for the user to consult the instructions for use for important, cautionary information such as warnings and precautions that cannot be presented on the medical device.
	CE Marking	Product conforms to European Medical Directive 93/42/EEC and meets applicable healthy, safety, and environmental requirements. If the mark is accompanied by a number, conformity is valid.
	Consult Instructions	See the Operating Instructions for additional information or instruction.
	Date of Manufacture	The date when the medical device was manufactured.
	DC Power	Direct current.
	Ground	Protective earth (ground).
	Equipment Power Off	“Off” (part of equipment).
	Equipment Power On	“On” (part of equipment).

Symbol	Name	Description
	European Representative	Name and address of the authorized representative in the European Community.
	Manufacturer	Name and address of the equipment manufacturer.
	Medical Device	Indicates the item is a medical device.
	Power	Power status of the system.
	Power On	“On” (power).
	Power Off	“Off” (power).
	Prescription Only	Caution: Federal law restricts this device to sale by or on the order of a physician.
	Recycle: Electronic Equipment	Product that is subject to the European Union’s Waste Electrical and Electronic Equipment (WEEE) 2002/96/EC/EU Directive for recycling of electronic equipment.

Symbol	Name	Description
	<p>Refer to Instruction Manual/Booklet</p>	<p>The instruction manual or booklet must be read.</p>
<p>SN</p>	<p>Serial Number</p>	<p>The manufacturer’s serial number so a specific medical device can be identified.</p>
	<p>Testing Organization</p>	<p>The logo of the organization responsible for testing the device.</p>
<p>UKRP</p>	<p>UK Responsible Person</p>	<p>A person established in the United Kingdom (UK) who acts on the behalf of a non-UK established manufacturer in relation to the manufacturer’s obligations under UK regulations.</p>

Glossary

The following terms may appear in this document:

Acronym / Term	Definition
Active video window	The global control video window that currently has focus.
API	Application Program Interface. The set of classes or functions used to access the capabilities of the application.
Cardiodrive®	The Stereotaxis <i>Cardiodrive</i> Catheter Advancement System (CAS) used to advance and retract a catheter in the patient's heart while the <i>Niobe</i> magnets precisely steer the working tip of the device. This function enables the physician to perform an electrophysiology procedure from the Control Room, greatly minimizing X-ray radiation exposure. The <i>Cardiodrive</i> system is used only for magnetic procedures in magnetic labs.
CARTO® 3	Biosense Webster's <i>CARTO 3</i> Mapping System, which combines 3D mapping and navigation systems with the Stereotaxis <i>Niobe</i> Magnetic Navigation System. (The magnetic and <i>Niobe</i> references apply only to magnetic labs. Non-magnetic labs are limited to displaying the video output of the <i>CARTO 3</i> system.)
CAS (Catheter Advancement System)	See <i>Cardiodrive</i> .
Clinical Workflow Manager (CWM)	A component of the <i>Navigant</i> application software that executes clinical workflow scripts to guide medical procedures. CWM is available only for magnetic procedures.
Global control video window	A window that can receive keyboard and mouse events from the <i>Odyssey Vision</i> global keyboard and mouse.
Layout	A set of video windows in a particular configuration on the <i>Odyssey Vision</i> display.
Magnetic Navigation System	See <i>Niobe</i> Magnetic Navigation System.
Manual procedure	A non-magnetic procedure that can be performed in a magnetic lab or a non-magnetic lab.
<i>Navigant</i> Navigation Workstation	A platform of software applications designed to simplify clinical workflows. It provides enhanced integration of catheterization and electrophysiology labs and improved automation during magnetic navigation of medical devices. (Available only in magnetic labs.)

Acronym / Term	Definition
Niobe Magnetic Navigation System	A Stereotaxis system that enables physicians to more effectively navigate catheters, guidewires, and other magnetic interventional devices through the blood vessels and chambers of the heart to treatment sites and then to effect treatment. (The <i>Niobe</i> System is available only in magnetic labs.)
Odyssey Cinema	The optional recording system for the <i>Odyssey Vision</i> Platform, referred to as “ <i>Cinema</i> ,” that provides remote viewing of live and recorded procedures.
Odyssey Vision Tableside Controller	An optional 4- x 5-inch touch screen attached to the patient table accessory mounting rail, providing basic control of the <i>Odyssey Vision</i> system in the Procedure Room.
QuadHD (or QuadHDTV)	A display that has four times the resolution of a standard HD display. QuadHD has a pixel resolution of 3840 x 2160.
Screen layout	A set of video windows in a specific layout configuration
Video window	A window on the <i>Odyssey Vision</i> display that contains the video display from one of the applications (e.g., <i>Navigant</i> , ECG, X-ray).
View-only window	A window for viewing only that cannot receive keyboard focus or mouse input; therefore, the cursor cannot display on this type of window. One example is the ultrasound window.

Section 2: Basics

Typical *Vision* Toolbar

The *Vision* toolbar (**Figure 2**—split into **Figures 2A** and **2B** for illustration only) displays horizontally at the bottom of the monitor. It contains 6 main sections.

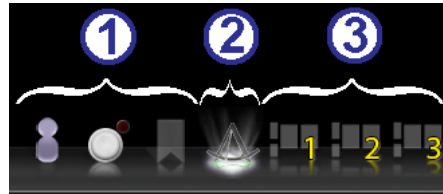


Figure 2A

Key to Figure 2A

- ① Section 1 contains three *Cinema* (*Odyssey Cinema Studio* and *Odyssey Cinema LT* products; see [Section 5](#)) buttons.
- ② Section 2 is the *Navigant* button (shown here in the selected state).
- ③ Section 3 contains three Quick Layout buttons.








Figure 2B

Key to Figure 2B

- ④ Section 4 contains the third-party device buttons.
- ⑤ Section 5 contains the digital video connection buttons (up to 4).
- ⑥ Section 6 is the Emergency Layout button.

Toolbar buttons



The following table describes each button within the *Vision* toolbar.

Button	Name	Description
<i>Cinema</i> buttons		
	Connections	Displays the status of remote connections through <i>Cinema</i> . (See Connection buttons .)
	Record and Pause	Starts and pauses recording in <i>Cinema</i> . It is disabled when <i>Cinema</i> is not available. (See Record / Pause buttons .)
	Bookmark	Enables the user to bookmark the timeline during a <i>Cinema</i> recording session. The button is disabled when <i>Cinema</i> is not available. (See Bookmark button .)
<i>Navigant</i> button		
	<i>Navigant</i>	This functions as a home button for the <i>Navigant</i> system. It returns you to the current layout in Clinical Workflow Manager if you are viewing a Quick Layout or emphasized video source.
Quick Layout buttons		
	Quick Layouts 1, 2, and 3	Each button displays a layout the user can customize and save in the Layout Editor.

Button	Name	Description
Third-party device buttons		
Clicking a third-party device button displays the video source at its maximum size and original resolution, if possible. Only one video source at a time can be displayed.		
	CARTO RMT	Emphasizes the Biosense Webster <i>CARTO</i> RMT video window.
	CARTO 3	Emphasizes the Biosense Webster <i>CARTO</i> 3 video window.
	Siemens Leonardo®	Emphasizes the Siemens <i>Leonardo</i> Workstation. The icon would be different for Philips Interventional Tools.
	ECG Real Time	Emphasizes the Live ECG video window.
	Live Fluoro A	Emphasizes the Live Fluoro A video window.
	Live Fluoro B	Emphasizes the Live Fluoro B video window if a biplane X-ray system is installed.
	Niobe	Click to access the Stereotaxis <i>Niobe</i> Magnetic Navigation System Service Menu in a magnetic lab.
	Auxiliary Input Procedure Room 2	Emphasizes the Auxiliary Input connected to the Procedure Room hub box port #2.
	Reference Fluoro A	Emphasizes the Fluoro A Reference video window.
	Reference Fluoro B	Emphasizes the Fluoro B Reference video window if a biplane X-ray system is installed.

Button	Name	Description
	ECG Control	Emphasizes the ECG control and dialog list window.
	Ultrasound	Emphasizes the ultrasound machine connected in the Procedure Room.
Additional third-party device buttons		
These device buttons display as needed, depending on system configuration.		
	ECG Image Reference	Emphasizes the Reference ECG video window.
	Patient	Emphasizes the patient view in the Procedure Room.
	Philips Allura® Live	Emphasizes the Philips <i>Allura</i> video window.
	Philips Allura Admin Live	Emphasizes the Live Philips <i>Allura</i> Admin video window.
	Philips Allura Reference 1	Emphasizes the Live Philips <i>Allura</i> Reference 1 video window.
	Philips Allura Reference 2	Emphasizes the Live Philips <i>Allura</i> Reference 2 video window.
	Videoconferencing	Emphasizes the videoconferencing video window.
	Biplane X-ray system	Emphasizes the biplane X-ray system video window.

Button	Name	Description
	Camera 1	Emphasizes the Camera 1 video window.
	Camera 2	Emphasizes the Camera 2 video window.
	Anesthesia Cart	Emphasizes the anesthesia cart system video window.
	EP Nav	Emphasizes the EP Nav system video window.
	Hemodynamics	Emphasizes the hemodynamics video window.
	IVUS Imaging System	Emphasizes the IVUS imaging system video window.
	NavX	Emphasizes the NavX system video window.
	Picture archiving and communication system (PACS)	Emphasizes the PACS video window.

Button	Name	Description
	<p>Digital Video Connections 1, 2, 3, and 4</p>	<p>Emphasizes up to 4 additional digital video windows for systems with 15 video displays.</p>
<p>Emergency Layout button</p>		
	<p>Emergency Layout</p>	<p>Click to display the Emergency Layout window with the video sources Live Fluoro A and ECG Real Time. This is a toggle icon. Click the Emergency Layout button to return to the previous layout.</p>

Toolbar button states

All of the toolbar buttons display slight differences in appearance, depending on their state. The example below is the Real Time ECG button.



The three most common states for *Vision* toolbar buttons are enabled, selected, and disabled.

System status messages

To check system status, double-click the system icon on the hardware status indicator toolbar (shown at right).

Figure 3 is a sample System Status message.



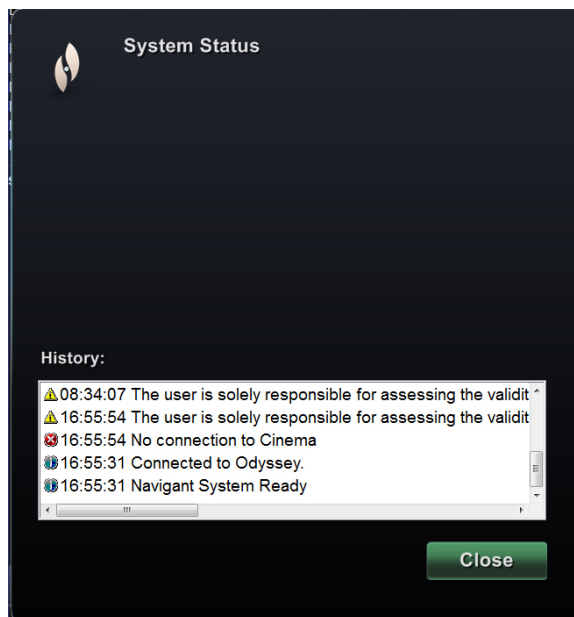


Figure 3: Sample System Status message

Special Window Types

Some applications with the *Odyssey Vision* platform have special window types:

- View-only windows are for the display of information only. The *Vision* global keyboard/mouse never sends input to this type of window. The cursor can move across the window, but it will change from a white arrow to a white arrow with a “no” symbol (⊘) to remind the user the mouse cannot affect this window.
- Another special window type is an application that has an extended desktop, such as ECG. These windows can be positioned in any orientation on the consolidated display.

Changing Video Window Focus

When the mouse is clicked in a video window of an application, the *Odyssey Vision* system delivers mouse move and mouse click events to the window under the cursor. When the user assigns keyboard focus to one of the video windows by clicking in it, the *Vision* system sends keyboard and mouse events to the system with keyboard focus. In this way, the user can change which application is being controlled simply by moving the mouse and clicking the mouse in that application’s video window on the *Vision* display.

For example, if the user clicks in the *Navigant* video window, the *Vision* system sets keyboard focus to the *Navigant* window and subsequent keyboard events are directed to *Navigant*. If the user then clicks in the ECG video window, the *Vision* system would then send subsequent keyboard events to the ECG application. Mouse move and click events are always directed to the window in which the cursor is located.

