North Carolina Department of Health and Human Services
Division of Health Service Regulation
Certificate of Need Section
2704 Mail Service Center ■ Raleigh, North Carolina 27699-2704

Beverly Eaves Perdue, Governor
Lanier M. Cansler, Secretary

www.ncdhhs.gov/dhsr

Craig R. Smith, Section Chief
Phone: 919-855-3875
Fax: 919-733-8139

January 9, 2012

Duncan Yaggy, Ph.D. Chief Planning Officer
Duke University Health System
DUMC 3229
Durham, NC 27710

RE: Exempt from Review - Replacement Equipment / Duke University Health System d/b/a Duke University Hospital/Replace existing Philips biplane electrophysiology (EP) cardiovascular system with a new Philips Allura biplane EP cardiovascular system/Durham County
FID # 943138

Dear Dr. Yaggy:

In response to your letter of December 15, 2011, the above referenced proposal is exempt from certificate of need review in accordance with N.C.G.S 131E-184(a)(7). Therefore, you may proceed to acquire, without a certificate of need, the Philips Allura biplane electrophysiology (EP) cardiovascular system to replace the existing Philips biplane EP cardiovascular system [Serial # S01H001244/00001]. This determination is based on your representations that the existing unit will be removed from North Carolina and will not be used again in the State without first obtaining a certificate of need. Further please be advised that as soon as the replacement equipment is acquired, you must provide the CON Section and the Medical Facilities Planning Section with the serial number of the new equipment to update the inventory, if not already provided. In addition, you should contact the Construction Section to determine if they have any requirements for development of the proposed project.

It should be noted that this Agency's position is based solely on the facts represented by you and that any change in facts as represented would require further consideration by this Agency and a separate determination. If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Michael J. McKillip, Project Analyst

Craig R. Smith, Chief
Certificate of Need Section

cc: Construction Section, DHSR

DukeMedicine

Strategic & Clinical Services Planning

December 15, 2011

Michael J. Mckillip, Project Analyst
Certificate of Need Section
Division of Health Service Regulation
2704 Mail Service Center
Raleigh, NC 27699-2704

Re: Equipment Replacement Project

Dear Mr. McKillip:

The purpose of this letter is to request the Section's written confirmation that the replacement of EP Lab #2 at Duke University Hospital is exempt from Certificate of Need review pursuant to GS 131E-184 (a)(7).

In the paragraphs below and the enclosed exhibits, we respond to the requests for documentation included in the letter that the Section sends applicants proposing equipment replacement projects. The numbering below follows the numbering in the Section's letter.

1) A completed Equipment Comparison Form is enclosed as Exhibit 1.
2) The equipment to be replaced and the replacement equipment are biplane cardiovascular systems supporting cardiovascular diagnostic and interventional procedures.
3) Brochures describing the existing equipment are no longer available. A brochure describing the replacement equipment is enclosed as Exhibit 2.
4) A copy of the purchase order for the existing equipment is enclosed as Exhibit 3.
5) Not applicable. No title was issued, and the existing equipment is owned, not leased.
6) Not applicable. The replacement equipment will be owned, not leased.
7) A copy of the quotation for the replacement equipment is enclosed as Exhibit 4. The list price, discount, trade-in allowance, and net purchase price are presented on page 26.
8) A letter from Philips documenting that the existing equipment will not be returned to clinical use in North Carolina without Certificate of Need review and approval is enclosed as Exhibit 5.

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LOC 3100 Tower Blvd. Suite 1300
Durham, NC 27707
TEL 919.419.5011
FAX 919.419.5001
dukemedicine.org

DUHEP Ex12

9) A letter documenting that the existing equipment continues in use and has not been taken out of service is enclosed as Exhibit 6.

Also enclosed are:

- A completed Proposed Total Capital Cost of Project form (Exhibit 7),
- A letter from the architects certifying the estimated costs of the renovations required to install the replacement equipment (Exhibit 8), and
- A letter from the Duke Hospital officer responsible for the project (Exhibit 9).

As the projected cost of the project ($1,951,618) is well below the $2 million limit despite the inclusion of a provision for contingency amounting to $102,000 (20% of construction costs), we are confident that the project will be completed for substantially less than $2 million.

Given that, we believe that this project is exempt from review pursuant to GS 131E-184 (a) (7), and we would appreciate a letter from the Section confirming the exemption.

If you have any questions about the project, please let me know.

Sincerely,

Duncan Yaggy, Ph.D.

Chief Planning Officer

Duke University Health System

EQUIPMENT COMPARISON

Exhibit 1

Duke University Hospital - EP Lab #2

12/15/2011

	EXISTING EQUIPMENT	REPLACEMENT EQUIPMENT
Type of Equipment (List Each Component)	BiPlane Lab	BiPlane Lab
Manufacturer of Equipment	Philips	Philips
Tesla Rating for MRIs	NA	NA
Model Number	VSVA 515	101822 DS FD 20
Serial Number	S01H001244/00001	TBD
Provider's Method of Identifying Equipment	Duke Asset Number	Duke Asset Number
Specify if Mobile or Fixed	Fixed	Fixed
Mobile Trailer Serial Number/VIN #	NA	NA
Mobile Tractor Serial Number/Vin #	NA	NA
Date of Acquisition of Each Component	07/27/01	TBD
Does Provider Hold Title to Equipment or Have a Capital Lease?	Owns	Will Own
Specify if Equipment Was/Is New or Used When Acquired	New	New
Total Capital Cost of Project (Including Construction, etc.)	N/A	$ 1,951,618.00
Total Cost of Equipment	$ 887,800.00	$ 1,241,524.00
Fair Market Value of Equipment	NA	$ 1,241,524.00
Net Purchase Price of Equipment	NA	$ 1,241,524.00
Locations Where Operated	Duke Hospital	Duke Hospital
Number Days In Use/To be Used in N.C. Per Year	365	365
Percent of Change in Patient Charges (by Procedure)	NA	0%
Percent of Change in Per Procedure Operating Expenses (by Procedure)	NA	<5%
Type of Procedures Currently Performed on Existing Equipment	BiPlane Imaging	NA
Type of Procedures New Equipment is Capable of Performing	NA	BiPlane Imaging

Notes:

1). The total capital cost includes a provision for contingency of $102,000. (Exhibit 7)

2). The total cost of equipment includes the trade-in allowance for the existing equipment ($55,000), the cost of modifying existing equipment ($76,524), and the cost of telephones ($10,000) as well as the cost of the replacement equipment ($1,100,000). (Exhibit 7)

Exhibit 2

The BiPlane system to be purchased is a combination of 3 Philip components:

- The Allura Xper Services
- The Philips EP Cockpit
- The Philips EP Navigation

Brochures for all 3 components are included in this exhibit, and all 3 are included in the Philips quotation.

Connections where they really matter

Allura Xper Series complete cardiovascular interventional environment

PHILIPS

Connecting a better interventional environment

Imagine a world...

... where heart specialists can perform cardiovascular interventions with more speed and confidence, fewer distractions and less physical strain.

... where patients can receive the best possible care in a safer, less stressful environment.

... where hospital administrators can experience an increase in productivity and referrals, while reducing waste and inefficiency.

This is the vision we can help you achieve. As a leader in cardiology, Philips has the capacity, resources and understanding to accomplish this. Our strong collaborative relationships with the world's leading cardiologists and medical research institutions and our long history of innovation continue to help us make connections where they really matter and to move the world of cardiovascular interventions forward.

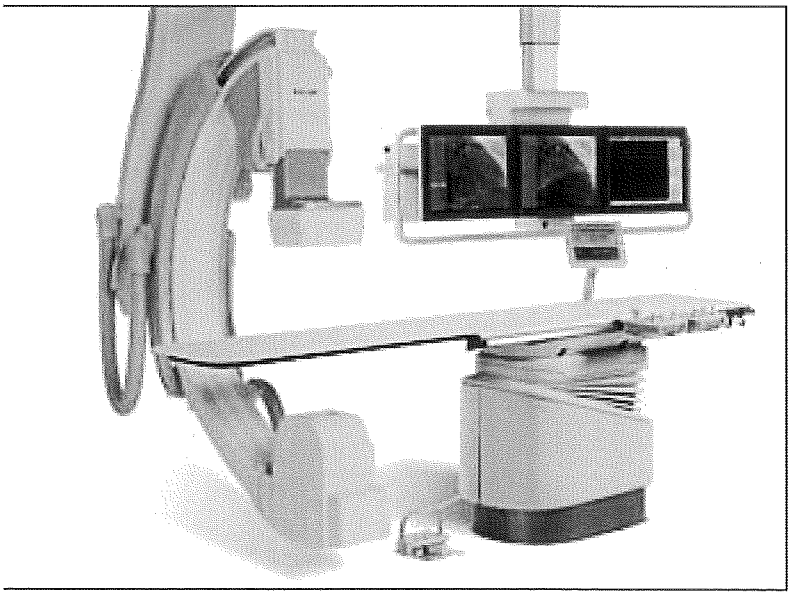
Our unique Ambient Experience concept is making new connections that will transform the interventional experience. It uses a combination of lighting, music and architectural elements to create a uniquely soothing and comfortable environment in either the waiting room, procedure room and control room. This revolutionary concept is based on a deep understanding of the values and needs of patients and medical staff. These insights can help you create a more relaxing experience for your patients, a better working environment and for your staff a unique competitive differentiator for your healthcare facility.

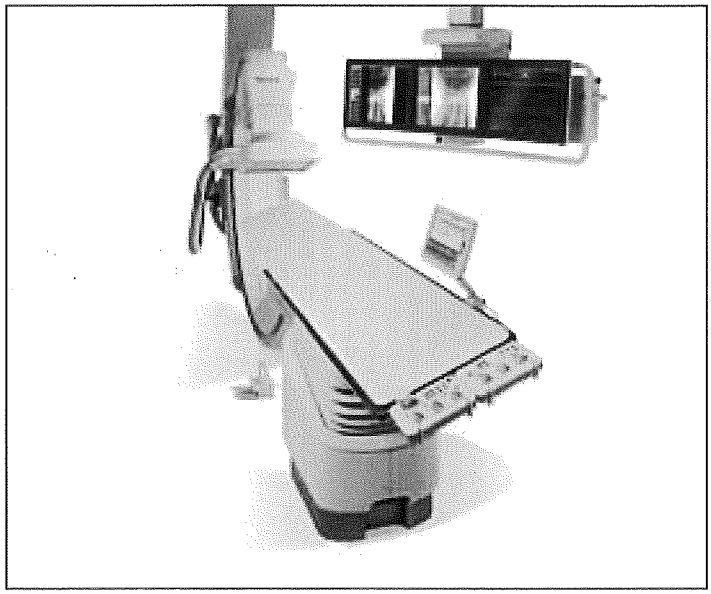
The Philips Allura Xper interventional environment connects the right speed, control and information with the right insight, clarity and protection to make a real difference in your interventional workflow. It offers a comprehensive set of solutions for cardiovascular interventions to assist physicians in providing the best clinical care in terms of quality, clinicial outcomes and patient comfort. By supporting a broad range of clinical applications you can feel confident that revenue is maximized and cost controlled.


PHILIPS

Connecting performance and applicational needs

The Allura Xper FD family of systems offers a full range of configurations that are designed to meet your applicational needs and case mix. All products feature the best geometry configuration and superb image quality that is only possible with flat detectors. All systems support all cath lab procedures and can be used to improve efficiency in the cardiology department. Philips has also developed special features and protocols for each type of cardiology application that will help achieve excellent patient care.



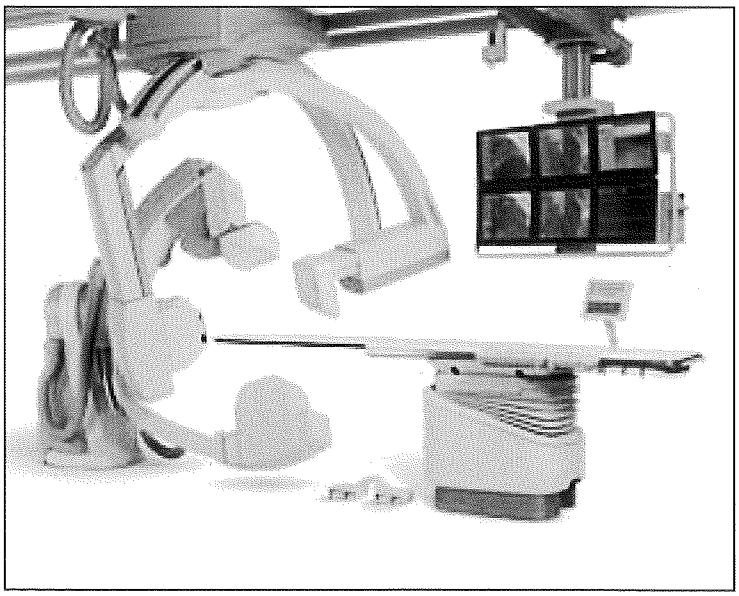


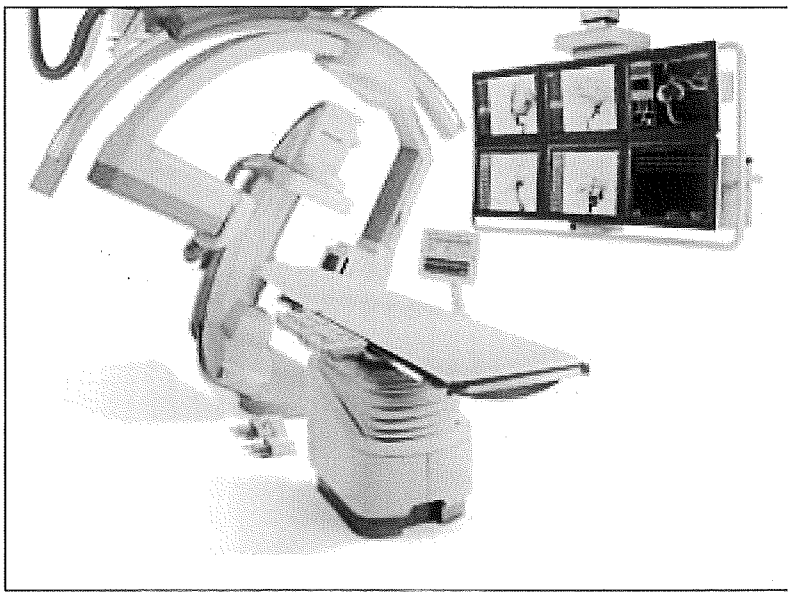
Allura Xper FD10 for dedicated cardiac procedures