The window model for the *Vision* system is the same as that for the Windows operating system. One window will have focus. The user moves the cursor over other windows, but focus does not change until some mouse click event (left-click, right-click, double-click) occurs in a window other than the one that currently has focus.

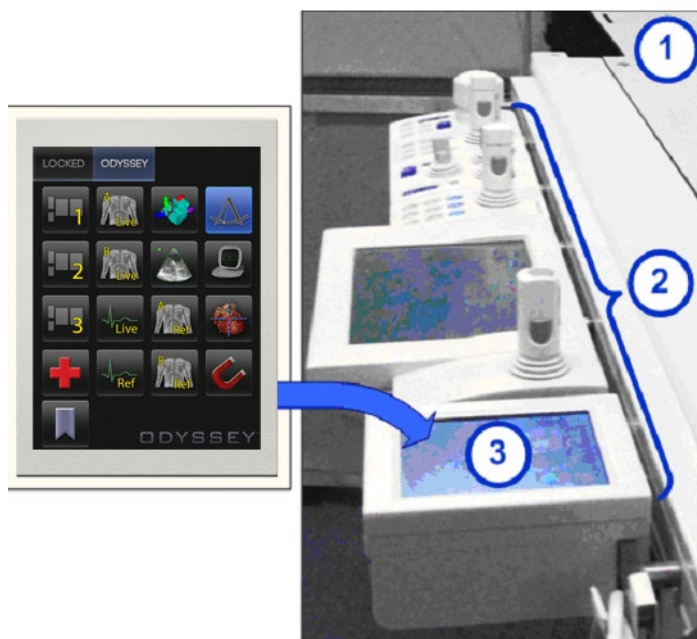
Tableside Controller (Optional)

In a typical *Odyssey Vision* lab, the physician controls a catheter from the Control Room. However, the Tableside Controller (**Figure 4**) may be added as an option if the ability to control *Vision* windows from the Procedure Room is desired.

Tableside Controller guide

- ① Patient table.
- ② Patient table accessory mounting rail. Devices may vary.
- ③ Tableside Controller — mirrors the Figure 4 buttons.

Figure 4:
Tableside
Controller on
patient table
accessory rail



Connecting Third-Party Systems to Procedure Room Hub

Digital video interface (DVI)

Following are general instructions for connecting a third-party computer by way of a third-party interface (TPI) to one of two TPI circuit boards (top or bottom) in the Procedure Room hub (**Figure 5** shows a TPI box). Included in this process are the digital video interface (DVI) and USB (for mouse and keyboard control, if desired) connections. Duplicate these steps (indicated in **Figure 6** for each computer (video source).



Figure 5: TPI box

1. Unhook the DVI cable currently attached to the back of the third-party computer, leaving it connected to the third-party monitor.
2. Connect the unhooked DVI cable to the TPI-J4 port on the system's associated TPI circuit board.
3. Connect the Stereotaxis-provided DVI cable between the back of the third-party computer and the TPI-J3 port on the system's associated TPI circuit board.
4. Connect the Stereotaxis-provided USB cable between the back of the third-party computer and the TPI-J6 port on the system's associated TPI circuit board.
5. Connect the appropriate *Odyssey Vision* system Ethernet cable to TPI-J1 on the system's associated TPI circuit board.
6. Connect the appropriate *Odyssey Vision* system fiberoptic DVI cable to TPI-J2 on the system's associated TPI circuit board.

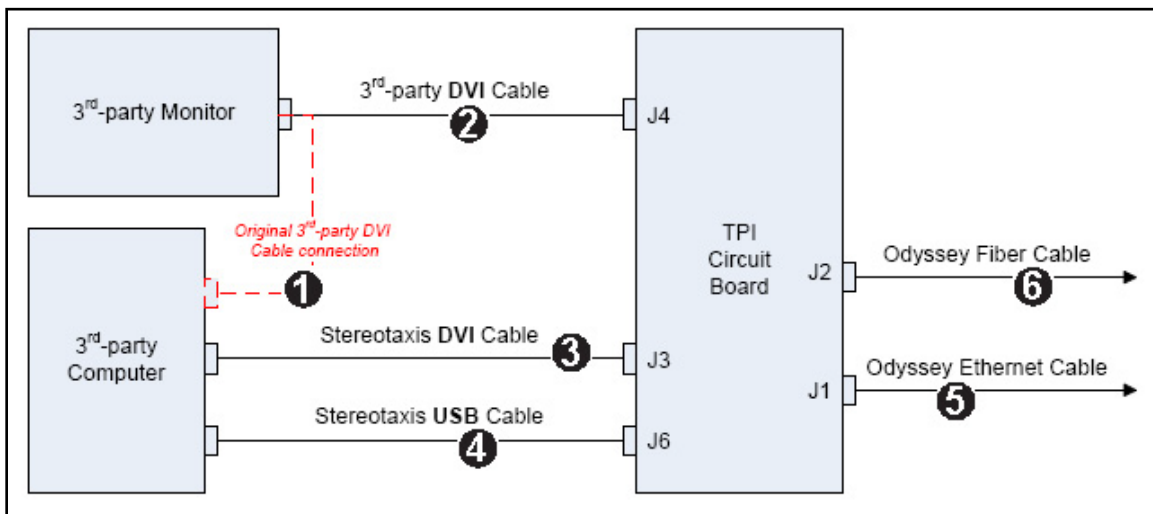


Figure 6: Procedure Room TPI connectivity for DVI

When connections are complete, the TPI system is available as a video window on the *Odyssey Vision* screen when its digital video connection button is selected.



Note: If Auto-resolution is enabled on this connection, it will be applied in the Layout Editor and be noticeable in the associated video source's window.

Video graphics array (VGA)

Following are general instructions for connecting a third-party computer by way of a third-party interface (TPI) to one of two TPI circuit boards (top or bottom) in the Procedure Room hub. Included in this process are the video graphics array (VGA), VGA adapter, and USB (for mouse and keyboard control, if desired) connections. Duplicate these steps (indicated in **Figure 7**) for each computer (video source).

1. Unhook the VGA cable currently attached to the back of the third-party computer, leaving it connected to the third-party monitor.
2. By way of a provided VGA-DVI adapter, connect the unhooked VGA cable to the TPI-J4 port on the system's associated TPI circuit board.
3. By way of a provided VGA-DVI adapter, connect the Stereotaxis-provided VGA cable between the back of the third-party computer and the TPI-J3 port on the system's associated TPI circuit board.
4. Connect the Stereotaxis-provided USB cable between the back of the third-party computer and the TPI-J6 port on the system's associated TPI circuit board.
5. Connect the appropriate *Odyssey* system Ethernet cable to TPI-J1 on the system's associated TPI circuit board.
6. Connect the appropriate *Odyssey* system fiberoptic DVI cable to TPI-J2 on the system's associated TPI circuit board.

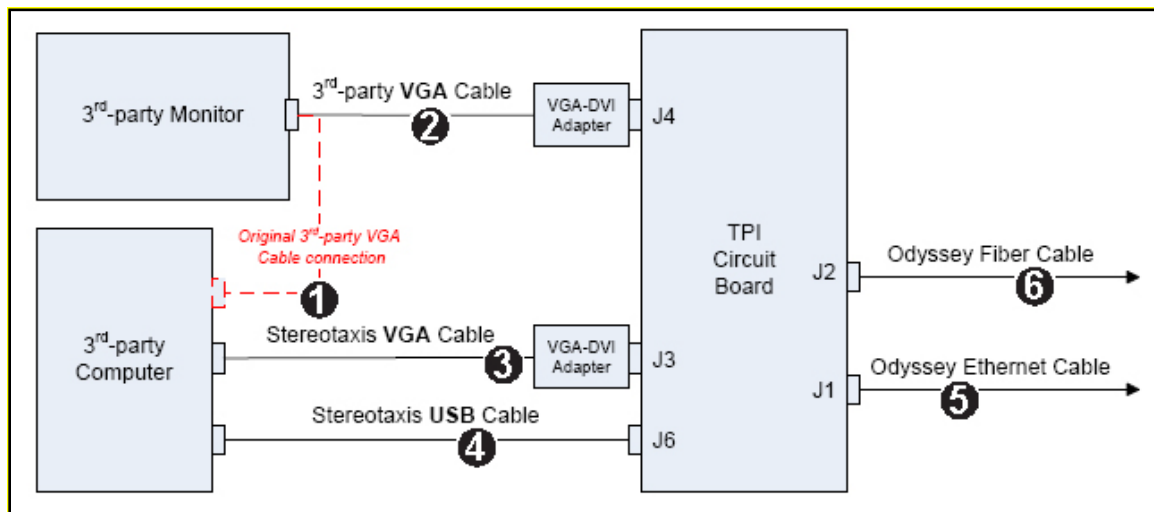


Figure 7: Procedure Room TPI connectivity for VGA

When connections are complete, the TPI system is available as a video window on the *Odyssey Vision* screen when its digital video connection button is selected.



Note: If Auto-resolution is enabled on this connection, it will be applied in the Layout Editor and be noticeable in the associated video source's window.

Getting Started

Following this sequence of steps when starting the *Odyssey Vision* application is important:

- Turn on all non-Stereotaxis system computers (e.g., X-ray, ECG, and mapping systems).
- In magnetic labs, turn on the *Niobe* system by pressing the switch labeled “NIOBE” to the **1** position on the *Vision* Remote Power Box. The switch is a momentary-contact switch that will return to the middle position when released.
- Turn on the *Vision* computer by pressing the switch labeled “ODYSSEY” to the **1** position on the *Vision* Remote Power Box. Like the NIOBE switch, this is a momentary-contact switch.

Key to Figure 8

- 1a** Siemens/Neusoft E-stop button
- 1b** E-stop button hole is plugged for Philips and non-magnetic labs
- 2** *Odyssey Vision* system is on when green LED is lit
- 3** E-stop is activated when red LED is lit
- 4** In a magnetic lab, *Niobe* system is on when green LED is lit
- 5** Turns *Odyssey Vision* system ON when pressed
- 6** Turns *Odyssey Vision* system OFF* when pressed
- 7** In a magnetic lab, turns *Niobe* system ON when pressed
- 8** In a magnetic lab, toggles *Niobe* system OFF* when pressed

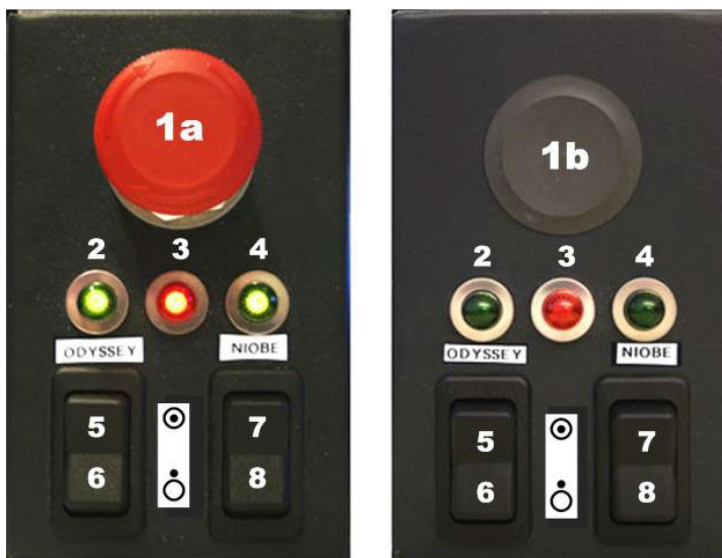


Figure 8: *Vision* Remote Power Box for Siemens/Neusoft labs (left) and Philips labs (right)





*Use the manual switches only when you cannot shut down the system through the *Vision* software. If you do need to use the switches, press and hold them for approximately 3 seconds until the system shuts down.



Note: The large red button displayed above is the *Niobe* emergency stop when the *Niobe* system is used in a magnetic lab with a Neusoft/Siemens AXIOM Artis™ dFC MNS X-ray system. This E-stop button is not present when the *Niobe* system is used in a magnetic lab with a Philips *Allura* Xper FD10 X-ray system (the *Allura* E-stop simultaneously stops the *Niobe* system).

On/Off symbols

The following table shows on/off symbols for the main power and system equipment:

Symbol	Description	Note
	Off—Power (disconnection from the mains)	Button is located inside cabinet
	On—Power (connection to the mains)	Button is located inside cabinet
	Off— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems
	On— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems

Section 3: Non-Magnetic Lab with QuadHD

Getting Started

It is important to follow this sequence of steps when starting the *Odyssey Vision* application:

- Turn on all non-Stereotaxis system computers (e.g., X-ray, ECG, and mapping systems).
- Turn on the *Odyssey Vision* computer by pressing the switch labeled “ODYSSEY” to the **1** position on the *Vision Remote Power Box* (**Figure 9**). This is a momentary-contact switch that will return to the middle position when released.

Key to Figure 9

- 1** *Odyssey Vision* system is on when green LED is lit
- Turns *Odyssey Vision* system ON when pressed
- Turns *Odyssey Vision* system OFF* when pressed

* Use the manual switches only when you cannot shut down the system through the *Vision* software. If you need to use the switches, press and hold them for about 3 seconds until the system shuts down.




Figure 9:
**Vision Remote Power Box
for non-magnetic labs**

On/Off symbols

The following table shows on/off symbols for the main power and system equipment:

Symbol	Description	Note
○	Off—Power (disconnection from the mains)	Button is located inside cabinet
	On—Power (connection to the mains)	Button is located inside cabinet
◦	Off— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems

	On— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems
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Start window

The *Odyssey Vision* start window (**Figure 10**) is shown in the lower left corner of the QuadHD screen — as are all *Navigant*-specific windows.



Figure 10: Start window

Click **Start New Procedure** (**Figure 11**).



Figure 11: Start New Procedure

Procedure information window

We recommend entering all patient information into the X-ray system before starting a procedure on the *Odyssey Vision* system. The information will then be automatically imported into the appropriate fields on the *Vision* system.

You may also fill out procedure information fields manually. If entering the procedural information manually, type in the Patient First and Last Name, their Patient ID, and Date of Birth (DOB), and then select the appropriate Sex. The Physician and Profile fields each contain a drop-down menu, provided for ease of usage. Click the down arrow to the right of the field to choose physician and procedure if working with previously entered information.

New information may be entered for the Physician and Profile fields and will be stored for future procedures. The Physician and Profile fields are used to display the customized layouts that a physician has created. The Notes section is an optional field for any additional information.

The Procedure Type section of this window contains four tabs to indicate the general procedure type. Select (click) the desired tab, and then click to choose options within the Procedure Type section. Selecting 3D Mapping changes the procedure layout to include the mapping video source. The example in **Figure 12** shows **Electrophysiology**, **Right Atrium**, and **Use 3D Mapping** selected.

Figure 12: Non-magnetic procedure information window

After entering procedure information and selecting procedure type options, click **OK**. The layout associated with this procedure displays. The procedure is now open and the main window (**Figure 13**) displays.



Note: You **must** fill out the Patient (First and Last Name, ID, DOB, and Sex) and Physician fields to continue with the procedure. Enter the patient information exactly as it appears on the X-ray system.

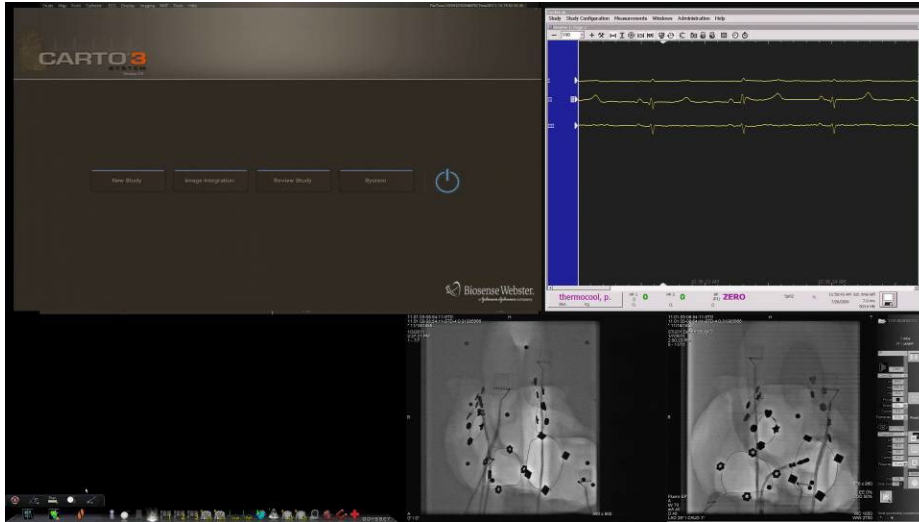


Figure 13: Main window for procedure in non-magnetic lab

Emergency Layout

The Emergency Layout is available when the *Vision* application starts and can be accessed at any time during the procedure by clicking the red cross (**Figure 14**) on the *Vision* toolbar. The QuadHD screen displays Live ECG, Live Fluoro A, and Reference Fluoro A (**Figure 15**).



Figure 14: Emergency Layout button on *Vision* toolbar

The Emergency Layout button acts as a toggle. Clicking it once displays the Emergency Layout; clicking again returns to the previous screen.

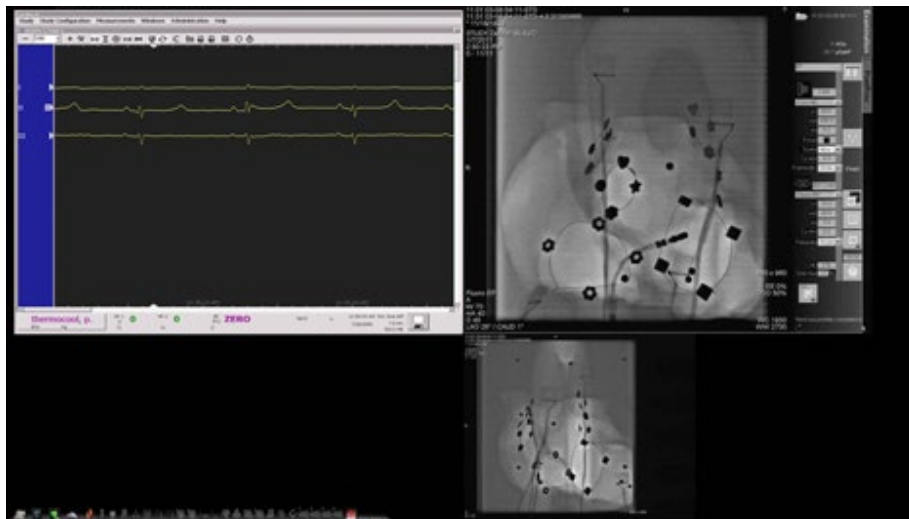


Figure 15: Emergency Layout

Altering Layouts

The *Vision* Solution offers several options for altering a layout:

- Emphasize a video source
- Change the layout through the Layout Editor
- Customize the default Quick Layouts

Emphasize video sources

Clicking a video source button on the *Vision* toolbar displays the video source in an emphasized state at or near full resolution on the screen (**Figure 16**).

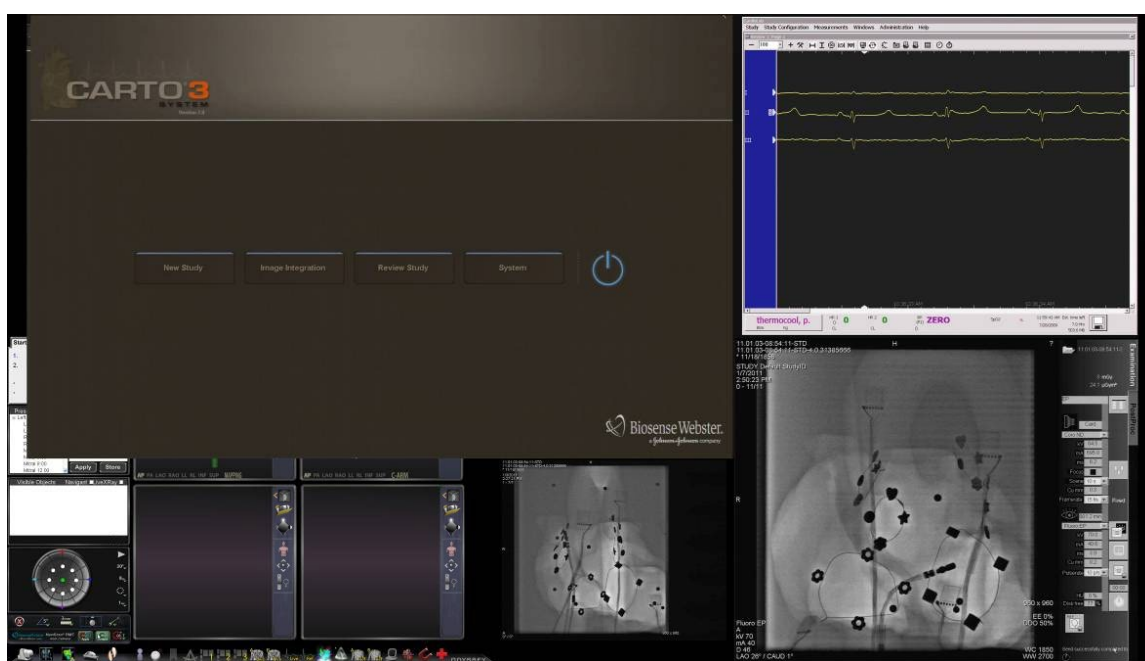


Figure 16: Emphasized video source – CARTO 3

Layout Editor

The Layout Editor, a *Navigant* feature, allows customization of the procedure layout displayed.

“Picture within a picture”

When opening the Layout Editor, you can still view three quarters of the live screen. This feature is significant because if your live videos (Live ECG and Live Fluoro) are displayed on the main window, you can still view them in Layout Editor (**Figure 17**).

When you move or modify images within Layout Editor, you will not see the change on the main window until you save your changes. This rule includes the live feeds.

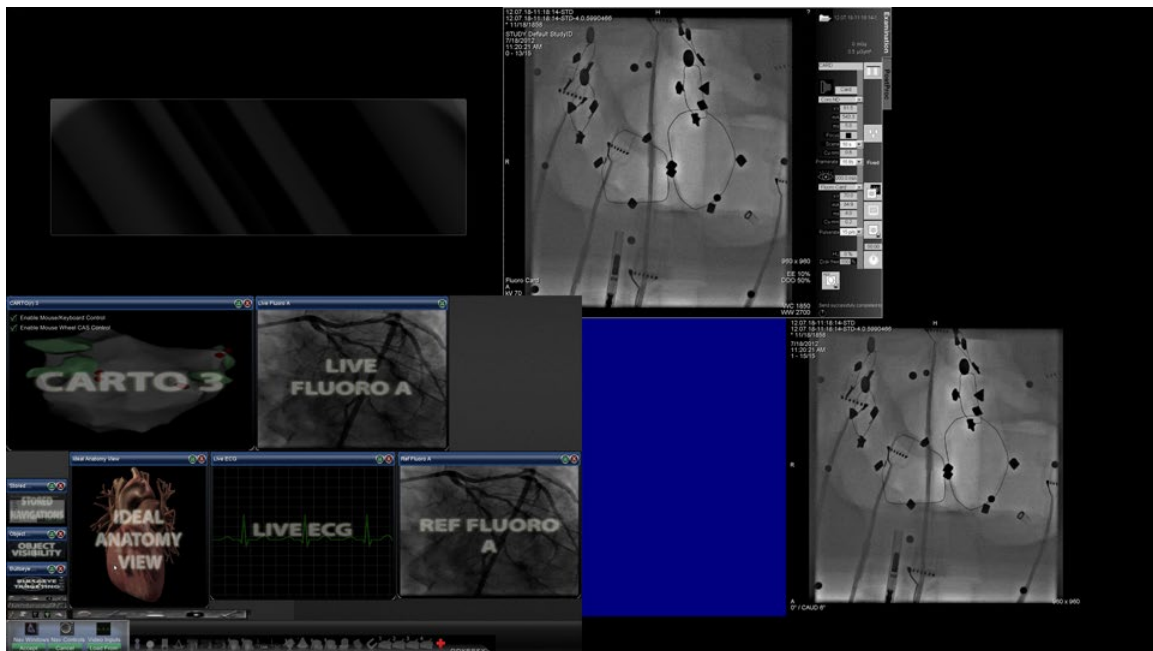


Figure 17: Non-magnetic Lab Layout Editor

Control Panel



Figure 18: Non-magnetic Lab Layout Editor Control Panel

Non-magnetic Lab Layout Editor Control Panel guide (Figure 18)

Nav Windows menu button. Displays a list of available and displayed *Navigant* windows.