- Enhanced coronary imaging in complex projections
- Superb performance for all cardiac projections
- Easy to comprehend X-ray dose display
- The Automatic Position Controller places the heart of the patient into iso-center of the X-ray system automatically to save time and X-ray dose
- Compact detector for patient access and steep projections

Allura Xper FD20 for cardiac and vascular procedures

- Large imaging supports a broad range of applications
- The true combination cath lab, covering the need for large field of view
- Table has a cradle movement option for extra flexibility during procedures



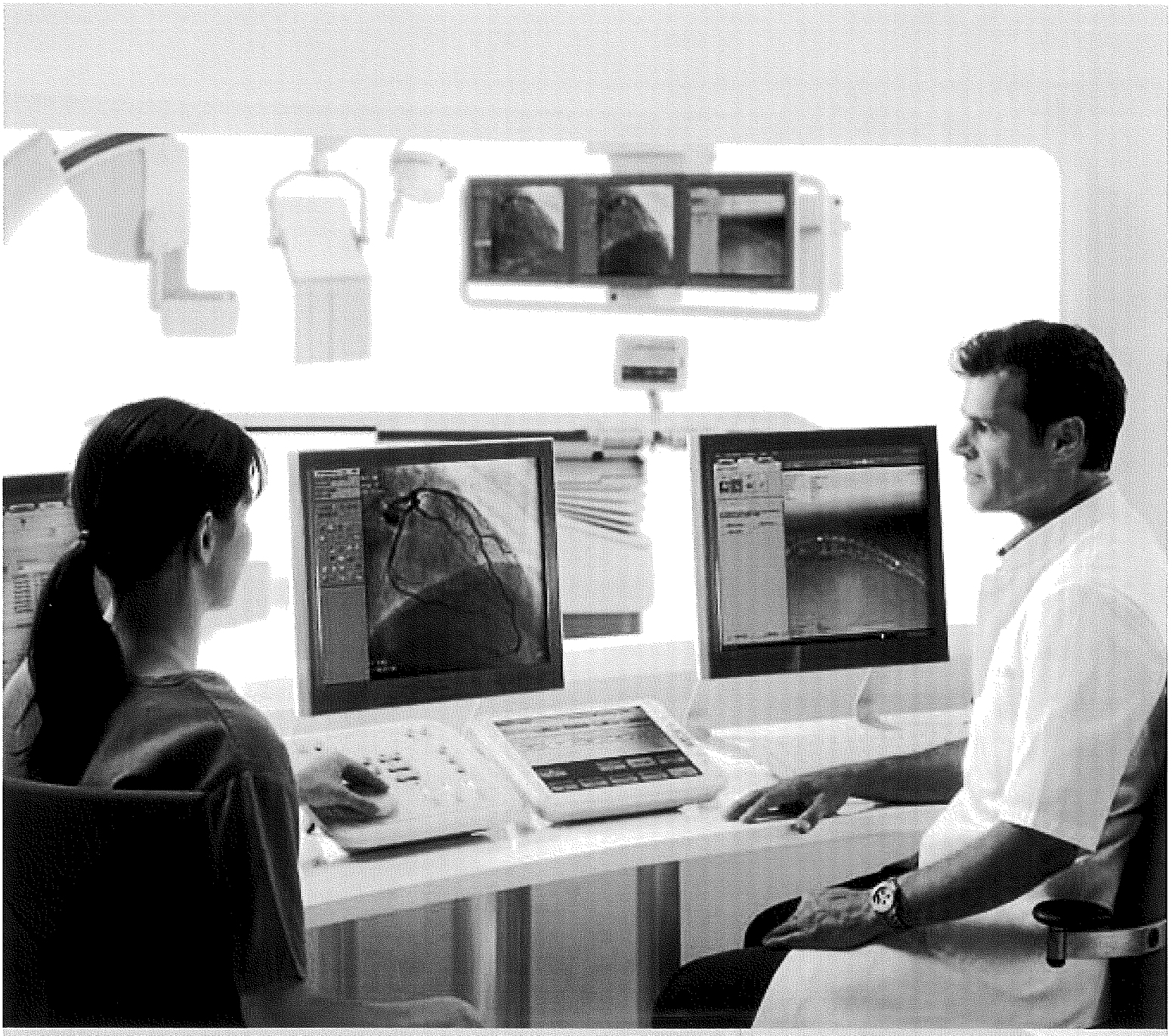


Allura FD10/10 for procedures where contrast and X-ray dose really matter

- Exceptional visualization of heart anatomy
- Easy to understand dose readings and dedicated pediatric X-ray dose settings
- High performance for pediatric cardiology and electrophysiology procedures
- The Automatic Position Controller places the heart of the patient into iso-center of the X-ray system automatically to save time and X-ray dose

Allura FD20/10 extra support for cardiac and vascular

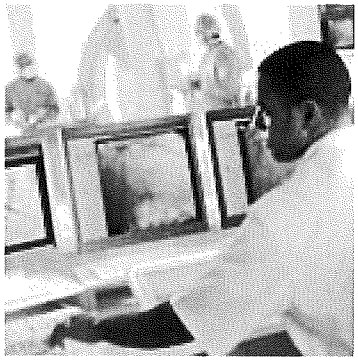
- Large image area for full range of patients
- Suitable for mixed cardiac, vascular and pediatric applications
- Table has a cradle movement option for extra flexibility during procedures
- Saving time and contrast



The Philips integrated cath lab solution combines the X-ray system with all necessary software systems and programs like:

- Xper Information Management with clinical and lab reporting to improve your workflow
- Xper Information Management Physiomonitoring 5 for hemodynamic studies at tableside
- Cardiovascular information solution (CVIS) for your mulitmodality image and data management
- Third party IVUS and Stereotaxis solutions

Connecting control and relevant information



What is your greatest challenge in the interventional suite? Performing complex and delicate procedures with an array of different medical systems. The Philips' interventional environment simplifies cardiovascular care, bringing together everything you need, where you need it, to manage and improve your cardiovascular procedures. Philips uses space more efficiently and maximizes advanced technology to create a more comfortable working area.

Built for speed and dependability
The Allura Xper systems are designed for fast and flexible imaging. The highly compact, fast-moving C-arm provides excellent patient access. A rotational scan can be performed in just seconds and projections can be stored and recalled for fast positioning. Real-time data from the interventional tools make the results instantly available at table-side. The Allura Xper systems deliver rock solid performance that prevents delays and distractions in the interventional workflow.

Personalized workflow reduces effort
Personalized workflow streamlines interventions. With Xper Settings, your personal preferences and protocols are pre-programmed, saving you effort and time during the procedure. The intuitive Xper user interface, with easy to use buttons, further simplifies operations.

Fast and correct decisions
Accurate, consistent data at your fingertips supports you in making fast, precise decisions. From pre-procedure to post-intervention, Philips Xper Information Management provides charting and logging, instant hemodynamic results and editable coronary and vascular tree images linked to the clinical database. Third party IVUS systems and even a complete Stereotaxis solution can also be integrated in the Allura Xper interventional environment.

Xper Information Management's integration with clinical and lab reporting, procedure notes, inventory, billing and the hospital information system (HIS) presents a variety of workflow benefits. Post-intervention, Xper Information Management Clinical Reporting is integrated with the system database, charting and scrapers so physicians can easily create reports. Additionally, bidirectional data entry allows physicians to make changes to the report that are automatically and consistently written back to the database. The ability to easily and efficiently customize the reports while updating the database saves valuable time, reduces redundant data entry, and streamlines the flow of information.

One access point for relevant information
The roadmap for the Philips cardiovascular information system (CVIS) presents a comprehensive cardiac IT solution encompassing multimodality image management and reporting, clinical applications, outcomes-based analysis reporting, multimodality scheduling, inventory management and data mining. The Philips CVIS will combine Xper Information Management with Xcelera multimodality image management, analysis and reporting solution. Our goal is to deliver a total Philips CVIS solution for every touch point in the cardiac care cycle.

* Optional

Connecting better understanding and lower X-ray dose

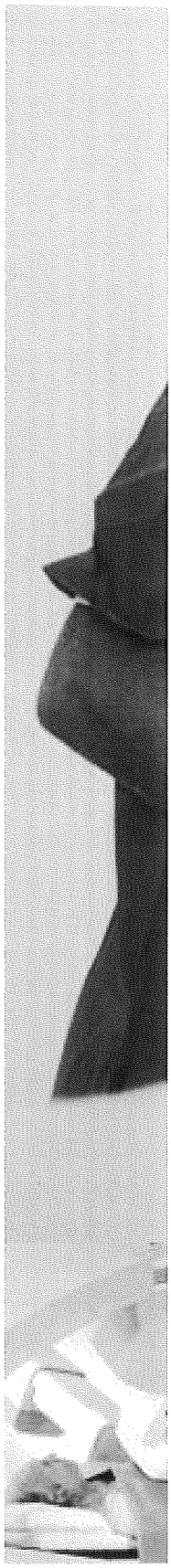
Cardiovascular interventions are becoming more complex and take more time to complete. These new trends make it more important than ever to find effective ways to manage radiation exposure for patients and medical staff. The Philips DoseWise philosophy includes practical tools to help you reduce X-ray dose during interventions.

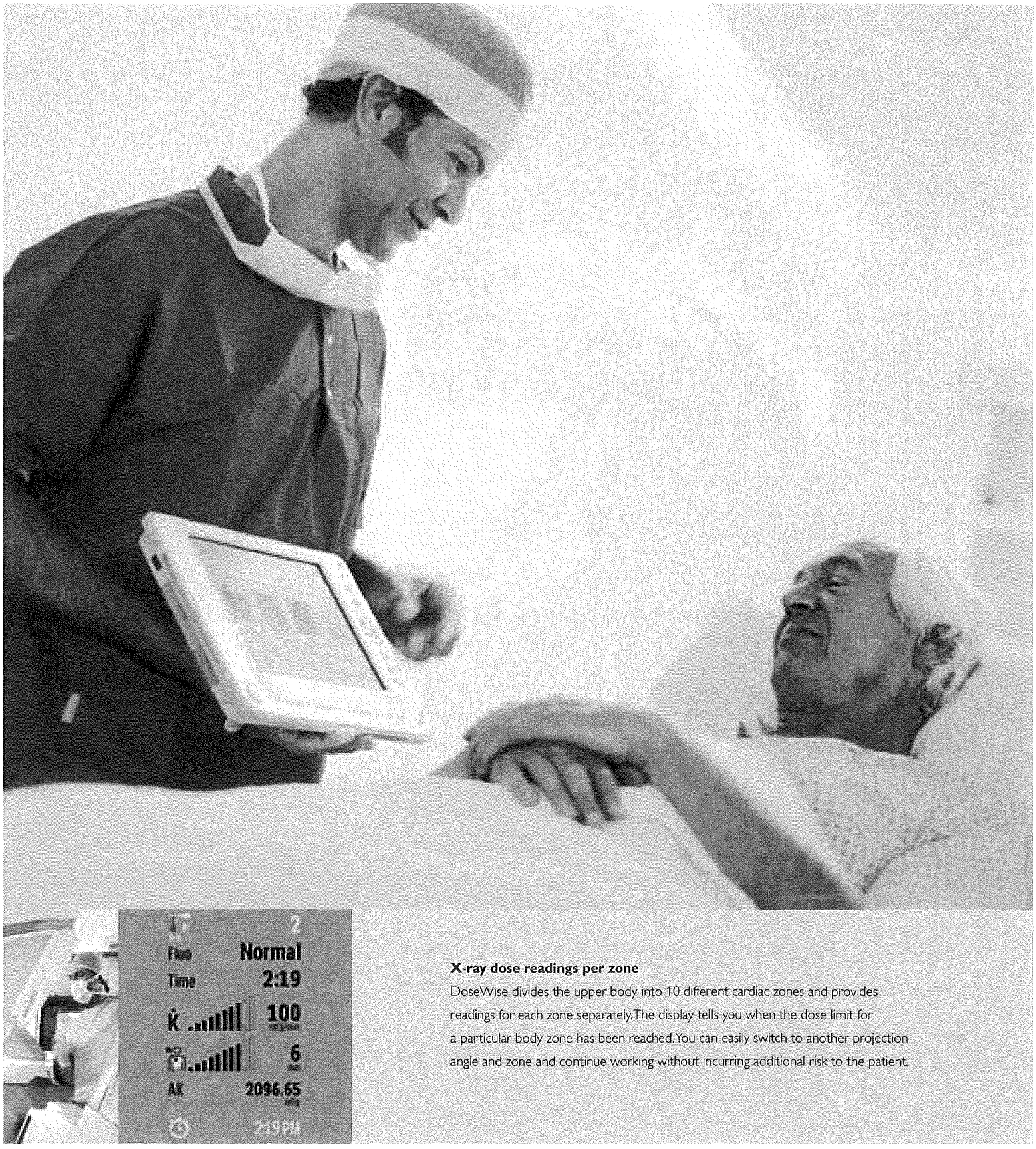
Reducing exposure at every level
The Philips DoseWise philosophy is built into every aspect of the Allura Xper Series. The legendary MRC X-ray tube with SpectraBeam filtration achieves optimum image quality with lower patient X-ray dose, while providing consistent imaging performance for long interventions without waiting. Grid-switched pulsed fluoroscopy enhances image sharpness and eliminates soft radiation from trailing effects. Many system movements, like iso-centering of the heart, are made without applying radiation.

Easy to understand dose readings
Philips' new graphical dose display makes it easier to understand dose readings and relate them to system movements and settings. Rather than showing hard to comprehend numbers, it shows the rate and accumulated dose being applied as easy to understand bar charts, much like a speedometer. You can instantly see how much dose is being applied in relation to the skin dose threshold, and even predict the amount of dose that will be used in the next run so you can immediately take corrective action and minimize the risk of radiation skin burns to patients.

BodyGuard patient protection
Philips' exclusive BodyGuard technology detects the position of the patient or other objects with proximity sensors. This feature enables clinicians to rotate and angulate the stand safely at high speeds adapted to actual patient size. The combination of geometry and exclusive BodyGuard sensing provides a high level of control and speed during procedures.

CPR in any table position
The dedicated cardiovascular Xper patient table can support a variety of patients, weighing up to 250 kilograms (550 lbs.). In case of emergency, CPR can still be performed at any position on the table, so you can provide critical care without moving the patient.





X-ray dose readings per zone

DoseWise divides the upper body into 10 different cardiac zones and provides readings for each zone separately. The display tells you when the dose limit for a particular body zone has been reached. You can easily switch to another projection angle and zone and continue working without incurring additional risk to the patient.

Connecting clarity and insight

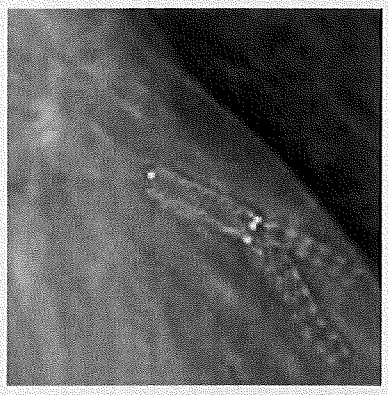
What is your greatest challenge as an interventional practitioner? Understanding the unique cardiovascular anatomy and pathology of each individual patient. The Allura Xper Series offers exceptional diagnostic image clarity and deeper cardiovascular insights thanks to a full range of advanced 3D imaging tools that work smoothly in sync with the X-ray system.

Crystal clear images

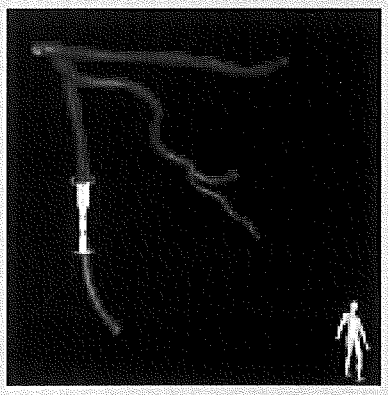
The Allura Xper Series provides the clarity you need to perform lengthy interventions. It offers superb image quality that is only possible with flat detector systems. Xres image processing produces clinical images that are sharp in contrast and low in noise. This boosts clinical confidence and efficiency.

Unique tools for deeper insights

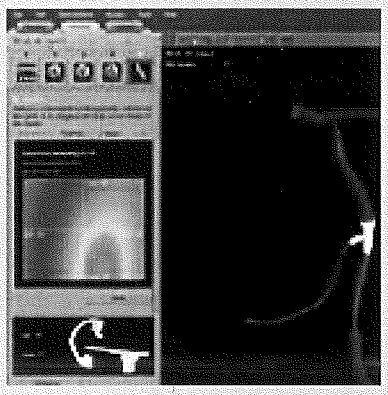
As a cardiovascular interventionalist, you want to see as many details as possible from a variety of angles to obtain a complete picture of the situation. Philips makes it possible with a set of unique interventional tools:



- StentBoost* enhances the visualization of stents in coronary arteries by showing the stent in relation to the vessel lumen while the catheter is still in place. StentBoost can assist in stent placement accuracy in bifurcations, main branch and stent-in-stent. StentBoost aids in identifying stent cracks, stent tapering and calcified plaque.



- Allura 3D-CA* creates 3D views from 2D images to prevent foreshortened views of lesions. This helps to better visualize, for example, overlapping branches in bifurcations. And to assess optimal working/viewing angles and determine accurate lesion length.



- By letting you transfer CT volumes from the Philips Brilliance CT to the Allura Xper systems, CT TrueView* helps you quickly select the optimal projection angle to minimize foreshortening without using radiation.

- Quantification and analysis: the coronary quantification package measures stenosis of the coronary arteries, while the left ventricular quantification and right ventricular software packages calculate ejection fraction and wall motion parameters.
- Vascular interventions can also be carried out on the Allura Xper X-ray systems. The table's cradle movement* provides extra flexibility during hybrid procedures. The DSA* option provides real-time digital subtraction. The 3D-RA* option provides extensive three-dimensional insight into vascular pathologies from a single rotational scan acquisition.

*Option

Philips Medical Systems is part of
Royal Philips Electronics

Interested?
Would you like to know more about our imaginative products? Please do not hesitate to contact us. We would be glad to hear from you.

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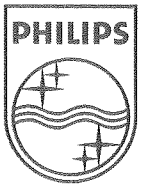

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Control and confidence all around

Philips EP cockpit people focused solutions for heart rhythm care

PHILIPS

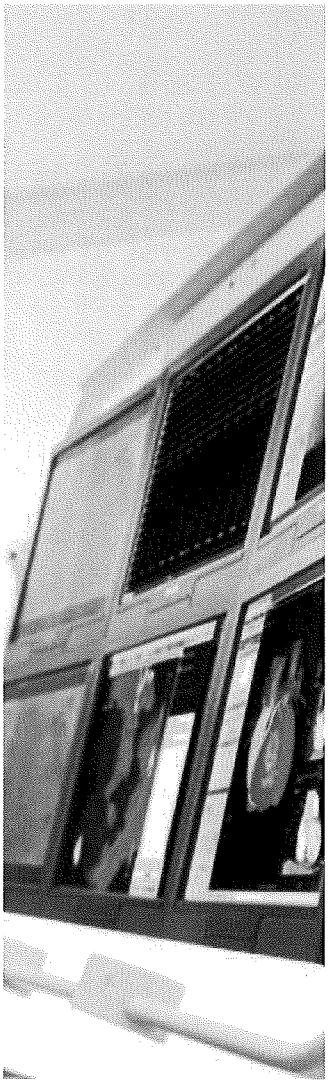
sense and simplicity

EP cockpit - brings new innovations

EP cockpit simplifies your EP lab

1. Improving your EP lab working environment
2. Integrating EP data throughout the care cycle
3. Assisting with complex therapies

to your EP lab



"I think Philips cockpit and navigator have been developed out of an obvious need to integrate divergent information sources - to help physicians deal with the challenges of information overload."
Dr. Gabriel Soto, Southeast Missouri Hospital, Missouri, USA

Electrophysiology (EP) is the fastest growing market segment in cardiology. However, many electrophysiology departments are having difficulty dealing with the increasing demand for procedures and the need to perform more complex patient treatments. EP procedures are very highly specialized and require dedicated equipment and facilities. Yet they are often performed in cath labs that are not specifically designed for this purpose and end up becoming cluttered and inefficient.

With this in mind, Philips developed an integrated EP solution which addresses the shortcomings of the present EP intervention lab set up and provides a comfortable and efficient working environment. The result is Philips EP cockpit, a fully integrated solution for the EP lab that is tailored to you – EP clinicians and staff members. This revolutionary concept improves the EP lab working environment, integrates data management in the lab and across the EP care cycle and assists with complex therapies.

"It brings together the technological advances in EP in a versatile, user-friendly way"
Dr. Kanagaratnam, St. Mary's London, UK

Improving your EP lab working environment

Your EP lab uses an array of EP specific equipment that can clutter your working area and make it difficult to perform procedures efficiently. Philips has tailored the EP lab to optimize workflow, increase efficiency and make it a convenient place to work.

A more efficient exam room

No more loose cables and equipment

Philips ceiling mounted, swivel rack organizes your EP equipment: mapping system, recording equipment, stimulator and defibrillator. The rack swivels around the patient table when in use and can be parked when finished. It guides all cables, simplifies cleaning and reduces clutter in your EP lab.

Flexible viewing options

View all the information you need, from Philips and third party systems, on any of the 6 or 8 21-inch monitors or on the large 56-inch LCD screen with EP cockpit XL, right at the table side. The information displayed can be customized and configured to your needs. The medical grade monitors support the image quality requirements for monochrome X-ray images, color EP signals and other images.

Resize and enlarge information with EP cockpit XL

The large 56-inch, high resolution color LCD screen lets you select and personalize all relevant procedure information from up to 8 sources simultaneously. With advanced SuperZoom, you can resize and enlarge information at any time and position on the screen, while maintaining full sharpness. It enables you to see small details, while maintaining your most convenient working position. The touch screen module gives you full control over information at the tableside.

A streamlined control room

Viewing and control

View the information displayed on the 6 or 7 control room monitors, from Philips and third party systems, according to your preferences. To simplify control and speed tasks, additional keyboards and mice for third party equipment connected to EP cockpit are eliminated as well.

Operate all equipment from one workspot

Operate Philips and third party devices from a single touch panel in the control room. Put information on any monitor in the exam and control room and change the set-up as you like. Keyboards and mice can be assigned to monitor of preference.

"It's a fantastic way to clean up the lab. Not a thing is on the floor."

Clinical EP Nurse Michelle Meyer,
Carondelet Heart Institute, Missouri, USA

Flexible viewing

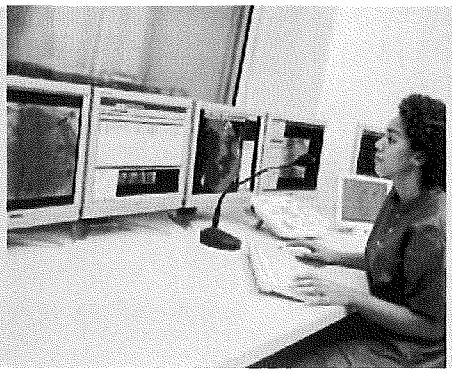
- Mix and match images tailored to your need
- Free programmable preset screen configurations
- Up to 8 monitors available at patient tableside

Less clutter

- Equipment centrally organized
- No loose cables on the floor
- Ceiling mounted

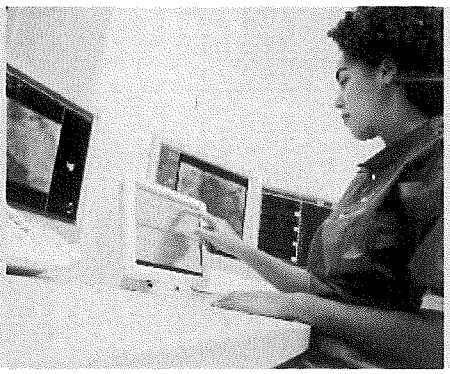
"EP cockpit's ability to have all the information displayed directly in front of me, is of great value. We have complete control over where the information is displayed. Rearranging the monitors is as easy as dragging and dropping your finger across the touchscreen module."

Dr. Gabriel Soto, Southeast Missouri Hospital, Missouri, USA



Streamlined control room

- Mix and match images tailored to your need
- Free programmable preset screen configurations
- No additional keyboards



Easy control

- Operate your equipment from single touchscreen control
- Assign keyboard and mouse to the monitor of preference

Integrating EP data throughout the care cycle

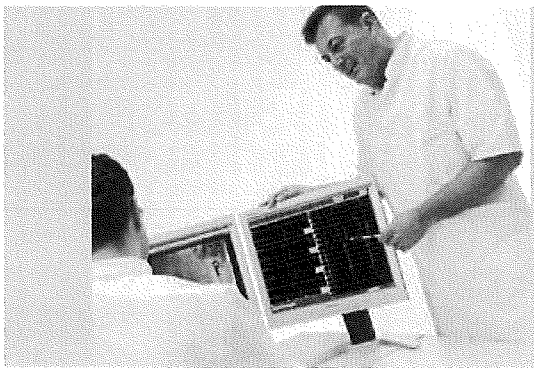
You need a variety of information to diagnose and treat heart rhythm diseases effectively. Yet today it is not possible to view all that data on one system. Philips provides to clinical staff one access point for all relevant information throughout the EP care cycle. For the first time you have direct access to patient data and images from X-ray, EP recording signals, EP mapping data, ultrasound (including Intra Cardiac Echo), CT, MR, nuclear medicine and ECG information – all on one single workstation. This makes it easier for you to access and store information before, during or after a procedure.

Work more flexibly and efficiently

EP data from diverse equipment can be stored and accessed from a single workstation, which gives you more freedom in where you perform your tasks. EP treatment can be planned and prepared off-line in a physician's office or at another workstation outside the exam room to free up valuable lab time. Imaging data acquired before the procedure can be accessed during interventions. EP-specific pre-interventional data like CT or Echo can be viewed and sent to third party equipment during an intervention in the exam room to reduce delays and support clinical decision-making. Relevant EP data, including that from third party equipment, can be viewed and stored during interventions to expedite procedures.