Nav Controls menu button. Displays available and displayed *Navigant* control panels.

Video Inputs menu button. Displays available and displayed video inputs.

Accept button. Saves the designated layout.

Cancel button. Rejects layout edits and returns to previous screen.

Load From button. Allows the user to copy a layout from another user for the same layout.

Similar to the **Nav Windows** and **Nav Controls** menu buttons, the **Video Inputs** button displays the available video sources (dark lettering in **Figure 19**) for the current procedure. The video sources already displayed on the Layout Editor appear shaded on the menu.

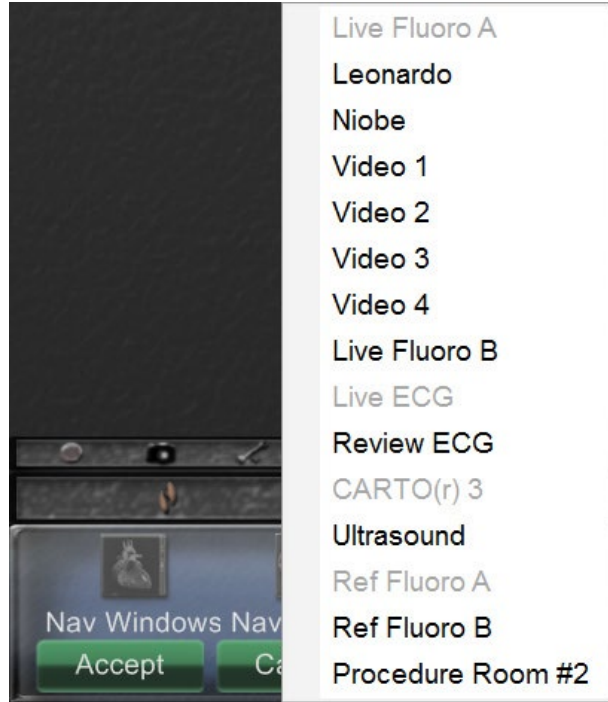
Figure 19: Example of Video Inputs menu in Layout Editor – Siemens system



Notes:

A video source may not be repeated within a layout. Only one instance of Live Fluoro may exist in any given layout.

Figure 19 represents the Layout Editor window list for a Siemens system. Some of the window names differ slightly for other systems.



Select a video source from the menu to add it to the layout. Move or resize other elements in the layout if necessary so none are overlapping. (Overlapping elements are indicated by a red border.) If the layout is satisfactory, click the **Accept** button. (The **Accept** and **Cancel** buttons are available only after a layout is changed.) If you prefer to use an existing layout, you may use the Load From dialog (**Figure 20**).

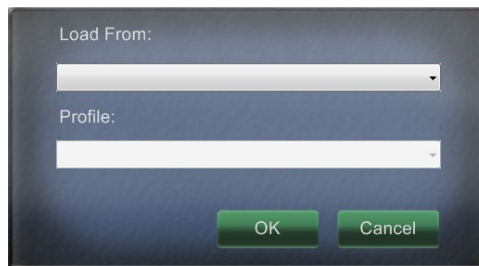


Figure 20: Load From dialog in Layout Editor

Load From dialog guide (Figure 20)

- To import this layout from a different physician, use the Load From dialog. Select a physician name (and/or profile for the layout), and then click **OK**.
- To use the *Vision* default layout, leave the Physician Name and Procedure Type fields blank and then click **OK**.

After clicking the **Accept** button from the Layout Editor or after clicking the **OK** button from the Load From dialog, the save dialog (**Figure 21**) displays. Click the **For This Procedure Only** button to use the layout for *only* the current procedure. Click the **As My New Default** button if you want the layout to be available for *all future* procedures for this *physician and procedure type*.

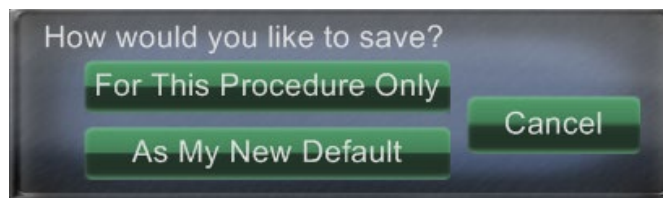


Figure 21: Save dialog in Layout Editor

Quick Layouts

Configurations

The Quick Layouts are grouped by clinical specialty and procedure type for manual, *CARTO 3*, and non-*CARTO 3* equipment combinations.

Each of the following Electrophysiology categories has separate Quick Layouts (1, 2, and 3):

- Right Atrium (*CARTO 3* and non-*CARTO 3*)
- Left Atrium (*CARTO 3* and non-*CARTO 3*)
- Right Ventricle (*CARTO 3* and non-*CARTO 3*)
- Left Ventricle (*CARTO 3* and non-*CARTO 3*)

The three Quick Layouts (1, 2, and 3) may be used for the following Interventional Cardiology categories:

- Coronary
- Peripheral (Femoral or Tibial).
- Cardiac Resynchronization Therapy—Coronary Sinus—procedures use the same three Quick Layouts (1, 2, and 3) for all procedures.

Buttons

To view and customize alternative (quick) layouts, click one of the Quick Layout buttons (**Figure 22**) on the *Vision* toolbar. To modify the Quick Layout, use the Layout Editor feature, above. The next time you click the same Quick Layout button, the new layout displays.

Figure 22: Three Quick Layout buttons on *Vision* toolbar



Note: You must click one of the Quick Layout buttons first to customize Quick Layout 1, 2, or 3. Opening the Layout Editor directly (without clicking a Quick Layout button) will *not* save the altered layout as a Quick Layout.

Section 4: Magnetic Lab with QuadHD

Start Window

The *Odyssey Vision* start window (**Figure 23**) is shown in the lower left corner of the QuadHD screen — as are all *Navigant*-specific windows.



Figure 23: Start window (magnetic lab)

Click **Start New Procedure** (**Figure 24**).

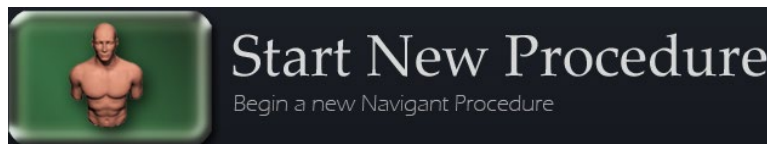


Figure 24: Start New Procedure

Procedure Information Window

We recommend entering all patient information into the X-ray system before starting a procedure on *Vision*. The information will then be automatically imported into the appropriate fields on *Vision*.

You may also fill out procedure information fields manually. If entering the procedural information manually, type in the Patient First and Last name, their Patient ID, and Date of Birth (DOB), and then select the appropriate Sex. The Physician and Profile fields each contain a drop-down menu, provided for ease of usage. Click the down arrow to the right of the field to choose physician and procedure if working with previously entered information.

New information may be entered for the Physician and Profile fields and will be stored for future procedures. The Physician and Profile fields are used to display the customized layouts that a physician has created. The Notes section is an optional field for any additional information.

The Procedure Type section of this window contains four tabs to indicate the general procedure type. Select (click) the desired tab, then click to choose options within the Procedure Type section. Selecting *CARTO 3* changes the procedure layout to include *CARTO 3* options. The example in **Figure 25** shows **Electrophysiology, Right Atrium, Use *CARTO 3*, and Use *Niobe*** selected.

Figure 25: Magnetic procedure information window

After entering the procedure information and selecting the procedure type options, click **OK**. The layout associated with this procedure displays. The procedure is now open and the main window displays.



Note: You **must** fill out the Patient (First and Last Name, ID, DOB, and Sex) and Physician fields to continue with the procedure. Enter the patient information exactly as it appears on the X-ray system.

Magnetic procedures

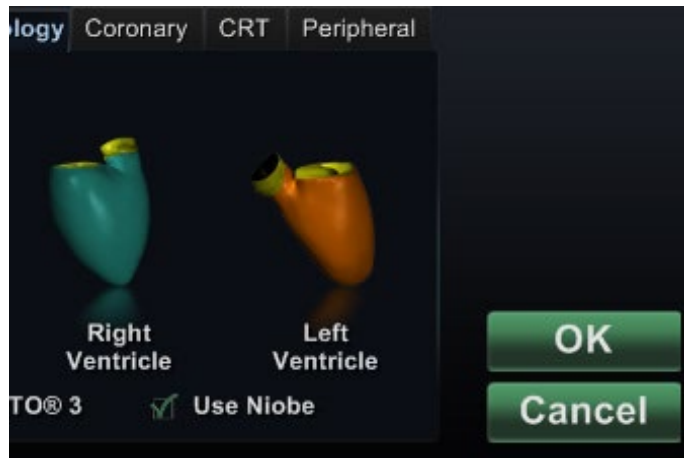


Figure 26: Selected Use *Niobe* checkbox on *Vision* procedure information screen for magnetic procedure

To start a magnetic procedure from the *Vision* procedure information window, leave the Use *Niobe* checkbox selected as shown in **Figure 26**. *Niobe* ES procedures can run only with the *Niobe* Magnetic Navigation System. *Vision* procedures can run with or without the *Niobe* system.

1. Select or clear the Use *CARTO 3* checkbox to start a procedure with or without *CARTO 3*.
2. Click **OK** to begin the procedure.

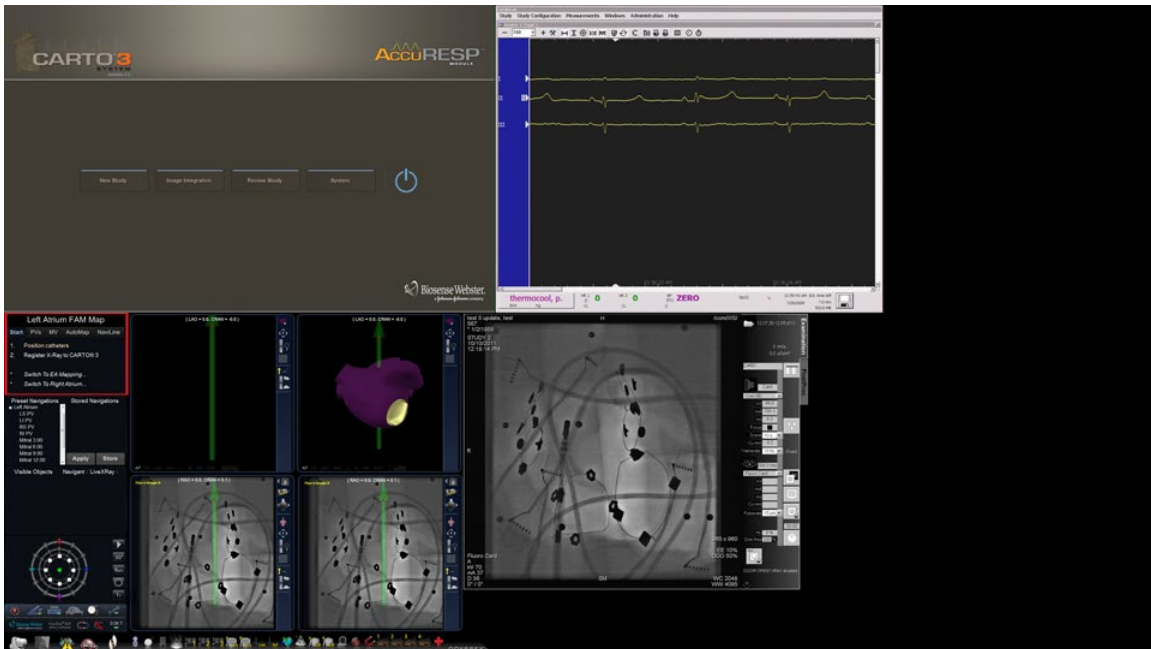


Figure 27: Magnetic procedure with *CARTO 3*

The Clinical Workflow Manager (red box in **Figure 27**) displays in the upper-left corner of the bottom quadrant of the QuadHD screen. The Clinical Workflow Manager controls the opening layout for any procedure. If you want to change the video source display, you can select:

- A device button on the *Odyssey Vision* toolbar to open a single, emphasized video source
- The Tools (wrench) button and then Layout Editor from the menu
- One of the three Quick Layout buttons on the toolbar

Manual procedures in magnetic labs

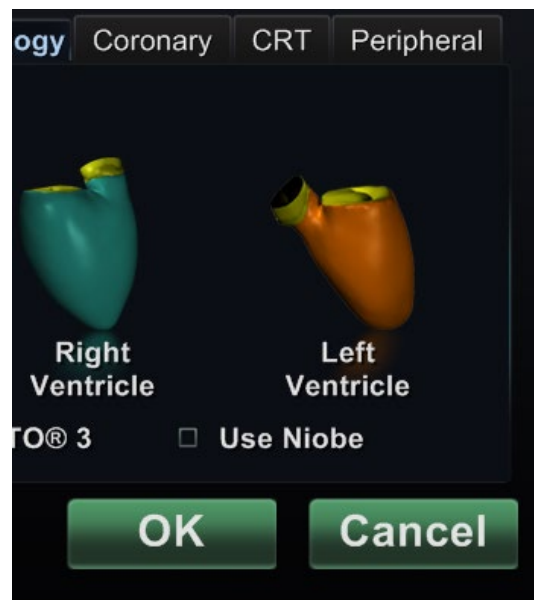


Figure 28: Cleared Use *Niobe* checkbox on *Vision* procedure information window for manual procedure in magnetic lab

The *Vision* procedure information window also allows you to perform manual procedures without using the *Niobe* Magnetic Navigation System. If you are starting a manual procedure, clear the **Use *Niobe*** checkbox on the procedure information window (**Figure 28**).