Comprehensive record-keeping

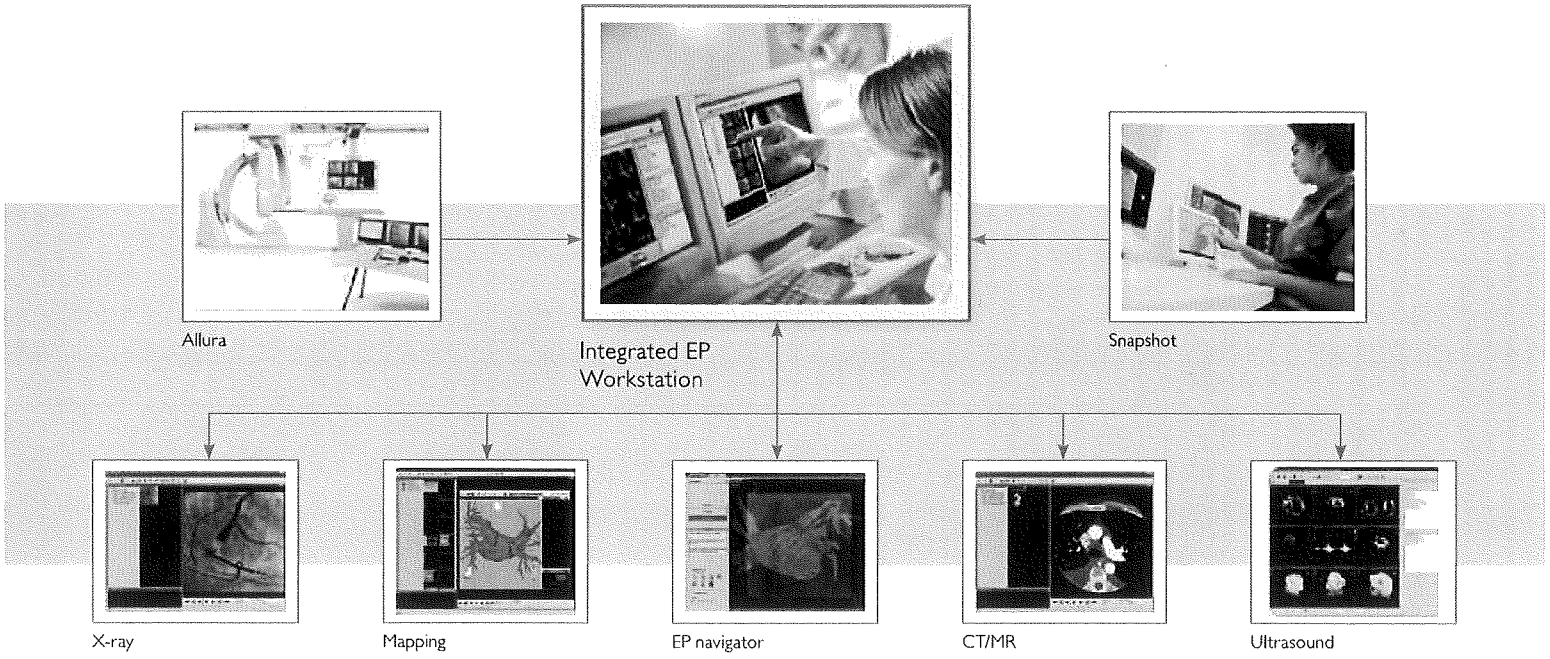
The EP snapshot function is particularly useful for record-keeping. It enables you to take snapshots of still images from any image on any screen in the control room or exam room to record an event. Relevant EP data and images can be included in reports or presentations.



One source for all your EP information

- Take snapshots of any image on any screen for reports or presentations
- Manage information more effectively
- Save time by having all information in one place

One access point for your EP information



Assisting with complex therapies

EP interventions are very time-consuming and may take several hours. Success of the procedure goes hand in hand with accuracy. X-ray fluoroscopy and 3D mapping are the most commonly used tools for guiding these interventions. However, both tools have their limitations. Philips EP navigator software helps to visualize 3D cardiac anatomy and the position of catheters, in real time, in one image, in the EP interventional lab. This information can help you carry out complex EP procedures with confidence, in a more intuitive way.

EP navigator provides a 3D image of the heart based on either a pre-interventional CT image or an actual rotational angiography acquisition in the EP lab.

3D atriography

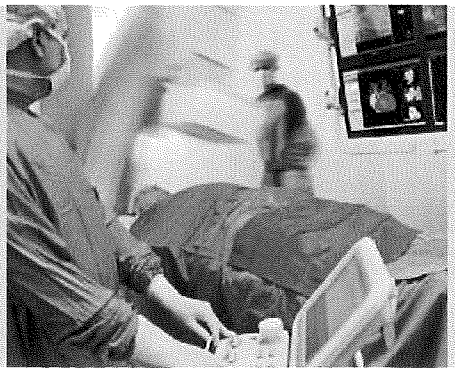
EP navigator offers the optional feature 3D atriography, which allows you to create a 3D image of the left atrium on the Allura Xper X-ray system in the EP lab by doing a rotational angiography with contrast injection. An up-to-date view of the cardiac anatomy is vital for guiding EP interventions. 3D atriography allows you to create up-to-date 3D images of the left atrium in your EP lab and use this information to guide your catheter.

Endoview shows the inside of the heart

EP navigator includes endoview, which lets you slice away a part of the segmented heart structure and "look inside" the three dimensional model. This enables you to get a better view of the posterior side of the atrial wall. It makes the ostia of the pulmonary veins, ridges and other cardiac structures visible so you are better able to see where you are moving your catheter.

Easy segmentation and synchronized movements

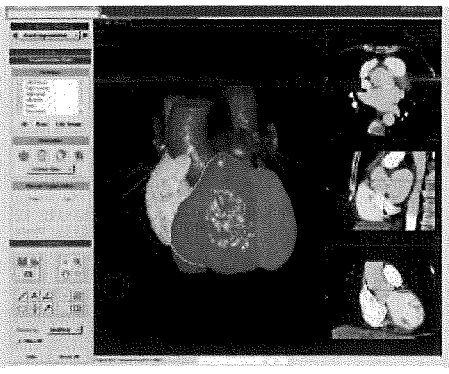
EP navigator provides an automatic segmentation of the heart, which saves a great deal of time compared to manual segmentation. Following segmentation, you can extract different cardiac structures from the data set. Unique algorithms are used to provide fast and accurate automatic segmentation. Once the desired 3D volume has been chosen – either a pre-acquired CT image or rotational angiography – it is aligned with the Allura Xper X-ray system. This enables EP navigator to move in-sync with the Allura Xper X-ray system to help you get the best viewing angle for the composite image and prevent in using unnecessary X-ray dose.



1. Creating 3D atriography scan

Data is collected and loaded

Note: alternative is to load CT data into EP navigator from a PACS or a CD

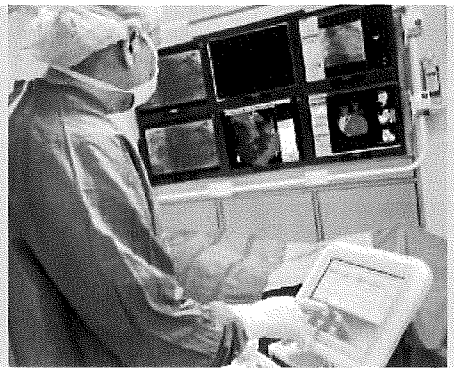


2. Viewing and automatic 3D segmentation

3D segmentation of different cardiac structures is automatically created.

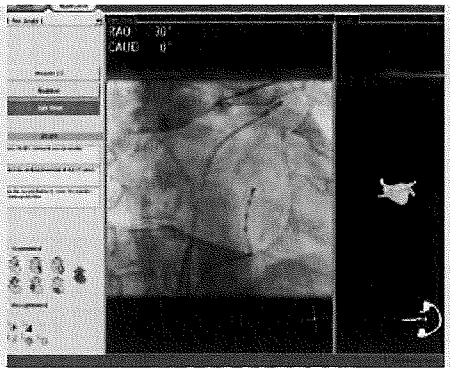
"EP navigator shows me in real-time where the catheters are in respect to the 3D cardiac anatomy"

Dr. Kriatselis, DHZB, Berlin, Germany



3. Registration

The 3D volumes are overlaid on each of the user-selected views. If needed the user adjusts the 3D volume to optimize the registration.



4. Live view

The registered image shows the position of any catheter in relation to the 3D cardiac anatomy in real time. When you rotate or move the Allura Xper system the EP navigator image will follow automatically in real-time.

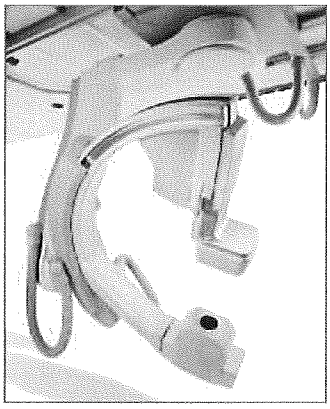
Philips Proven Allura Xper FD family

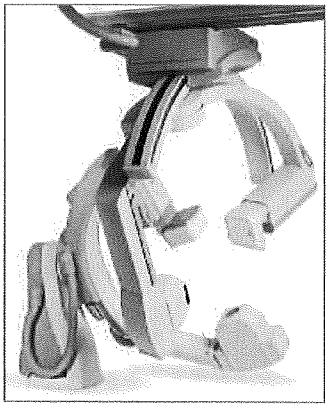
Allura Xper family

The basis of many of our EP solutions is the Allura Xper: the flat detector X-ray system used for both diagnostic and interventional procedures. The Allura Xper monoplane systems offer full flexibility for electrophysiology (EP) interventions and implant procedures. The Allura Xper bi-plane delivers superb image quality in both the frontal and lateral plane, enabling side-by-side viewing. Using the Allura Xper bi-plane system saves valuable time. It delivers twice the information with a single contrast injection.

Philips is committed to improving heart rhythm care

An already established leader in interventional cardiology, Philips is also a major medical equipment company with a dedicated EP business program. Thanks to our broad product portfolio and close collaboration with some of the most important players in the EP sector, we offer you an integrated solution that covers the EP care cycle. We help to remove complexity and allow you to truly realize your potential in this fast-expanding market.





Allura Xper FD family

- Mono-plane and bi-plane configurations
- Optimal projection flexibility
- Intuitive control at table-side
- For dedicated EP and mixed interventions

"Phantom studies indicate that up to 80% reduction in patient's skin dose may be achievable when using the lowest of the dose modes available when compared to standard UK cardiac dose rates..." *

* A.G. Davies et al, quotes from his study "X-ray Dose Reduction in Fluoroscopically Guided Electrophysiology Procedures," University of Leeds, Leeds, United Kingdom.

Lower dose for EP procedures

The Allura Xper system is programmed with Philips dedicated EP dose-saving image protocols. These settings have been developed and tested uniquely for EP. All dose parameters can be adjusted as needed.

Solutions that work for you

Throughout your entire system ownership, Philips Services offers you an extensive portfolio of services. Helping you get the most out of your system and ensure you have time to focus on what is most important: your patients.

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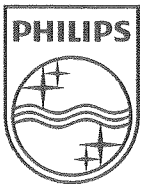

Printed in The Netherlands.
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Revealing a clear path

Philips EP navigator intuitive 3D catheter guidance

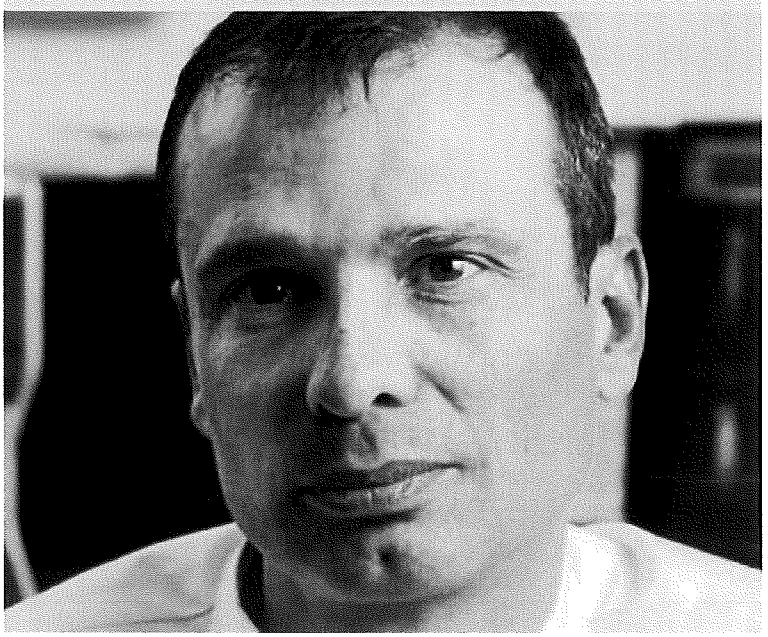
PHILIPS

sense and simplicity

Revealing a clear

"We used EP navigator to successfully treat a patient who had persistent AF since 1999. This patient had two prior ablations in 2001 and 2009, and used several antiarrhythmic medications for over 10 years. During the third procedure, we had to target the fibrillation which was intermittent. Altogether this was a really difficult case. Ablation at the mitral isthmus line and at the roof recovered after a complete block and required re-ablation. The EP navigator images were very helpful during this procedure. The loop shows you the most external aspect of the left atrium. Registration is also very fast. It hardly takes any time."