The Clinical Workflow Manager will not display on the *Vision* screen. However, *CARTO 3*, ECG, X-ray, and other systems will still display. Most *Navigant* features also display, such as control panels, guidance dialogs, and Layout Editor.

Click **OK** to begin the procedure. **Figure 29** displays.

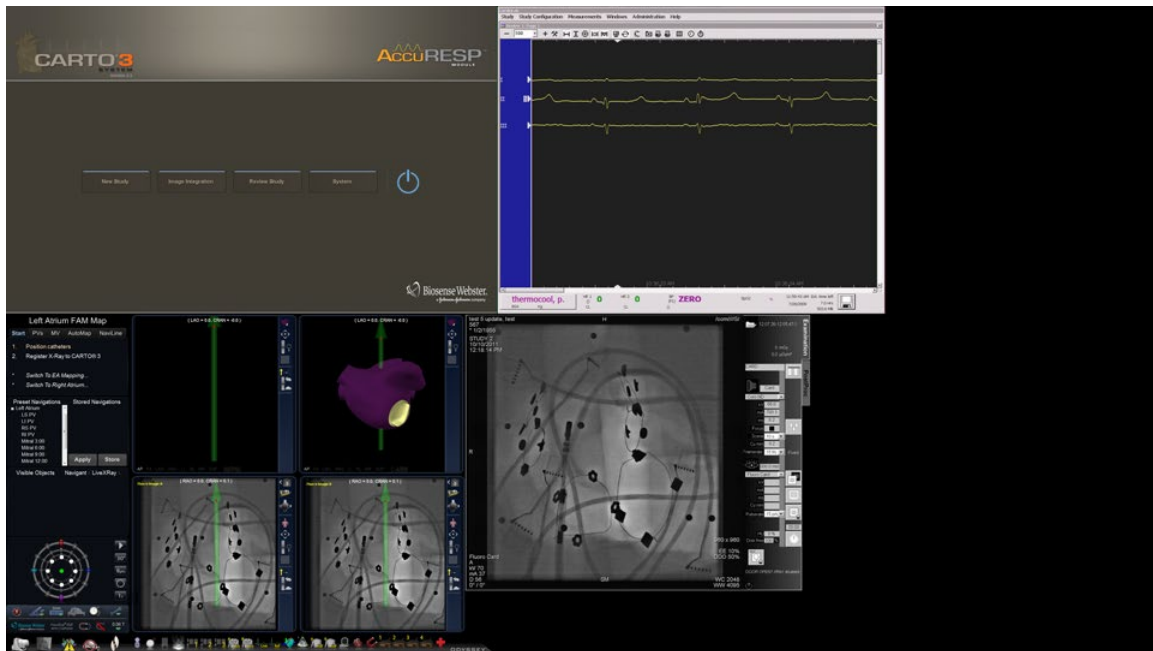


Figure 29: Manual procedure in magnetic lab with CARTO 3 main window

This opening window of a manual procedure displays default video sources based on the selected procedure. If you want to change the video source display, you can select:

- A device button from the *Vision* toolbar to open a single, emphasized video source, displaying at or near full resolution.
- The Tools (wrench) button and then Layout Editor from the menu.
- One of the three Quick Layout buttons.

Emergency Layout

The Emergency Layout is available when the *Vision* application starts and can be accessed at any time during the procedure by clicking the red cross icon (**Figure 30**) on the *Vision* toolbar. The QuadHD screen displays Live ECG, Live Fluoro A, and Reference Fluoro A (**Figure 31**).



Figure 30: Emergency Layout button on *Vision* toolbar

The Emergency Layout button acts as a toggle. Clicking it once displays the Emergency Layout; clicking again returns to the previous screen.

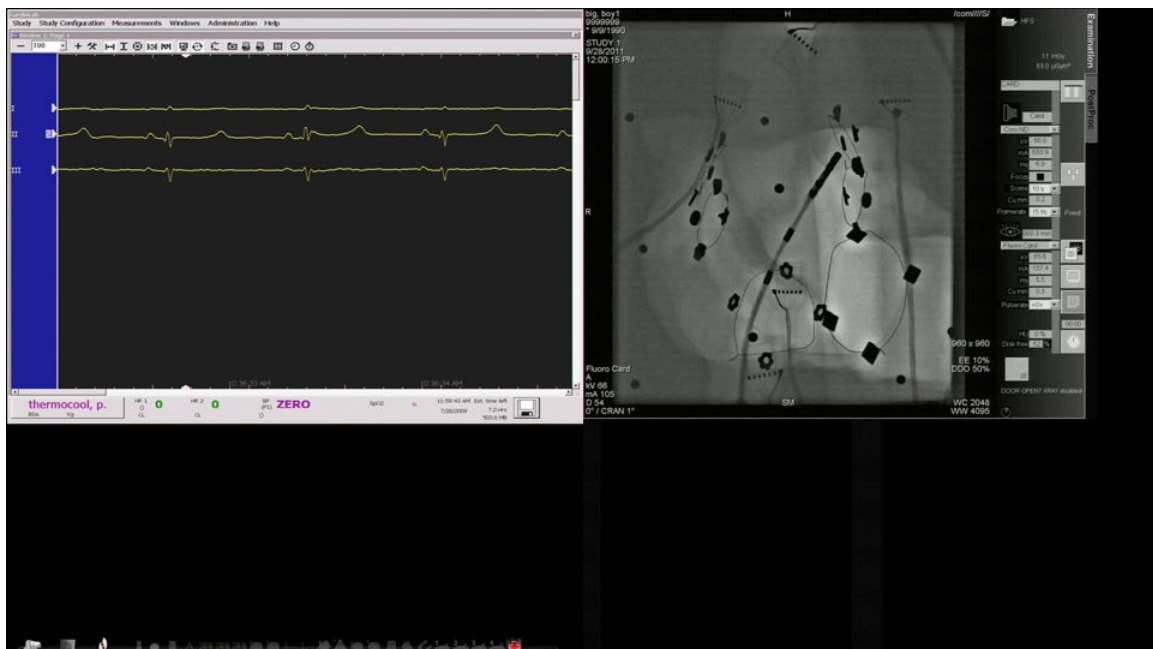


Figure 31: Emergency Layout

Altering Layouts

Vision offers several options for altering a layout:

- Emphasize a video source
- Change the layout through the Layout Editor
- Customize the default Quick layouts

Emphasize video sources

When you click a video source button on the *Vision* toolbar, the video source you selected displays (Figure 32) in an emphasized state on the screen at or near full resolution.

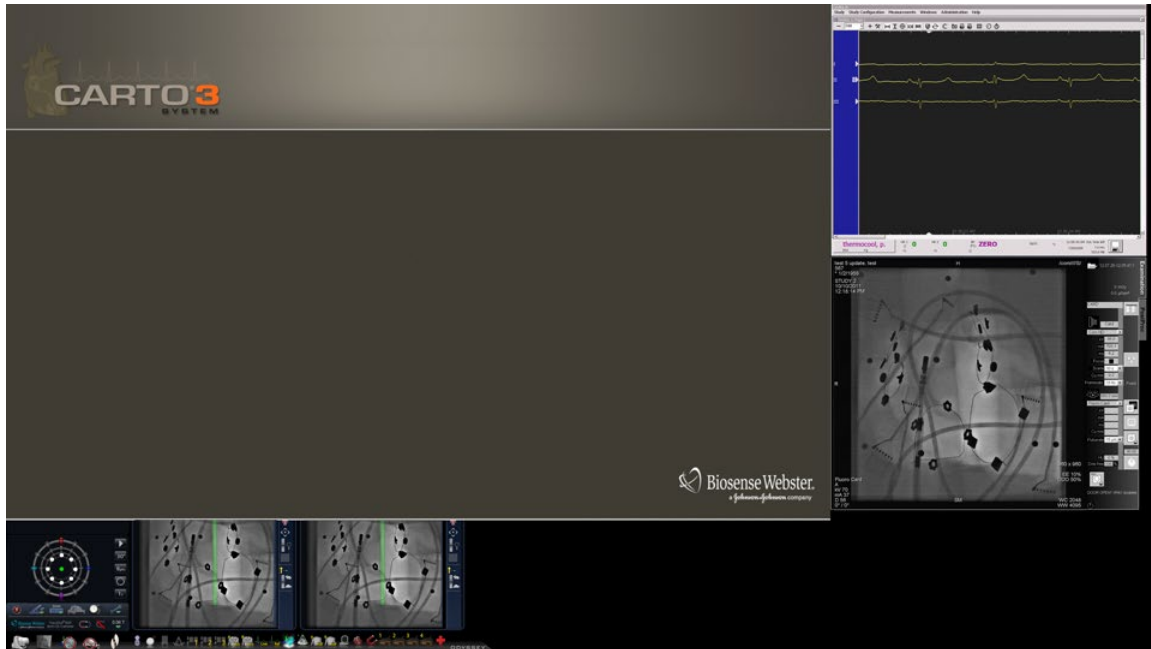


Figure 32: Emphasized video source – CARTO 3

To return to the previous procedure layout when done with the emphasize layout, select the *Navigant* icon (Figure 33) on the toolbar.



Figure 33: Navigant toolbar icon

Layout Editor

The Layout Editor is a *Navigant* feature that allows you to customize the procedure layout displayed.



Refer to the *Niobe ES User Guide* for a complete description of procedure layout customization.

The *Vision* Layout Editor includes the addition of the Video Inputs menu button to the control panel.

“Picture within a picture”

When opening the Layout Editor (**Figure 34**), you can still view three quarters of the live screen. This feature is significant, because if your live videos (Live ECG and Live Fluoro) are displayed on the main window, you can still view them in Layout Editor.

When you move or modify images within the Layout Editor, you will not see the change on the main window until you save your changes. This rule includes the live feeds.

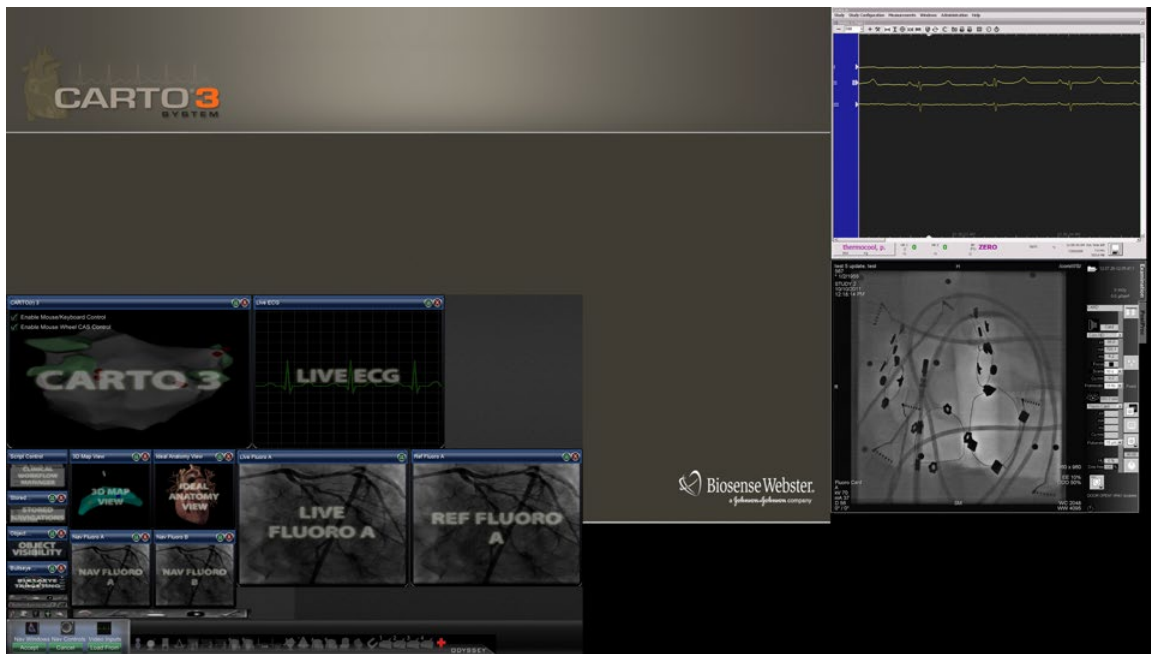


Figure 34: Magnetic Lab Layout Editor (bottom left quadrant of screen)

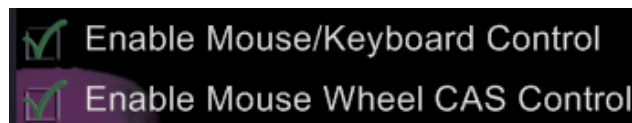


Figure 35: Checkboxes within CARTO 3 section of Layout Editor

The *CARTO 3* video source on the Layout Editor window contains two checkboxes (**Figure 35**) to configure functionality within *CARTO 3* procedures.

1. **Enable Mouse/Keyboard Control.** Checking this box enables *Vision* global keyboard and mouse to be used within *CARTO 3* when *CARTO 3* is the window currently in use (has focus).



Note: We recommend disabling the mouse/keyboard control when in a lab with two operators, one controlling the *CARTO 3* system with the native keyboard and mouse and one controlling the global keyboard and mouse on the other systems such as the *Niobe* system.

2. **Enable Mouse Wheel CAS Control.** Checking this box enables the *Vision* mouse wheel to advance and retract the catheter when *CARTO 3* has focus during a magnetic procedure.



Note: For more information on the window currently in use or changing focus, see [Changing Video Window Focus](#).

Control Panel



Figure 36: Magnetic Lab Layout Editor Control Panel

Magnetic Lab Layout Editor Control Panel guide (Figure 36)

Nav Windows menu button. Displays a list of available and displayed *Navigant* windows.

Nav Controls menu button. Displays available and displayed *Navigant* control panels.

Video Inputs menu button. Displays available and displayed video inputs.

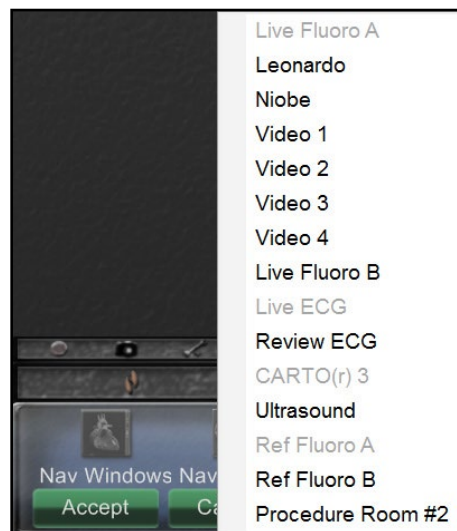
Accept button. Saves the designated layout.

Cancel button. Rejects layout edits and returns to previous screen.

Load From button. Allows the user to copy a layout from another user for the same layout.

Similar to the **Nav Windows** and **Nav Controls** menu buttons, the **Video Inputs** button displays the available video sources (dark lettering in **Figure 37**) for the current procedure. The video sources already displayed on the Layout Editor appear shaded on the menu.

Figure 37: Example of Video Inputs menu in Layout Editor – Siemens system



**Notes:**

A video source may not be repeated within a layout. Only one instance of Live Fluoro may exist in any given layout.

Figure 37 represents the Layout Editor window list for a Siemens system. Some of the window names differ slightly for other systems.

Select an available video source from the menu to add it to the layout. Move or resize other elements in the layout if necessary so none are overlapping. (Overlapping elements are indicated by a red border.) When the layout is satisfactory, click the **Accept** button. (The **Accept** and **Cancel** buttons are available only after a layout is changed.)

If you prefer to start editing from an existing layout from another physician for this same layout in the procedure, you may use the Load From dialog (**Figure 38**).

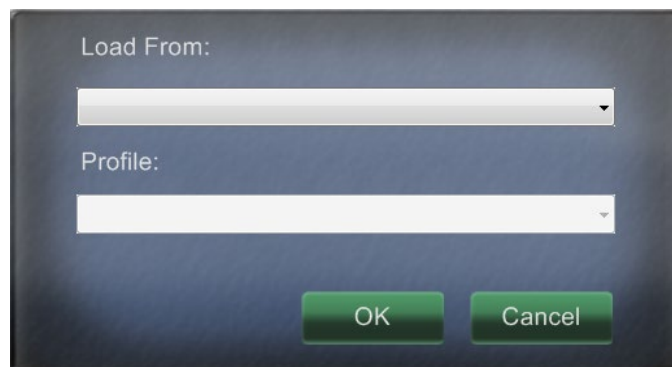


Figure 38: Load From dialog in Layout Editor

Load From dialog guide

- To import this layout from a different physician, use the Load From dialog. Select a physician name (and/or profile for the layout), and then click **OK**.
- To use the *Vision* default layout, leave the Physician Name and Procedure Type fields blank, and then click **OK**.

After clicking the **Accept** button from the Layout Editor or after clicking the **OK** button from the Load From dialog, the save dialog (**Figure 39**) displays. Click the **For This Procedure Only** button to use the layout for *only* the current procedure. Click the **As My New Default** button if you want the layout to be available for *all future* procedures for this *physician and procedure type*.

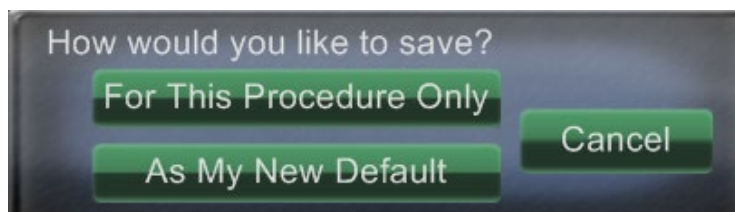


Figure 39: Save dialog in Layout Editor

Quick Layouts

Configurations

The Quick Layouts are grouped by clinical specialty and procedure type for manual, *CARTO 3*, and non-*CARTO 3* equipment combinations.

Each of the following Electrophysiology categories has separate Quick Layouts (1, 2, and 3):

- Right Atrium and Left Atrium (*Niobe CARTO 3* and non-*CARTO 3*, Manual *CARTO 3* and non-*CARTO 3*)
- Right Ventricle and Left Ventricle (*Niobe CARTO 3* and non-*CARTO 3*, Manual *CARTO 3* and non-*CARTO 3*)

The three Quick Layouts (1, 2, and 3) may be used for the following Interventional Cardiology categories:

- Coronary (*Niobe* and Manual)
- Peripheral (Femoral or Tibial) (*Niobe* and Manual)
- Cardiac Resynchronization Therapy—Coronary Sinus—procedures use the same three Quick Layouts (1, 2, and 3) for all procedures.

For example, assume you are in an Electrophysiology Left Atrium procedure and have selected to use both *Niobe* and *CARTO 3*. You can make and save changes to Quick Layout 1.

You will still see these changes if you open Quick Layout 1 in a Right Atrium procedure, as long as you have selected both *Niobe* and *CARTO 3*.

Buttons

To view and customize alternative (quick) layouts, click one of the Quick Layout buttons (**Figure 40**) on the *Vision* toolbar. To modify the Quick Layout, use the Layout Editor feature, above. The next time you click the same Quick Layout button, the new layout displays.

Figure 40: The three Quick Layout buttons on the *Vision* toolbar



Note: You must click one of the Quick Layout buttons first to customize Quick Layout 1, 2, or 3. Opening the Layout Editor directly (without clicking a Quick Layout button) will *not* save the altered layout as a Quick Layout.

Section 5: *Odyssey Cinema*

Cinema Overview

Cinema is an optional add-on to the *Odyssey Vision* product. “*Cinema*” refers to both *Odyssey Cinema Studio* and *Odyssey Cinema LT* products. When installed, the Record / Pause, Connection, and Bookmark buttons display their available states (see below). When not installed, only the disabled states display.

If you have the *Cinema* add-on, your Stereotaxis representative configures the system to use one of four recording control modes:

- **Recording disabled.** No recording can occur on the *Vision* system.
- **Manual recording.** You fully control the recording by clicking the Record / Pause button on the *Vision* toolbar.
- **Semi-automatic recording.** *Cinema* automatically starts recording when a *Navigant* procedure is opened; however, you can manually pause or resume the recording at any time.
- **Automatic recording.** *Cinema* automatically starts recording when a *Navigant* procedure is opened; you cannot pause or resume the recording.



Notes:

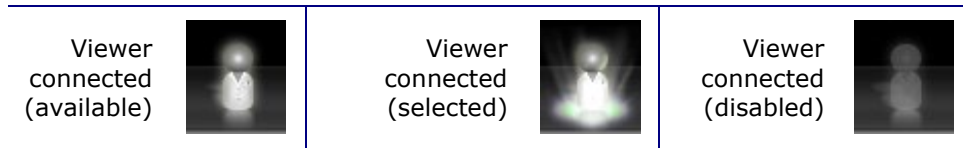
If your system is configured for semi-automatic recording, the Pause button will be available as soon as you start a session because the system will already be recording. (Record / Pause is a toggle button.) For alternate button states, see [Record / Pause buttons](#).

For all modes, the recording is automatically stopped when the *Navigant* procedure is closed.

Connection Status Buttons

Cinema enables other interested parties to view your *Vision* procedure, if you give them permission. Another party could be the Customer Care Center, a colleague, a professor, a resident or intern, or anyone who is interested in the procedure. The Connection button tells you if anyone is connected or if anyone is waiting to be connected (a Pending connection).

No viewer (available)		No viewer (selected)		No viewer (disabled)	
Viewer pending (available)		Viewer pending (selected)		Viewer pending (disabled)*	



- * The button can be in the viewer pending (disabled) state if you have opened the *Vision* application (so you can see the toolbar) and a potential viewer has requested permission to view but you have not started a procedure. You have to start the procedure before you can click the button and respond to the request (see the following scenario).

Scenario

Following is a sample scenario using the Connection button in various states:

1. You open the *Vision* application and start setting up your procedure. You see there are no viewers.



No viewer:

2. You know your colleague, Dr. Agamemnon, is planning to view the procedure from his office. Dr. A launches *Cinema* in his office and requests permission to view your procedure. The Viewer button turns yellow, indicating at least one pending viewer.



At least one viewer is pending:

3. You click the Connection button and the Remote Viewer Connections dialog displays with Dr. A's name listed as Pending.
4. Select Dr. A's name and click **Accept**. Now the Connection button shows a connected user:



One or more viewers are connected:

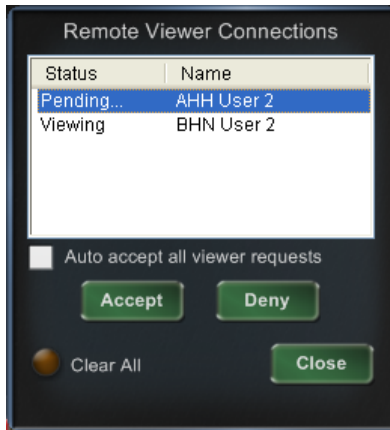


Figure 41: Remote Viewer Connections dialog – Viewer connected



Note: If another potential viewer requests a connection, the Viewer button will again turn yellow.