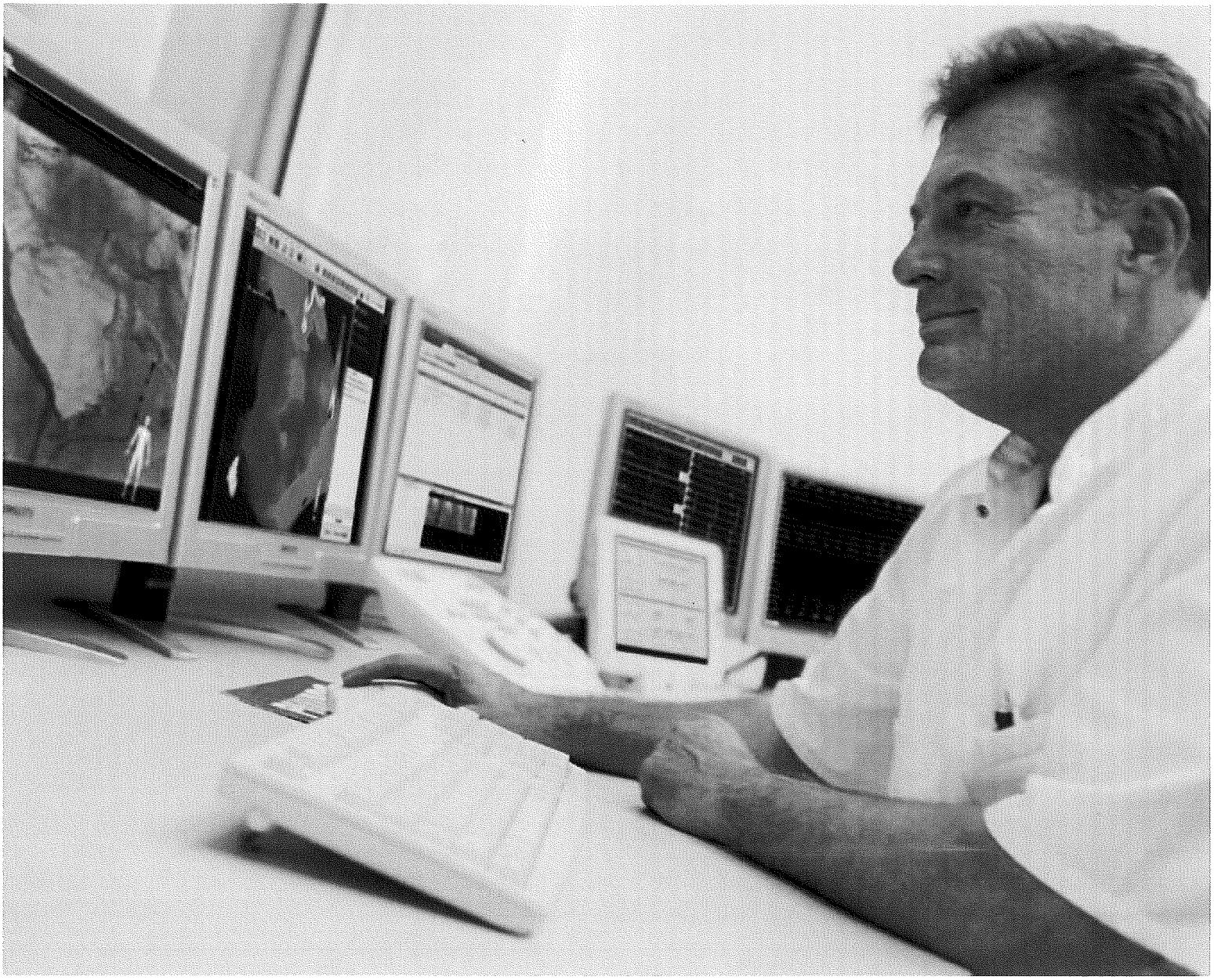
Professor Pierre Jaïs, Hopital Cardiologique Haut-Lévéque, Bordeaux-Pessac, France



As an electrophysiologist, you know that atrial fibrillation (AF) ablation is one of the most challenging and stressful procedures to perform. Working accurately requires experience, as well as precise tools. Because the left atrium is constantly moving and shaped slightly differently in every patient, it is essential you can completely depend on the images you base your delicate work on.

EP navigator reveals a clear path through the heart. It provides detailed 3D anatomy for CT or a rotational X-ray scan. This anatomy can be overlaid on a live fluoroscopy image to visualize the position of all catheters. Developed with leading EP specialists, EP navigator has been used by hundreds of EP practitioners and labs. EP navigator supports you as you carry out the most challenging interventions.

path

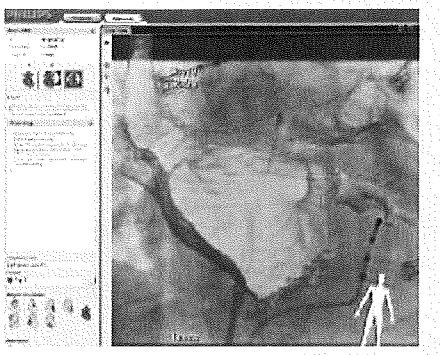


Clear insight into cardiac anatomy

EP navigator's innovative features help you gain clear insight into cardiac anatomy – with wider benefits for your clinical workflow. It can help reduce the fluoroscopy time.

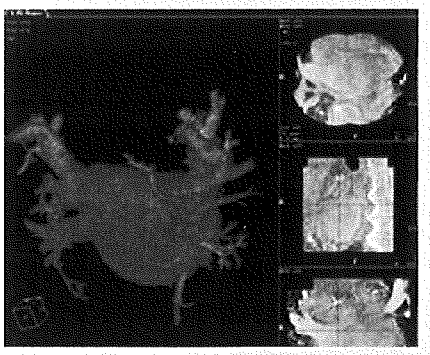
"The EP navigator added a new dimension in terms of immediately understanding where we are three dimensionally."

Dr. Michael V. Orlov, St. Elizabeth's Medical Center, Boston, USA



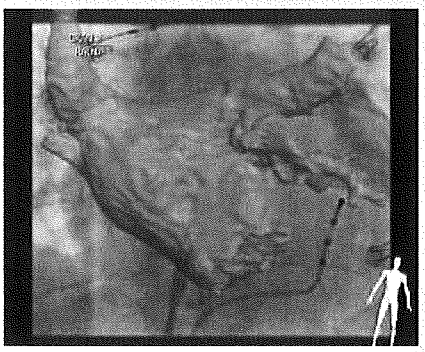
Convenient 3D imaging in the EP lab

While EP navigator works well with CT images, the latest development in EP imaging is 3D rotational atriography (3D ATG). The user does a rotational angiography, with contrast injection, on the X-ray system to create a 3D image of the left atrium. This 3D ATG image is sent to EP navigator which automatically segments the 3D ATG image. It can then be overlaid on a live fluoro image or sent to a mapping system. The resulting images can provide excellent detail of left atrial anatomy comparable to CT, while using an efficient X-ray dose. Pre-procedural CT or MRI images may be several weeks old, while 3D ATG can be performed during the ablation procedure. This provides real-time anatomic detail during the intervention. The 3D ATG feature is an option for EP navigator.



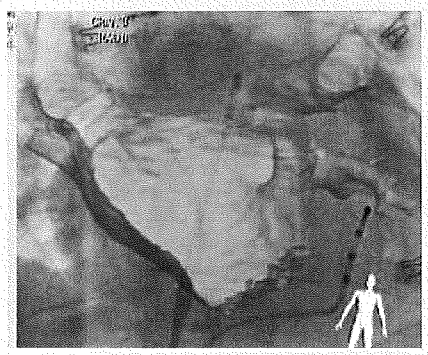
Fast and easy segmentation

EP navigator quickly segments the heart automatically. After segmentation, you can extract the right and left atrium, right and left ventricle, myocardium, aorta, coronary sinus, vena cava, and bronchi. Each structure can be displayed in a different color.



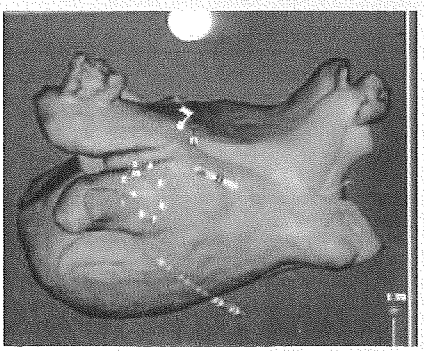
Live overlay

The 3D anatomy overlaid on the live fluoroscopy image shows the position of all catheters in relation to the anatomy. The EP navigator image moves in sync with the C-arm geometry of the Allura Xper system to optimize the viewing angle of the composite image.



A new view of the heart

EndoView lets you look inside the 3D anatomy to view the posterior side of the atrial wall, as well as the ostia of the pulmonary veins, ridges, and other cardiac structures.



Radiation free mapping

During an EP procedure, a great deal of time and X-ray dose are required to create the 3D electroanatomical map. The segmented CT and 3D ATG anatomy from EP navigator can be transferred to a compatible mapping system, such as Carto 3 and Ensite Velocity™. This allows you to navigate catheters on images with real 3D anatomical detail without using X-ray. This allows you to perform ablations efficiently.

The power of

We partner with electrophysiologists and other leading EP companies to produce innovations that fit your EP lab workflow and aim to enhance EP care in the simplest possible way. You can choose from an array of flexible solutions to fit your lab setup and preferred way of working. So whether you are performing fast, fluoro-based procedures or more elaborate, low dose mapping procedures, EP navigator can be tailored to your workflow.

3D EP navigator image with mapping system

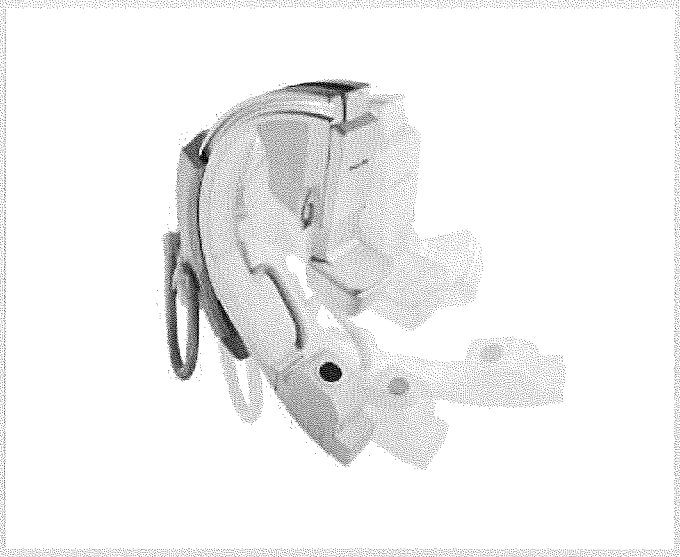
EP navigator creates and automatically segments the 3D anatomy. This is seamlessly transferred to the mapping system: Biosense Webster Carto™ and St Jude Medical Ensite™ are fully supported. Subsequently, the catheter localization, visualization and electro-anatomical features of the mapping system are used. The procedure can then be carried out mainly on the mapping system, with no additional radiation dose. The EP navigator fluoroscopy overlay is always available, to help confirm the catheter positions of the mapping system, if needed.

The 3D segmented anatomy is seamlessly transferred to a mapping system via the network. To do this, the EP lab needs networking applications for their mapping system. The Carto 3 system requires the CartoMerge module and the Ensite Velocity™ system requires the EnSite Courier™ Module.

EP navigator with fluoro overlay

The 3D anatomy in EP navigator is used to help guide ablation or diagnostic catheter. Navigation is supported by low radiation dose fluoroscopy. An electro-anatomical mapping system, with its associated disposables and clinical support, is not necessary. EP navigator and 3D ATG are operated by the electrophysiologist and his staff.

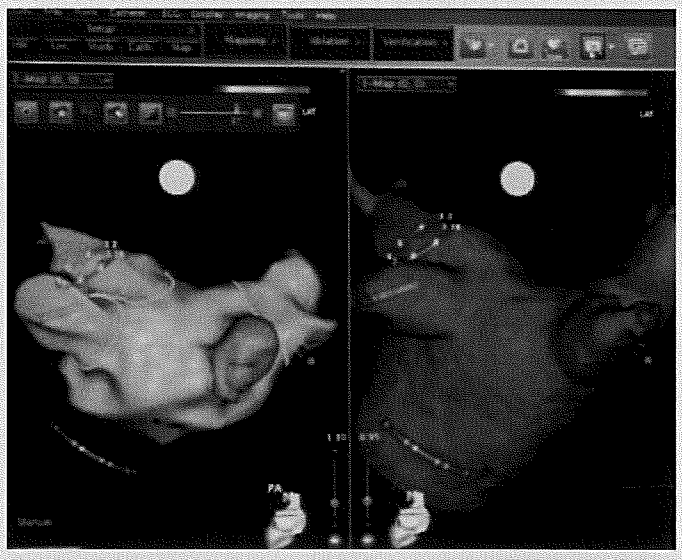
shared goals



3D rotational atriography

"3D rotational angio, certainly after you have adopted a straightforward workflow, allows you to get an accurate and reliable image of the desired chamber of the heart."

Prof. Dr. M. Duytschaever, electrophysiologist, St. Jan Hospital, Bruges, Belgium



3D EP navigator image with mapping system

"The big advantage is that by reliably merging the Carto with the real 3D anatomy of the patient, is that you can more anatomically correct delineate the function between the left atrium and pulmonary vein entrance and this allows us to ablate in an efficient and effective way."

Prof. Dr. M. Duytschaever, electrophysiologist, St. Jan Hospital, Bruges, Belgium

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Exhibit 3

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Item	Material	Description	Order qty	Unit	Price per unit	Net value
00001		#VSVA515, INTEGRIS ALLURA BI-PLANE	1	each		

CARDIOVASCULAR SYSTEM.

PRICE INCLUDES DISCOUNT OF $1,057,200.00

PLEASE REFERENCE QUOTATION #: 0581835930A

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USA

PO number/date 4520099931 / 03/15/2001

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	Gross Price	1,945,000.00 USD	1 EA	1,945,000.00
	Discount (Value)			1,057,200.00-
	Net incl. disc.	887,800.00 USD	1 EA	887,800.00
00004	1 each	#VO600A, DICOM CONNECTION FOR INTURIS	43,500.00	43,500.00
	SUITE			
00005	1 each	#VO620DIPR1, INTURIS SUITE INTEGRATED	110,000.00	110,000.00
	WORKSTATION PROMO			
00006	1 each	#VO619W, WORKSTATION PATCH CABLE KIT	104.00	104.00
00007	1 each	#VUA101, EXAMINATION LIGHT (UNIFLEX R96)	5,769.00	5,769.00
00008	1 each	#VUA104, MONITOR SUSPENSION MOUNTED 40	4,400.00	4,400.00
	X 50CM RADIATION SHIELD			
00009	1 each	#VOA42, TABLE RADIATION SHIELD	4,827.00	4,827.00
		Total net value USD		1,056,400.00

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Quotation #: 1-U8GQQ5	**Rev:** 1	**Effective From:** 14-Nov-11	**To:** 29-Dec-11

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2301 ERWIN RD
DURHAM, NC 27710

Tel:

Alternate Address:

Presented By:
Bethann Griffith-Subik
Account Manager
Tel: (919) 677-9046
Fax: (919) 677-9047

Steve Weiss
Regional Manager
Tel: (678) 924-6087
Fax: (678) 924-6003

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Quote Solution Summary

Line #	Product	Qty	Price
	101822 DS FD20 Biplane with AD7	1	$1,100,000.00
		Equipment Total:	$1,100,000.00

Solution Summary Detail

Product	Qty	Each	Monthly	Price
101822 DS FD20 Biplane with AD7	1	$1,100,000.00		$1,100,000.00

Buying Group: **NO CONTRACT** **Contract #:** **NONE**

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101822 DS FD20 Biplane with AD7

System Type: Remarketing
Freight Terms: FOB Destination
Warranty Terms: Part numbers beginning with two (2) asterisks (**) are covered by a system 12 Months Warranty unless otherwise indicated. All other parts are third (3rd) party items.
Special Notations: Contingencies must be removed 120 days before scheduled shipment to assure delivery on specified date. Any rigging costs are the responsibility of the Purchaser.
Additional Terms:

Line #	Part #	Description	Qty
1	**NNAJ538	DS FD20 Card Floor w AD7	1

SUBJECT TO AVAILABILITY AND PRIOR SALE. AVAILABILITY BASED UPON RECEIPT OF CONTINGENT FREE ORDER AT THE FACTORY (ARO). CURRENT AVAILABILITY OF THIS OFFERING IS ARO +150 DAYS.