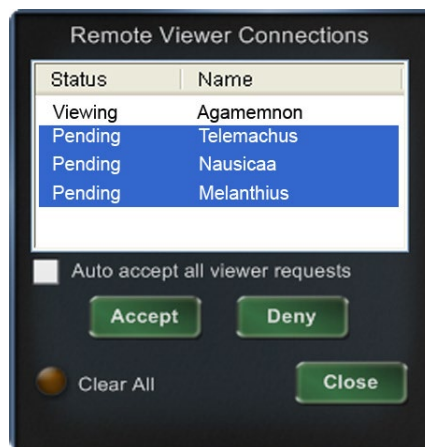


Figure 42: Remote Viewer Connections dialog – One viewer, multiple pending

The Remote Viewer Connections dialog (**Figures 41** and **42**) offers four options:

- **Auto accept all viewer requests checkbox.** If you check this box, all listed viewers (pending and connected) are able to automatically connect and disconnect at any time during the current procedure (until you close the procedure). Any qualified user may connect and disconnect at will during a procedure.



Note: How to know if the viewer disconnected or reconnected:

If Dr. A is the only viewer, and he disconnects, the Connection button changes from Viewer connected to No viewer. However, if more than one viewer is connected, you see no change in the Connection button if only one viewer disconnects. The Viewer connected button is still displayed. The Connection button shows a connected viewer until there are no more connected viewers.







- **Accept button.** Select the pending viewer's name and click **Accept**. This is a one-time action; in other words, if you accepted a viewer, he disconnects, and then he wants to reconnect, you need to Accept or Deny his request again.

- **Deny button.** Select the pending viewer's name and click **Deny**. This is also a one-time action; if a viewer's request is denied and he tries to connect again, you need to Accept or Deny his request again.
- **Clear All.** This button is similar to the emergency act of clearing the room. If you click **Clear All**, several things happen:
 1. All connected viewers are immediately disconnected.
 2. All pending viewers are immediately denied.
 3. All user names in the list are cleared.
 4. The **Auto Accept All** checkbox is cleared (if it is checked).

To reconnect, each viewer must submit a new request, and you may respond to their requests with one of the choices above.

Record / Pause Buttons

Cinema has the ability to record procedures for future reference. The Record and Pause buttons are toggles; when one is on, the other is off.

Recording paused; Record button available		Recording paused; Record button pressed		Record button disabled	
Recording in progress (red light appears lit); Pause button available		Recording in progress (red light appears lit); Pause button available		Pause button disabled	

Scenario 1

For example:

1. To start recording a procedure, click the Record button.



Paused / Record available:

After clicking, the button changes (toggles) to Recording / Pause available. A bright red dot (the “record light”) displays in the upper-right corner when recording.

2. If the procedure is delayed, click the Pause button to pause recording.



Recording / Pause available:

3. The button now toggles back to the Record available state.



Paused / Record available:



Note: Recording can take several seconds to start.

Bookmark Button

While recording, bookmarks may be added and annotated. The bookmarks will be stored with the recorded procedure.



Scenario 2

Another scenario using the Bookmark button:

1. While recording a procedure, an unusual arrhythmia occurs.
2. Click the Bookmark button to mark the exact time of the arrhythmia.



Bookmark selected:

3. The Archiver Bookmark dialog (**Figure 43**) displays with a blank space for annotations. Type an identifying note in the space. You may add as many bookmarks as desired.



Figure 43: Archiver Bookmark dialog



Notes:

When playing back the recording in *Cinema*, a bookmark symbol appears on the timeline. Hold the cursor over the bookmark symbol to display the annotation. Click the bookmark symbol to move the video playback to that bookmark's position.



See the *Odyssey Cinema* Client User Guide for more information.

The bookmark time in the video marks the time the Bookmark button was clicked, not the time when **OK** on the Archiver Bookmark dialog was clicked.

Section 6: System Information

Companion Systems

The *Odyssey Vision* platform supports importation of VGA, DVI, and RGB component video on each port with up to 3840 x 2160 pixels of resolution. The *Vision* system is compatible with:

- Stereotaxis *Navigant* versions 4.2 and newer
- Stereotaxis *Niobe* versions 4.1 and newer
- Lab equipment that uses USB-compatible mice and keyboards within the context of Microsoft Windows 2000 or newer Windows operating systems

Optional *Vision* control

The user has the option of using the native display, keyboard, and mouse controls of any of the systems connected to the *Vision* platform instead of, or simultaneously with, the *Vision* controls.

Monitors

The *Odyssey Vision* setup has two monitors: one in the Control Room and one in the Procedure Room. The output on the two monitors may vary. Sometimes, one monitor will display the *Navigant* window only. Monitors can display up to 16 video streams (input from the *Navigant* system and 15 non-*Navigant* sources, such as ECG and fluoro). Each video stream appears in its own window on the *Vision* display. The window that contains a video stream on the *Vision* display is called a video window.

Resolution signal

Vision monitors have a signal resolution of 3840 x 2160.

Auto-resolution

The Auto-resolution feature of the *Odyssey Vision* system automatically detects the input resolution of a video source. This input resolution depends on the system connected.

When a device or system is hooked up to the Procedure Room hub, Auto-resolution detects its resolution and allows the video to “grow” or scale up inside the device’s designated window on the display while maintaining aspect ratio integrity. When adding a window to the display using the Layout Editor, the video source’s native resolution is used to calculate the Preferred Size, Maximum Size, and Minimum Size allowed.

Figure 44 is an example of a display whose layout was created when the video source connected to the Procedure Room hub had a native resolution of **1600 x 1200**.

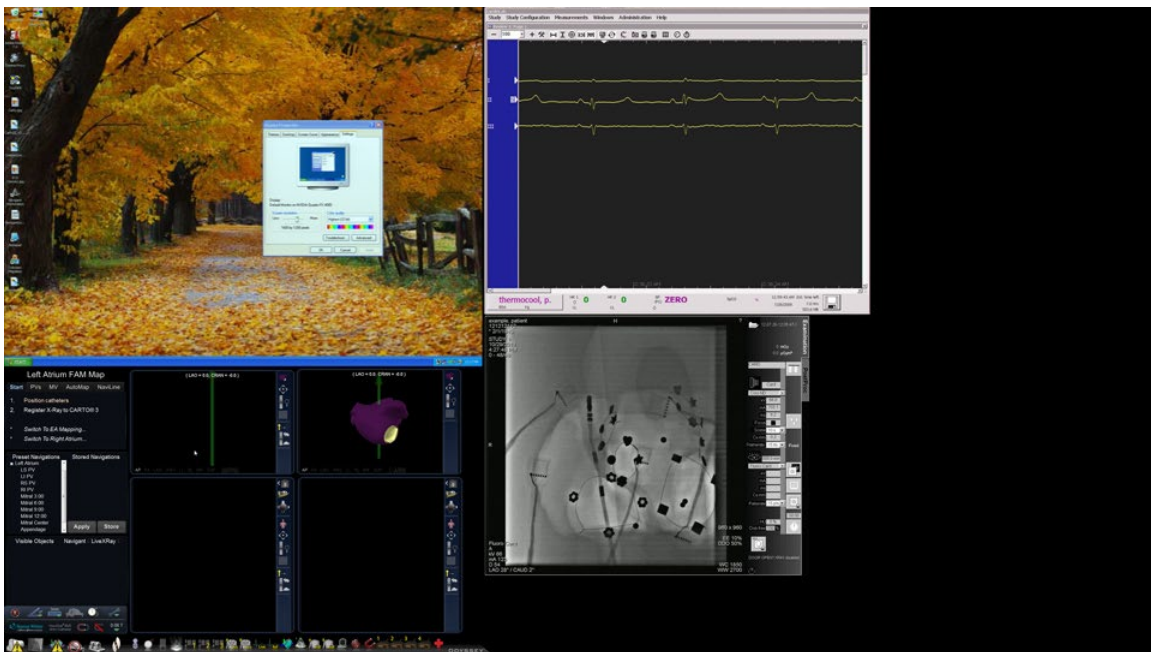


Figure 44: Right upper left – Video source with native resolution of 1600 x 1200 connected to Procedure Room hub

Figure 45 is an example of the same layout on the display but with a video source connected with a native resolution of **1280 x 1024**. If the connected video source’s native resolution has an aspect ratio differing from the window size on the display, a black band (encased by a red rectangular outline in Figure 45 for illustrative purposes) appears on a side of the video source window to maintain the correct ratio.

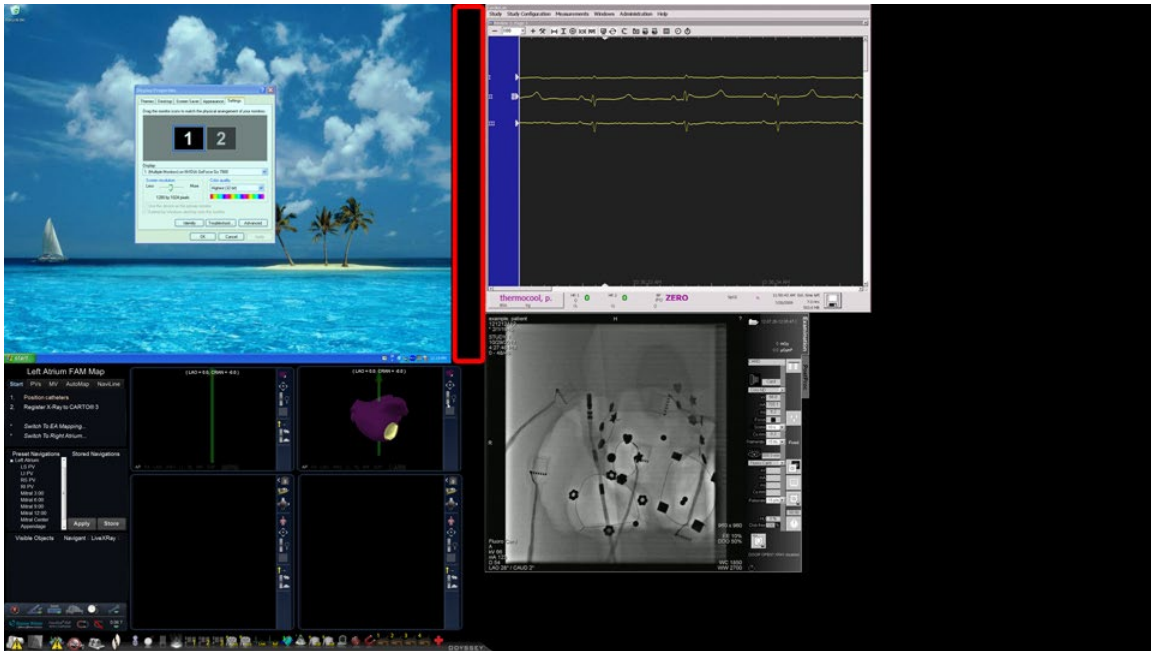


Figure 45: Right upper left – Video source with native resolution of 1280 x 1024 connected to Procedure Room hub, resulting in black band on right end (emphasized by application of red rectangular outline)

Start Panel Utilities

As shown previously, the start window, or panel (**Figure 46**), contains the entry point for starting a new procedure. The start panel also contains the **Utilities** option, discussed next.



Figure 46: Start panel with Utilities button

Clicking the **Utilities** button on the start panel displays a dialog pertaining to one of the following tabs at the top:

- **Physicians**
- **Procedures**
- **Licenses**
- **Odyssey**



See the *Niobe* ES User Guide for information on the **Physicians**, **Procedures**, and **Licenses** tabs.