NOTE: IF CUSTOMER IS UNABLE TO ACCEPT DELIVERY BY THE ABOVE STATED ARO DATE, THEN PHILIPS MAY DETERMINE A REVISED DELIVERY DATE.

Diamond Select Xper FD20/10 Cardiac with AD7

The Allura Xper FD20/10 biplane cardiovascular system is comprised of a floor mounted C-arm stand, a ceiling mounted lateral ARC and digital imaging X-ray system for cardiovascular diagnostic and interventional procedures.

The Allura Xper FD20/10 system is an integrated single-host concept. The system comprises five functional building blocks: Geometry, X-ray Generation, User Interface, Image Detection, and Viewing. Each functional building block is explained in further detail.

GEOMETRY

The Allura Xper Frontal Stand

The Allura stand consists of a floor mounted C-arm. The stand has the following capability:

- The L-arm can be rotated allowing a three-sided patient approach.
  - L-arm rotation around the patient table: +90, 0, -90 degrees.
  - L-arm rotation movement: motorized and manual

The Allura stand allows a very wide range of projections, including PA and AP imaging.

- In the head position (0 degrees position, L-arm parallel to patient table):
  - C-arm rotation range (degrees): 120 LAO to 185 RAO
  - C-arm angulation range (degrees): 90 CA to 90 CR
  - (Full angulation capability determined by patient position)
- In the side position (+90 / -90 degrees position, L-arm perpendicular to patient table):
  - C-arm rotation range (degrees): 90 LAO to 90 RAO
  - C-arm angulation range (degrees): 185 CA to 120 CR or 120 CA to 185 CR
  - (Full angulation capability determined by patient position)
- The stand provides fully motorized fast movements with variable and configurable maximum speed.
  - Variable C-arm rotation speed, up to: 25 degrees/s
  - Variable C-arm angulation speed, up to: 18 degrees/s
- L-arm rotation motorized and manual

- C-arm depth is 90 cm
- The FD20 Dynamic Flat Detector features Xper Access which allows the flat detector to be positioned in either portrait or landscape imaging modes in 3 seconds.
- The variable source image distance between focus and Dynamic Flat Detector input screen is motorized from 89.5 to 119.5 cm.
- The stand features BodyGuard a capacitive sensing collision avoidance system for patient protection.

The Allura Xper Lateral Stand

The lateral stand consists of a double C-arm mounted to a ceiling suspended carriage.

The X-ray tube and the Flat Detector are integrated into the C-arm. The double C-arm concept enables mutual independent rotation and angulation movements. The Dynamic Flat Detector on the lateral stand is mounted at the left side of the patient providing optimal positioning for cardiac applications.

Ceiling carriage longitudinal movement: 315 cm

The lateral stand projection ranges:

- Rotation range (degrees): 0 LAO (frontal) to 90 LAO (lateral)
- Angulation range (degrees): 45 CA to 45 CR

The stand provides fully motorized movements. The rotation movement can be controlled separately or synchronously with the frontal stand. The Flat Detector is counterbalanced and can be moved motorized and manually.

- Rotation speed: 8 degrees / s, fixed
- Combined rotation speed (frontal / lateral): 8 degrees / s, fixed
- Angulation speed: 8 degrees / s, fixed
- Flat detector movement: motorized and manual
- Ceiling carriage longitudinal movement: motorized and manual
- Motorized fine adjustment when the lateral stand is in the biplane application area.
- During combined rotation, the BodyGuard detection system of the frontal stand controls the rotation speed of the frontal and the lateral stand.

Patient support

The Xper Table

Patient support with flat carbon fiber tabletop

- Table top length of 319 cm, width 50 cm
- Metal-free overhang 125 cm
- Floating table-top movement of 120 cm longitudinal and 35 cm transversal range.
- Motorized height adjustment from 79 to 107 cm
- Maximum cantilever of 223 cm , for full patient coverage
- Maximum patient weight 250 kg with 25 kg of accessories plus 500 N for CPR in any longitudinal position of the table top

- Xper Geometry and Imaging Modules for exam room controls.
  - The operating modules can be attached to either side of the table.

Patient Support Accessories set

- One cerebral filter
- Three rail accessory clamps
- One IV stand
- One slow recovery foam mattress
- One Set of Arm Supports (FCV0248)
- One Set of Patient Straps (FCV0250)
- One Head Support (FCV0251)
- One Arm Support (FCV0258)
- One Table Mounted Radiation Shield
- One anti-fatigue mat with Philips logo

X-RAY GENERATION

The Allura Xper FD20/10 utilizes a microprocessor controlled high frequency 100 kW generator. The user interface control of this X-ray Generator is incorporated in the Xper module, Xper Desktop Console, and the Xper on-screen displays.

For each plane, the Velara CFD generator comprises:

- X-ray generator 100 kW
- Voltage range is 40 - 125 kV
- Maximum current 1250 mA at 80 kV
- Program selection
- Pulsed X-ray for pulsed fluoroscopy; 3.75, 7.5, 15 and 30 frames/s in single plane and biplane modes.
- Pulsed X-ray for (subtracted) acquisition up to 6 frames/s for vascular applications in both single plane and biplane modes.
- Minimum exposure time of 1 ms.
- Automatic kV and mA control for optimal image quality established prior to run to save dose.
- Each plane has an X-ray depth collimator with two semi-transparent wedged filters with manual positioning and includes:
  - SpectraBeam filtering Filters low energy radiation to optimize image quality and dose efficiency with MRC-GS X-ray tubes.
  - Xper Beam Shaping, positioning of both shutters and wedges on the Last image Hold without the need for X-ray radiation.

Fluoroscopy

- Three programmable fluoroscopy modes
  - Each mode can be set to different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, and adaptive harmonization).
- Trace Subtract Fluoroscopy
  - A trace subtract run is created and overlaid with live fluoroscopy.

- Xper Fluoro Storage, a grab function allows storage and archiving of both a fluoro image and the last 20 seconds of Fluoroscopy, called Xper Fluoro Storage. These fluoro images or fluoro runs can be archived as a regular exposure run.

IMAGE DETECTION

Frontal imaging chain:

- A 30 cm by 40 cm FD20 Dynamic Flat Detector subsystem for fluoroscopy and fluorography procedures
- 8 imaging modes are available, 30 x 38, 30 x 30, 26 x 26, 22 x 22, 19 x 19, 16 x 16, 13.5 x 13.5, and 11 x 11 cm
- The flat detector subsystem features Xper Access, the detector can be rotated over 90 degrees, it moves from portrait to landscape back and forth
- The digital output of the FD20 flat detector is a 2k x 2.5k image matrix at 14 bits depth for the largest mode
- DQE (Detective Quantum Efficiency) >73
- The pixel pitch is 154 x 154 microns

Lateral imaging chain:

- A 25 cm (10 in.) diagonal triple mode Dynamic Flat Detector subsystem for fluoroscopy and fluorography procedures
- 3 imaging modes are available; 18 x 18, 14 x 14, 11 x 11 cm
- The digital output of the FD10 flat detector is 1k x 1k image matrix at 14 bits depth
- DQE (Detective Quantum Efficiency) is 75 %
- The pixel pitch is 184 x 184 microns

VIEWING

The Allura Xper FD20/10 comprises the following components in order to display the clinical images in the control and examination rooms.

Displays

Examination Room

Four 18 inch monochrome LCD monitors designed for medical applications. There are two live display monitors, one per plane and two reference monitors, one per plane.

- 18 inch monochrome TFT-LCD display
- Native format 1280x1024 SXGA
- 10 bit gray-scale resolution with gray-scale correction
- Wide viewing angle (approx. 160°)
- High brightness (max 600 Cd/m2, default 500 Cd/m2) with ambient light dependent brightness control
- LCD Protection Screen

The monitor ceiling suspension in the exam room can be configured to accommodate either 4 or 6, 18"LCD monitors and includes motorized height adjustment. The height adjust feature is dependent on the room ceiling height.

- The first reference channel is for the display of reference images or runs, controlled by infra-red remote-control Xper Viewpad.
- The On-Screen Display provides status information on stand rotation, angulation, display of system messages, X-ray tube load status, selected fluoroscopy mode, selected detector Field of View, and both the rate and accumulation of the dose area product and skin dose.

Control Room

One 19 inch color LCD monitor used as a data monitor.

- 18 inch color TFT-LCD display
- Native format 1280x1024 SXGA

Two 18 inch monochrome LCD monitor designed for medical applications.

- 18 inch monochrome TFT-LCD display
- Native format 1280x1024 SXGA
- 10 bit gray-scale resolution with gray-scale correction
- Wide viewing angle (approx. 160°)
- High brightness (max 600 Cd/m2, default 500 Cd/m2) with ambient light dependent brightness control

The Graphical User Interface on the monochrome monitor has the following features and functions:

- Step through file, run, or images
- File, and run overview
- Contrast, brightness, and edge enhancement settings
- Flagging of runs or images for transfer
- Applying text annotation in images
- Optional DICOM printing
- Executing Quantitative Analysis Packages if available
- Subtraction functionality
- Zoom/pan functionality
- Electronic shutters
- Video invert
- View trace, stacking of images
- Landmarking

Acquisition

The acquisition segment coordinates the parameters for automatic exposure control. The program is selected via the Xper module and or Xper Desktop Console.

Exposure techniques:

- Serial imaging for DA and DSA with automatic exposure setting
- Single shot mode

This Allura offers a storage capacity of:

- 50,000 images per plane at matrix size of 1024 x 1024, 10 bit
- Maximum number of examinations is 999, with no limit to the maximum number of images per examination

Xres Image Processing

Xres is a multi-resolution spatial temporal noise reduction and edge enhancement filter

Biplane Xres Vascular

- Xres Vascular enhances sharpness, contrast, and reduces noise in non subtracted fluoroscopy runs for vascular studies.

Biplane Xres Cardiac

- Xres Cardiac enhances sharpness, contrast, and reduces noise in fluoroscopy and exposure runs for cardiac studies

The settings for Xres can be customized with regard to the image quality.

USER INTERFACE

Xper is comprised of three elements: 1) Xper Settings, to customize the system to each user's preferred settings, 2) Xper User Interface, and, 3) Xper Integration, making advanced integration functionality available, such as DICOM Query / Retrieve, background archiving, and Xper Fluoro Storage.

The Xper User Interface comprises a range of User Interface modules in the Examination Room, including On-Screen Display.

On-Screen Display

The On-Screen Display is positioned on the left side of each reference monitor.

The following system information is displayed:

- X-ray indicator
- X-ray tube temperature condition
- Gantry position in rotation and angulation
- Source Image Distance
- Detector field size display
- General System messages (frontal reference monitor only)
- Selected Frame speed (frontal reference monitor only)
- Fluoroscopy mode (frontal reference monitor only)
- Integrated fluoroscopy time (frontal reference monitor only)
- Skin Dose: dose rate at X-ray, cumulated dose at no X-ray (frontal reference monitor only)
- Dose Area Product: dose rate at X-ray, cumulated dose at no X-ray (frontal reference monitor only)

- Graphical bars for Body Zone specific dose-rate and accumulated skin dose levels, related to the 2 Gy level (cardiac applications only)
- Stopwatch (frontal reference monitor only)

The Xper ViewPad contains the preprogrammed function settings. The system is provides with two Xper Viewpads. The following functions are provided:

- Run and image selection
- File and run cycle
- File overview
- Store to Reference image file
- Copy image to photo file
- Digital (fixed)zoom and panning
- Recall reference images
- Laser pointer, intended to point at regions of interest on the imaging monitors
  - LED indication of laser pointer on/off and battery low
- Subtraction on/off
- Remasking
- Landmarking

Remote Intercom

The separate intercom which is connected independently from the system that allows separate placement of the intercom at the preferred working position in the control room and examination room.