Clicking the *Odyssey* tab reveals an initial screen showing the status of connections, as shown in **Figure 47**. These connection statuses, which are for mouse and keyboard only, are categorized as follows:

- Connected
- Not Connected

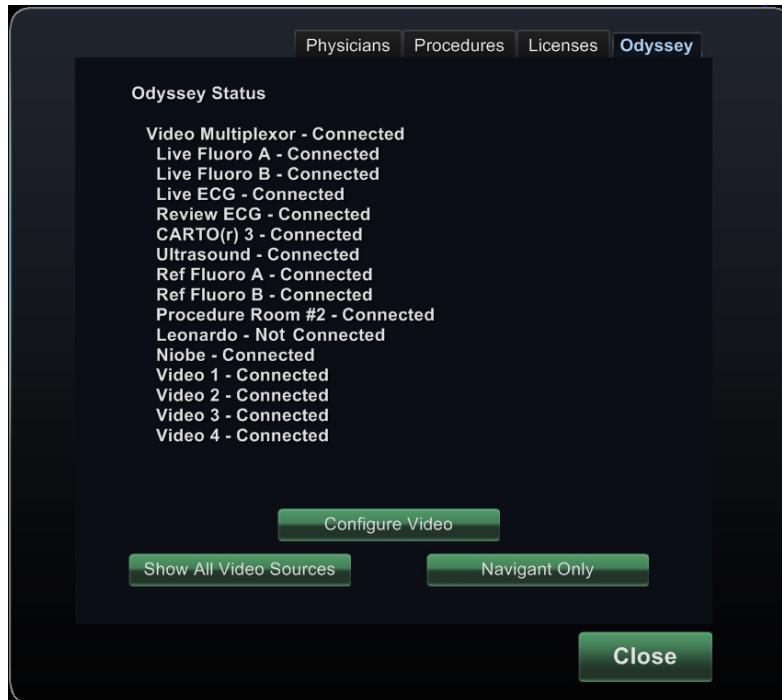


Figure 47: Odyssey Status tab

Figure 47 shows the top-level “Video Multiplexor” category, under which any mouse and keyboard system connection statuses appear. Note that, in this case, all systems are connected except for the Siemens *Leonardo*.

The *Odyssey* tab display also offers the following button options geared more toward video. These utilities are discussed in the following sections.

- **Configure Video**
- **Show All Video Sources**
- **Navigant Only**

Configure Video

Clicking the **Configure Video** button displays the dialog shown in **Figure 48**.

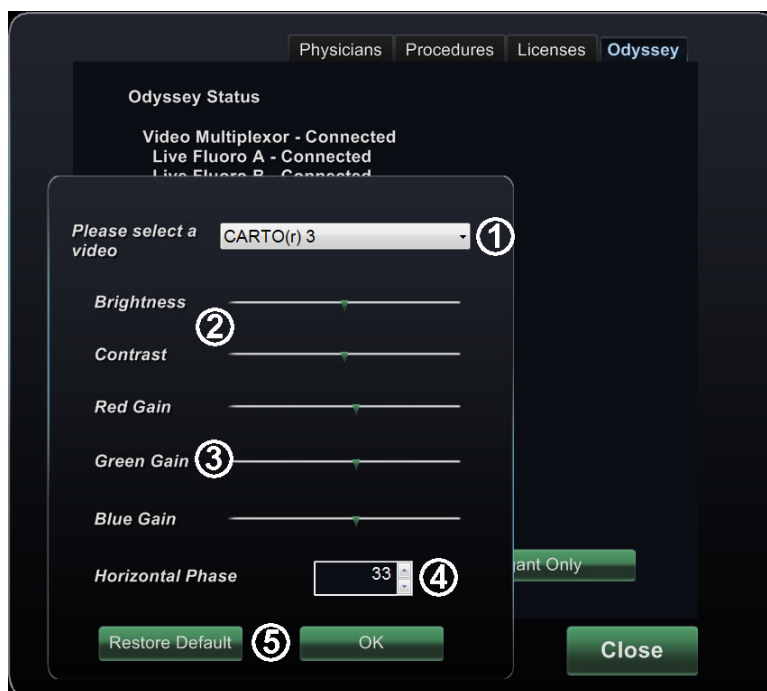




Figure 48: Configure Video dialog

Configure Video dialog guide

- ① **Please select a video.** Use the drop-down box to select the video source to configure. In the Figure 48 example, “*CARTO 3*” was chosen. Always ensure the video source is visible on the screen. If necessary, first change the layout to display the source you wish to configure.
- ② **Brightness and Contrast options.** The green arrow () appears on the line at the current settings for the source chosen. Move the arrow along the line as desired to change the designated feature. Moving left lessens; right increases. Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ③ **Gain (Red, Green, Blue) options** (*not available for NTSC or analog x-ray*). The green arrow () appears on the line at the current settings for the source chosen. Move the arrow along the line as desired to change the designated feature. Moving left lessens; right increases. Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ④ **Horizontal phase** (*available for VGA or analog x-ray only*). Click or scroll the up or down arrow to change the video display’s pixel alignment if needed. Observe vertical lines while adjusting: Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ⑤ **Save choice.** Review the chosen video source display, and then select **OK** to save changes, close the dialog, and return to the *Odyssey* tab. *Or*, click **Restore Default** to cancel current changes for the selected source and then review, change as necessary, and click **OK** to save changes, close the dialog, and return to the *Odyssey* tab.

To exit from the *Odyssey* tab, click the **Close** button. The start panel reappears.

Show All Video Sources

Clicking the **Show All Video Sources** button from the *Odyssey* tab displays a screen similar to the one in **Figure 49**. By viewing this screen, you can ensure all desired video sources are active. You can move the mouse cursor into any video source window configured for global keyboard and mouse control (except *Navigant*). These windows respond to global keyboard and mouse input and are there to verify the third-party devices are working correctly.

The screen may show 11 or 15 video windows (and an **Exit** field) depending on the number of inputs purchased (Figure 49 shows 11). In the upper left corner of each video window is the name assigned to that channel in the *Odyssey Vision* configuration file. A black rectangle indicates no device is connected to that channel. A blue rectangle indicates a device is connected, but the corresponding channel(s) are emitting no signal.



Note: If your configuration varies from the default, the name below the panel may not match the device type that is plugged in. Because so many video sources are possible, a configuration differing from the default is common.



Figure 49: Show All Video Sources screen

To close the Show All Video Sources screen and return to the *Odyssey* tab, click **Exit**. To exit from the *Odyssey* tab, click the **Close** button. The start panel reappears.

Navigant Only

The **Navigant Only** button displays *Navigant*-only video sources and the *Vision* toolbar in the main *Vision* window (which is in the bottom left corner of the screen, as shown in **Figure 50**). The **Navigant Only** button is for use by Stereotaxis personnel only and **should not be used during a clinical procedure**.

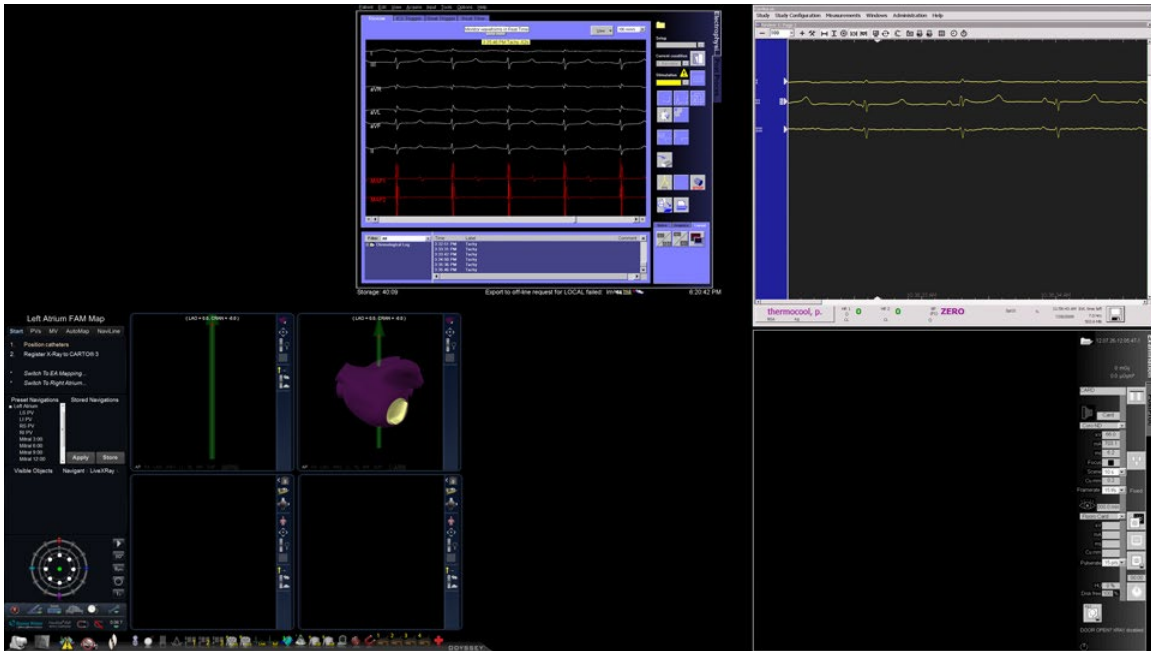


Figure 50: Sample screen when "Navigant Only" is selected

Shutdown System

Click the **Shutdown System** button in the start panel (in red oval in **Figure 51**). This shuts down the *Odyssey Vision* and *Navigant* systems.



Figure 51: Start panel with Shutdown System button

The **Shutdown** button shuts down only the *Vision* application and computer. Click it to shut down only the *Vision* computer and all associated *Vision* hardware. Because it shuts down the *Vision* power supply, it also shuts down power to the monitors of the third-party devices in the Control Room.

Primary *Vision* Components

A number of hardware and software components are required to achieve this level of device consolidation. The primary *Vision* components are listed in the following table.

Component	Description
Odyssey cabinet	The <i>Odyssey</i> cabinet contains video processing components, power supply, power transformer, routers, and circuitry for the <i>Vision</i> system, which allows for up to 16 inputs with potential for more.
QuadHD display	The QuadHD display has four times the resolution of an HD display (3840 x 2160).
Procedure Room hub	The user can connect up to two auxiliary systems at the same time to the Procedure Room hub. Auxiliary systems are systems that are not permanently installed in the Procedure Room, such as ultrasound machines or PV loop machines on carts.
Third-Party Interface (TPI) boxes	TPI boxes are used to connect all devices in the interventional lab. They route the video and USB keyboard/mouse signals of all devices connected to the <i>Vision</i> system, enabling video display and global keyboard and mouse control.

Clinical Workflow Manager

The Clinical Workflow Manager runs within the *Navigant* application and has the ability to control the number, size, and location of the video windows on the *Vision* display.

Customer Care Center

Stereotaxis offers a technical support package through the Customer Care Center.

Stereotaxis Customer Care Center representatives can view *Vision* video content and *Vision* displays at the installed site.

Troubleshooting

If you need assistance with any of the solutions in the following table, call the Customer Care Center at 866-269-5268 (from the U.S.) or 314-678-6200.

Problem	Solution
Cannot connect to the Video Controller.	Click OK to shut down the system; restart. If the problem persists, call the Customer Care Center.
Connection to the <i>Navigant</i> computer was lost.	Wait 2 minutes for the connection to automatically restore. If the connection is not restored, shut down the system; restart. If the problem persists, call the Customer Care Center.
Error opening Odyssey.xml file.	Click OK to shut down the system; restart. If the problem persists, call the Customer Care Center.
Failed to initialize Layout Manager.	The layout directory is missing or a layout file is corrupted. Click OK to shut down the system; restart. If the problem persists, call the Customer Care Center.
Hourglass displays on the <i>Vision</i> main menu window for more than 2 minutes.	Call the Customer Care Center.
Non- <i>Navigant</i> window displays improper color or a noisy image.	Refer to the Configure Video section. If the problem persists, call the Customer Care Center.
OAV connection is disabled.	Either the site has not purchased <i>Cinema</i> , or the connection between <i>Vision</i> and the <i>Cinema</i> server is down. If you are unable to restore the connection, call the Customer Care Center.
Received a message that “Only one instance can run at a time.”	Shut down the system; restart. If the problem persists, call the Customer Care Center.
Unable to connect to Power Shutdown hardware. Only shutting down <i>Navigant</i> computer.	Allow the system to shut down the <i>Navigant</i> computer. Then use the ODYSSEY switch on the <i>Vision</i> Remote Power box to turn off the other hardware. If the problem persists, call the Customer Care Center.
Unable to use the <i>Vision</i> mouse in the <i>Navigant</i> window.	Restart the system. If the problem persists, call the Customer Care Center.
Unexpected error occurred in opening required layout file.	A layout file is corrupt or has been removed. Shut down the system; restart. If the problem persists, call the Customer Care Center.

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