Table Side Modules

Two Xper Modules are provided for use. The first Xper Module is mounted tableside. The Second Xper Module (NCVA778) is located in the control room. These modules use a touch screen, which can be operated when draped with sterile covers. The Xper Module contains the following functionality:

- Acquisition settings
- Selection of Xper Setting allows the user to set frame rates and x-ray generation settings applicable for the type of the preferred intervention
- Automatic positioning recall to allow the stand position to match the reference image.
- Image Processing

The Xper Biplane Geometry T.S.O. module can be positioned at three sides of the patient table, while keeping the button operation intuitive. The Xper Geometry T.S.O. provides the following functionality:

- Tabletop float
- Table height position
- Source Image Distance selection per plane
- Gantry positioning per plane Biplane rotation of the two gantries
- Frontal gantry rotation in an axis perpendicular to the floor and longitudinal movement of the lateral gantry
- Store and recall of two scratch gantry positions including SID
- Emergency stop button

- Geometry reset button, which resets stand and table to a factory-default starting position

The Xper Biplane Imaging T.S.O. module can also be positioned at three sides of the patient table, while keeping the button operation intuitive. The Xper Imaging T.S.O. provides the following functionality:

- Fluoroscopy Flavor selection defined per Xper Setting
- Shutters and Wedge positioning
- Manual or automatic semi-transparent wedge filter
- Xper Fluoro Storage and Grab
- Selection of the Detector field size
- Shutter positioning
- Reset of the fluoroscopy buzzer
- Subtraction and other vascular processing factors
- Channel selection for the shutter and wedge control

Pan Handle

The Pan Handle is an extension of the control facility for floating movements of the table

Control Room

The control room comprises a Xper Review Module, Xper Viewing Console, a keyboard, and a mouse. The Xper Review Module offers the basic functions for review. The Xper Review Module contains the following functionality:

- Power on/off
- Tagarno wheel to control the review of a patient file
- File and run cycle
- Contrast, Brightness, and Edge enhancement settings
- File, Run, Image stepping and run and file overview
- Delete run
- Image invert and digital zoom
- Reset fluoroscopy timer and enable/disable X-ray

System information is displayed on the bottom of the data Monitor:

- Stopwatch and Time
- System guidance information
- Dose Area Product (DAP) and Skin Dose, as dose rate during X-ray, and accumulative dose
- Frame speed settings, fluoroscopy mode, and accumulated fluoroscopy time
- Exposure and fluoroscopy settings per plane, like Voltage (kV), Current (mA) and time (ms)
- Geometry information per plane, like rotation, angulation, and SID

Vascular Quantification Software Package

- Vessel diameter / stenotic index
- Automated vessel analysis
- Calibration routines

The workflow is divided into scheduling, preparation, acquisition, review, and archive.

Scheduling

The patients can be added, listed and selected per date, physician, or intervention type. Previous DICOM patient studies can be uploaded with the DICOM Query Retrieve function.

Patient management protocols are flexible and allow for multiple studies to be selected under one patient identification number. This means that new studies can be appended to an earlier patient file. Each study can contain multiple examinations to allow for split administrative purposes. Each examination contains multiple files, like acquisition file, reference file, and QA results file.

Preparation

The preparation page provides the information of the room and patient preparation of each individual physician. The preparation page is customizable per Xper Setting and allows each physician to provide his or her own room protocols

Acquisition

The acquisition page contains information on the current selected patient.

Review

The review page allows for reviewing of patients:

- Previous examination cases
- Review of other DICOM XA or DICOM SC studies.

Archive

Clinical studies can be archived to a CD or a PACS. The archive process can be completely automated and customized with Xper Settings. Parameters like multiple destinations, archive formats can be selected to the individual needs and wishes for programming under the Xper Settings.

The Xper frontal/lateral review monitors are 18" TFT-LCD B&W monitors, the same monitor type as used in the examination room, but without protective screen. The Graphical User Interface on the Black and White monitor has the following features and possibilities:

- Step through file, run, or images
- File, and run overview
- Contrast, brightness, and edge enhancement settings
- Flagging of runs or images for transfer
- Applying text annotation in images
- Optional DICOM printing
- Executing Quantitative Analysis Packages if available
- Subtraction functionality if available
- channel selection for viewing

The Xper DICOM Image Interface enables the export of clinical images to a destination like a DICOM CD recorder station or a PACS server. The export formats are based on DICOM 3.0 protocols. The system exports clinical studies in Cardiac DICOM XA Multi-Frame or DICOM Secondary Capture formats.

- The Xper DICOM Image Interface transfers through its fast ethernet link, making images very fast available on-line . The archive process is configured by Xper Settings.
- The images are sent out either in the background, or manually upon completion of the examination.
- The export format is configurable in 512x512 or 1024x1024 matrix in 8 or 10 bit depth.

- The examination can be sent to multiple destinations for archiving and reviewing purposes.
- The Xper DICOM Image Interface provides DICOM Storage and DICOM Storage Commitment Services.

The DICOM Query/Retrieve function allows older DICOM XA MF and DICOM SC studies to be uploaded in the system. Furthermore, additional information can be appended to a study, while keeping the patient identification the same.

Biplane Continuous Autopush

Continuous Autopush is an archive accelerator, which ensures that background archiving continues with minimal disruptions.

Clinical studies can be archived to a CD or a PACS. The archive process can be completely automated and customized with Xper Settings. Parameters like multiple destinations; archive formats can be selected to the individual needs.

The Xper DICOM Image Interface enables the export of clinical. The export formats are based on DICOM 3.0 protocols. The system exports clinical studies in Cardiac DICOM XA Multi-Frame or DICOM Secondary Capture formats.

- The export format is configurable in 512x512, 1024x1024 or 2048 x 2048 (unprocessed) matrix.
- The examination can be sent to multiple destinations for archiving and reviewing purposes.
- The Xper DICOM Image Interface provides DICOM Storage and DICOM Storage Commitment Services.
- The DICOM Query/Retrieve function allows older DICOM XA MF and DICOM SC studies to be uploaded in the system. Furthermore, additional information can be appended to a study, while keeping the patient identification the same.

Real Time Digital Link

The Allura Xper FD20/10 includes Real Time Digital Link which enables real time image transfer to the optional Interventional Hardware.

2nd set of documentation

Clinical Education Program for the Allura Xper System

Essentials OffSite Education: Philips will provide up to two (2) Cardiovascular Technologists, Registered Technologists Registered Nurses, or other system operator as selected by customer, with in-depth didactic, tutorial, and hands-on training covering basic functionality and work-flow of the cardiovascular imaging system. In order to provide trainees with the ability to apply all fundamental functioning on their system, and to achieve maximum effectiveness, this class should be attended no earlier than two weeks prior to system installation. This twenty-eight (28) hour class is located in Cleveland, Ohio, and is scheduled based on your equipment configuration and availability. Due to program updates, the number of class hours is subject to change without notice. Customer will be notified of current, total class hours at the time of registration. This class is a prerequisite to your equipment handover OnSite Education. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. **In the event that an EP Navigator workstation has also been ordered, the offsite training course will be tailored to focus on the electrophysiology functionality of the FD system and the EPN workstation. Travel and lodging are not included, but may be**

Line #	Part #	Description	Qty

purchased through Philips. It is highly recommended that 989801292102 (CV Full Travel Pkg OffSite) is purchased with all OffSite courses

Handover OnSite Education: Philips Education Specialists will provide twenty-eight (28) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 28 hours, and must include the two OffSite education attendees. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Site must be patient-ready. Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. **It is highly recommended for systems that are fully loaded or for customers with a large number of staff members to also purchase 989801292099 (CV Add OnSite Clin Educ 24h).**

Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref #106107-100915

2 ****NDSA014** **Maximus ROTALIX Ceramic grid switch tube 04/07** **1**

- Maximus ROTALIX Ceramic tube MRC 200 GS 0407 with anode heat storage capacity of 2.4 MHUand 0.4/0.7 mm. nominal focal spot values maximal 30 and 67 kW loading;
- Grid switching at dynamic pulsed fluoroscopy;
- Dose management with SpectraBeam filtration 0.2 0.5 1 mm mm CU eq.;
- Tube housing ROT-GS 1004 for oil-cooling with built-in thermal safety switch;
- Rotor control unit for continuous rotation ofthe anode disk;
- Cooling unit CU 3000 heat exchanger for direct andcontinuous forced cooling with oil;
- High Voltage cables;

3 ****NDSA017** **Maximus ROTALIX Ceramic Grid Switch tube assembly** **1**

Maximus ROTALIX Ceramic tube assembly MRC-GS 05 08 and cooling unit CU 3101 for cardio-vascular systems.
Comprising:

- Maximus ROTALIX Ceramic tube MRC-GS 05 08 with 0.5 mm nominal focal spot values maximal 45 and 85 kW short time load
- Grid Switching at pulsed fluoroscopy
- Continuous load ability: 3400 W (at 21 degrees C room temp.)
- Application of SpectraBeam dose management
- Tube housing ROT 1001 for oil-cooled X-ray tube with thermal safety switch
- Cooling unit CU 3000 heat exchanger for use in oil-cooled X-ray tube systems
- High Voltage cables

4 ****NDSA306** **RIS / CIS DICOM interface** **1**

This package allows communication of the Allura Xper system with a local information system (CIS or RIS). The interfaceusesthe DICOM Worklist Management (DICOM WLM) and Modality Performed Procedure Step (DICOM MPPS) standards.

If a hospital has an Allura Xper system and an information system it can receive patient and examination request information from the information system and report examination results in order to:

- Eliminate the need for retyping patient information on the Allura Xper
- Prevent errors in typing patient names and registration numbers (ensuring consistency with IS information to prevent problems in archive clusters ortosearch fora name in case of later retrieval)
- Inform the IS about the acquired images and radiation dose
- Upon request from the Allura Xper system the complete worklist with all relevant patient and examination data is returned from the IS to the Allura Xper system. For each patient the following information will be shown on the Allura Xper after it has been retrieved from the IS:

Patient Identification:

- Patient name
- Patient ID
- Birth date
- Sex

Examination/Request Information:

- Accession number
- Scheduled procedure step start time
- Scheduled performing physician's name

It is possible at all times to enter patient demographics information manually within the Allura Xper system in case of an emergency or in case the local Information System connection is down.

On request of the clinical user the Integris will report the following information about the selected patient to the IS:
Patient Identification:

- Patient name
- Patient ID
- Birth date
- Sex

Examination/Request Information:

- Accession number
- Performed procedure step status start/end date and time
- Performing physician's name
- Referenced image sequence

Radiation dose:

- Total time of fluoroscopy
- Accumulated fluoroscopy dose

Line #	Part #	Description	Qty

- Accumulated exposure dose
- Total dose
- Total number of exposures
- Total number of frames

Further detailed information can be found in the Allura Xper DICOM Conformance Statement.

The interface requires an EasyLink (hardware and software) if the IS is not compliant withDICOM Work List Management and Modality Performed Procedure Step.

5 ****NDSA308** **Lab reporting** **1**

This basic local print function allows the user to generate and print a simple report in modality stand-alone situations. The user has the ability to incorporate free text and clinical images. The reporting functionality is suitable for local printing and email only. Part of the report is generated automatically from administrative data (e.g. patient/exam data hospital name) and required data (e.g. run-log dose information and event-log).

6 ****NDSA253** **Frame rate extension** **1**

Frame rate extension increases the system acquisition speed for vascular and cardio-vascular studies requiring high speed imaging allowing for example cardiac applications.

Frame rate extension increases the acquisition frame rate to 15 fps and 30 fps with 1024 x 1024 matrix.

7 ****NDSA329** **FD Rotational Angio** **1**

Rotational Angiography provides real-time 3D impressions of complex vasculature and coronary artery tree. It acquires multiple projections with just one contrast injection via a fast rotational scan of the region of interest.

Rotational Angiograpy can be used during screening procedures to quickly determine the optimal projection for the study as the angle (rotation/angulation) of the projection is indicated on each image.

Compared with traditional angiography, Rotational Angiography can save considerable time, dose and contrast, while providing image detail required for diagnostic and therapeutic decisions.

A rotational scan is possible both with the Allura Xper systems in the side position (ceiling mounted systems) and in the head position, providing the flexibility to perform procedures virtually from head to toe.

C-arm in side position:
Max. rotation Speed: 30 degrees/s
Max. rotation Angle: 180 degrees

C-arm in head position:
Max. rotation Speed: 55 degrees/s
Max. rotation Angle: 305 degrees

Max. Frame speeds are given by the framespeed specifications of the system configuration.

Line #	Part #	Description	Qty

The speed and range of rotation are the highest available (see table). The very high speed allows using less contrast, whereas the very wide rotation range provides a complete evaluation of the anatomy.

A contrast run can be followed up with a mask run, to allow image/run subtraction.

The stand is designed for a very high mechanical stability. It offers precise positioning and high reproducibility, assuring you of high quality images and excellent subtraction studies.

Operation of Rotational Angiograpy is extremely easy. The procedure is selected, set up and executed virtually in a matter of seconds, supporting the highest patient throughput.
A set of dedicated acquisition programs is available on the Xper Module and can be selected at the touch of a button. The rotation end- and start-positions are easily selected. The procedure is controlled from the exposure hand- or footswitch.

8 ****NDSA393** **Aut. Pos. Contr. for table** **1**

The Automatic Position Controller (APC) for the Xper table provides two modes of operation:

- Auto positioning. The tabletop position and table height will be adjusted automatically to the pre-defined default point of interest. This to save time and x-ray dose at the start of an exam or for setting up the system for rotation scans.
- Store/recall of a position of the table top. This includes the height-, longitudinal- and lateral position of the table top.

The option comprises:

- motor drives for movement of the table top
- software license to operate the function

9 ****NDSA174** **Catheterisation arm support** **1**

For brachial catheterization and digital imaging technique the support is made of X-ray transparent material with exception of the fixingclamp and pivots.

10 ****NDSA403** **Pivot for table base.** **1**

For angiographic- and interventional procedures of the upper peripherals.
Provides improved table access for patient transfer.
Allows pivoting of the table base around its vertical axes.
Pivot range from -90 degrees to + 180 degrees (or -180 to +90 degrees) with locked positions on 0, -13/+13 (facilitating arm-angiography) and -90/+90 and 180 degrees.

Comprising:

- pivot device with graduated scale.

To be mounted on the universal floor plate of the table.

Compatible with Xper Table

11 ****NDSA402** **SyncraTilt and Cradle** **1**

Line #	Part #	Description	Qty

This innovating SyncraTilt enhances the accuracy and efficiency of gravity-oriented procedures. It is available as an option for the Xper table in Allura Xper series systems.

SyncraTilt is ideal for interventional, myelography, phlebography and head down procedures because it provides more precise imaging of contrast medium, blood, or objects in the body.

With SyncraTilt, the isocentre is automatically located at the isocentre of rotation and angulation of the stand. If the longitudinal position of the stand changes, the tilt isocentre is changed to match with the new stand position.
As a result, the region of interest is always centred

As the table tilts, the X-ray beam automatically coordinates to the movement.

The table floats even when tilted, and the region of interest can be followed by panning the tabletop.

When combined with the Bolus Chase option, SyncraTilt enables phlebography to be performed with a head-up tilted patient.
In addition, this option also provides the possibility to cradle the table top. This allows optimal positioning of the patient for f.i. more invasive (surgical) or
guided puncture procedures.

The option provides:

- maximum tilt range:
  -17 degrees (head down) to +17 degrees
  (head up).
  tilt speed: 2 degrees/sec
- isocentric cradle with maximum cradle range:
  -15 degrees to +15 degrees for the full tilt range
  cradle speed: 3 degrees/sec
- automatic safeguarding system with manual override
- panning range in tilted plane: equal to the standard tabletop specifications (longitudinal 120cm, lateral 35cm)
- easy to use controls

Comprising:
- Tilt and cradle drives with user controls

Compatible with:

- Xper table in Allura Xper FD series Rel 3 onwards (monoplane versions) and Rel 2 onwards (biplane verions)
  - Bolus Chase
  - Pivot for table base
  - swivel for table base

Power requirements: refer to system configuration

12	**FDS0034	**CS universal cable carrier**	1

Additional carrier for suspension of cable hose from X-ray tube assembly or TV monitor.

13	**NDSA404	**EP Cockpit Biplane**	1

101822 DS FD20 Biplane with AD7

Line #	Part #	Description	Qty

EP cockpit biplane is an integrated EP lab solution supporting an efficient working environment, integrated workflow and enabler for complex procedures.

The EP cockpit provides the ability to:

- Reduce the amount of cables, keyboards and displays in the Exam Room and Control Room
- Operate EP cockpit connected equipment (including 3rd party equipment) from a single location.
- Display EP cockpit connected equipment (including 3rd party equipment) on any of the Philips high-brightness color LCD displays in the Exam Room and Control Room.
- Select a predefined display setup and keyboard/mouse configuration, or save a custom configuration as a new preset configuration.
- Store any image on any screen as a DICOM Secondary Capture image
- Connect EP lab to hospital PACS
- Provide an integrated hardware platform for EP Navigator.

The EP cockpit consists of:

Omniswitch
The Omniswitch is a 15 channel video-switch and 8 channel keyboard/mouse switch, operated from a color touch-screen console in the Control Room.
The Omniswitch allows the user to direct the video output of all connected medical equipment to any of the displays in the Exam Room (8 displays) and Control Room (6 or 7 displays), and to switch keyboard/mouse control for the connected medical equipment.
Omniswitch supports a wide variety of display formats (up to 1600x1200).

Omniswitch can be connected to up to 8 medical equipment systems.
These systems can be selected and controlled with 1 or 2 keyboard/mouse combinations in the Control Room.

High-brightness, medical grade, color LCD displays
A total of 14 x high-brightness, medical grade, color LCD displays are provided with EP cockpit, 8 displays located in the Exam Room and 6 in the Control Room.
These displays support the image quality requirements for monochrome X-ray images, color EP signals as well as other images and replace all displays normally delivered with an Allura system.
Main characteristics are:

- 21.3 inch, 2 Megapixel color LCD display
- Max. resolution: 1600x1200
- Brightness: 450 Cd/m2
- Contrast ratio : 550:1
- Wide viewing angle (approx. 170 degrees)
- Constant brightness stabilization control
- Independently selectable brightness settings for monochrome and color images
- Independently selectable lookup table for gray-scale, color and DICOM transfer function

Monitor ceiling suspension
An 8 fold Monitor ceiling suspension for use in the Exam Room carry the 8 x high-brightness color LCD displays, providing flexible viewing capabilities.

The monitor ceiling suspension is height-adjustable and moveable along ceiling rails. It can be positioned on both sides of the table and replaces the Allura monitor ceiling suspension.

Control Room set-up
The 6 x high-brightness color LCD displays, the 2x keyboard/mouse combination and touch screen console are designed to support an efficient workflow within the Control Room.
Equipment connected to EP cockpit can be operated from a central touch screen console.
Display EP cockpit connected equipment (including 3rd party equipment) on any of the Philips high-brightness color LCD displays in the Control Room.

Snapshot functionality
The snapshot function allows the user to store/save a screen-capture of any image on any EP cockpit display as a DICOM Secondary Capture image to a connected PACS.

Wall Connection Boxes
A total of 8 x Wall Connection Boxes are provided with EP cockpit.
Through Wall Connection Boxes, 3rd party equipment can be connected to the EP cockpit Omniswitch.
The Wall Connection Boxes have Power (230V, 50Hz, max. 500 Watt), Grounding, Video (VGA), Network (RJ45) and Keyboard/mouse (PS/2) connections. The Wall Connection Boxes can be located in the Technical Room, Control Room and/or Exam Room.
In case of an Equipment Rack: 1 x Wall Connection Box is permanently placed on the Equipment Rack.
The Wall Connection Boxes for EP cockpit can be used to connect 3rd party equipment that complies with the following requirements:

- Qualified medical electrical equipment [IEC 60601-1]
- IEC 950 only if connected to an EP cockpit Wall Connection Box mains (230V) connection in the Control Room or otherwise isolated from hospital mains according IEC60601-1.
- Connected to the same earth as the Philips Protective Conductor Bar (PPCB).
- Can be operated with a standard AT 101-key US English keyboard connected through a PS/2 connection.
- Provide video-output that matches the display range of the Color monitor that is used for display. Most display formats up to 1600x1200 are supported.

EP Hardware
The EP hardware includes (at least): Radisys workstation, 4 GB memory, Hard Drive and is also the platform for the optional EP navigator software.

Notes:

- Life-supporting equipment can not be connected to the Wall Connection Boxes
- EP cockpit displays are not powered by an Uninterruptible Power Supply. Equipment that requires a (fail-safe) power connection (UPS) for the video output need an additional display connected to that equipment's UPS.
- Equipment that is required to be galvanically isolated cannot be connected to the Philips Protective Conductor Bar (PPCB). Therefore the connections to EP cockpit should be galvanically isolated.
- Medical equipment with dedicated keyboards or displays should not be connected without consent of the manufacturer. Please contact your 3rd party equipment vendor for information and clearance.

Line #	Part #	Description	Qty

Compatibility
EP cockpit release 1.1 is compatible with:

- Allura Xper FD10/10 series from Release 2 onwards
- Allura Xper FD20/10 series from Release 2 onwards
- Allura Xper FD20/20 series from Release 1 onwards

Clinical Education Program for EP Cockpit

CV EP Cockpit OnSite Education:

Clinical Education Specialists will provide sixteen (16) hours of CV EP Cockpit OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. Education expires one (1) year from equipment delivery date. Ref# 263-070920

14 ****NDSA379** **EP Navigator Rel. 2** **1**

EP navigator enables users to segment previously acquired 3D datasets into 3 dimensional volumes of the heart and overlay and register these 3D segmented data sets with live fluoro X-ray images of the same anatomy in order to support catheter/device navigation during specified procedures.
EP navigator image processing algorithms are performed on the EP Hardware and can perform the following functions:

- Import DICOM CT data sets from PACS via DICOM Query Retrieve or CDRom, or
- Segment previously acquired 3D image data,
- Manually register the segmented 3D data with live fluoroscopic X-ray images obtained on a Philips Allura Xper FD system for specified procedures.
- Superimpose the segmented 3D dataset on a live fluoroscopic X-ray image of the same anatomy, obtained on a Philips Allura Xper FD system,

EP navigator software includes

- 3D data import
- 3D segmentation software.
- Real Time Digital Link with Allura Xper system
- 3D – fluoro-matching algorithm.
- Allura geometry link; follow stand + 3D APC.

Compatibility
Compatible with EP Hardware and EP Cockit.
The imported CT data needs to comply to the DICOM Conformance Statement. For the latest DICOM compatibility information please visit the Philips Interoperability Website at www.philips.com.
EP navigator is compatible with the following Allura systems:

- FD10 rel 2 and further
- FD10/10 rel 1 and further
- FD20 rel 2 and further

Line #	Part #	Description	Qty

- FD20/10 rel 1 and further
- FD20/20 rel 1 and further

Clinical Education Program for EP Navigator

CV EP Navigator OnSite Education:

Clinical Education Specialists will provide sixteen (16) hours of CV EP Navigator OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. Education expires one (1) year from equipment delivery date. Ref# 230-070920

15 **NDSA381 3D ATG 1

3D atriography (3D ATG) reconstructs three-dimensional (3D) cardiac anatomy from a rotational angiography scan, in the EP lab itself. This 3D anatomy is used in EP navigator as a roadmap to guide catheter navigation, when used as an overlay onto live fluoroscopic images.

All EP navigator functions, such as Endo View and Point Tagging, are available when using 3D ATG. Automatic segmentation is provided as part of 3D ATG for the left atrium. User-aided segmentation is possible for other anatomic structures

Handover OnSite Education: Philips Education Specialists will provide sixteen (16) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 16 hours, and must include any OffSite education attendees. CEU credits may be available if the participant meets the guidelines provided by Philips. Note: Site must be patient-ready. Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.

Education expires one (1) year from equipment installation date (or purchase date if sold separately).

16 **NDSA405 Equipment Rack 1

The Equipment Rack for EP cockpit allows users of the Philips Allura Xper system to organize all the equipment used in an EP Lab on one moveable rack and also allows for cables to be out of the way. This provides a much "cleaner" organized look for the busy EP Lab.

The ceiling-mounted Equipment Rack, which is located in the Exam Room, can support 3rd party equipment. Cabling for this equipment is guided up through the ceiling mounted suspension. It can be moved by swiveling the ceiling mounted boom. The Equipment Rack can be positioned within a circular range of 1.6 meters.

The Equipment Rack consists of:

- 5 shelves and 1 drawer with flexible mounting position and can support 225kg of equipment weight.
- An infusion extension rod
- An extension arm with a standard VESA mounting plate, on which different types of equipment can be mounted
- A Wall Connection Box (1 of the standard EP cockpit Wall Connection Boxes) with Power (230V, 50Hz), Grounding, Network (RJ45), Keyboard/mouse (PS/2) and Video (VGA) connections

Line #	Part #	Description	Qty

- Cabling and connectors for EPMedSystems EPWorkmate, and Biosense Webster Carto equipment
- 10 country-specific power connectors
- 4 Ethernet network connectors
- Ergonomically operating handles with pneumatic brakes
- Standard gas outlets for O2, NO2, and Vacuum

Notes:

- Life-supporting equipment can not be connected to the Equipment Rack.
- Medical equipment with dedicated keyboards or displays should not be connected without consent of the manufacturer. Please contact your 3rd party equipment vendor for information and clearance.
- Only EP cockpit-compatible configurations of Carto and EPWorkmate should be connected. Customers are requested to contact their local Biosense Webster or EPMedSystems representative for further information on compatability.
- The Wall Connection Box can be used to connect 3rd party equipment that complies with the following requirements:
- Qualified medical electrical equipment [IEC 60601-1]
- IEC 950 only if connected to an EP cockpit Wall Connection Box mains (230V) connection in the Control Room or otherwise isolated from hospital mains according IEC60601-1.
- Connected to the same earth as the Philips Protective Conductor Bar (PPCB).
- Can be operated with a standard AT 101-key US English keyboard connected through a PS/2 connection.
- Provide video-output that matches the display range of the Color monitor that is used for display. Most display formats up to 1600x1200 are supported.

Compatibility

- The Equipment Rack is compatible with EP cockpit R1.x

17 ****FDS0249** **Addl. EP Cockpit CR display** **1**

This is an additional EP cockpit Control Room display for either Allura Xper mono-plane or bi-plane systems.

The high-brightness, medical grade, color LCD display offers additional viewing capabilities within the Control Room.
The display support the image quality requirements for monochrome X-ray images, color EP signals, as well as other images.

Main characteristics are:

- 21.3 inch, 2 Megapixel color LCD display
- Max. resolution: 1600x1200
- Brightness: 450 Cd/m2
- Contrast ratio : 550:1
- Wide viewing angle (approx. 170 degrees)
- Constant brightness stabilization control

Line #	Part #	Description	Qty

- Independently selectable brightness settings for monochrome and color images
- Independently selectable lookup table for gray-scale, color and DICOM transfer function

Compatibility

- The display is compatible with EP cockpit R1.x

18	**NDSA218	**Second Xper module is located in Control room**	1

Second Xper module is located in Control room

19	**NDSA255	**Standard Tabletop in Vascular mono**	1
20	**NDSA213	**First Xper module is located in Examination Room**	1

First Xper module is located in Examination Room

21	**989600207421	**Equipment rack Predelivery set**	1

Pre-delivery for Equipment Rack.

22	**980306640009	**Blue Anti-Fatigue Floor Mat w/ Logo**	1

Blue Anti-Fatigue Floor Mat w/ Logo

23	**980406041009	**Rad Shield w/ Arm (Contoured) 61X76**	1

Contoured Rad Shield with Arm rest. 61X76

24	**980406190009	**PIVOTING TABLE-MOUNTED RADIATION SHIELD**	1

Table-mounted radiation shield for additional protection of physician and staff against scatter radiation. The shield consists of two protective parts: a lower shield and an upper shield. The shield is specially designed for use with the AD5 patient table.

The table mounted radiation shield provides the following features:

- Mounting to either the right orleft tableaccessory rails;
- Pivoting into the required working position;
- Pivoting into the parking underneath the tabletop facilitating patient preparation;
- The upper shield can be positioned upright providing optimal protection or can be folded down for free access to the patient.

The table mounted radiation shield includes:

- Lower shield measuring 70 cm high 80 cm wide 0.5 mm Pbequivalence;
- Upper shield measuring 40 cm high 50 cm wide 0.5 mm Pbequivalence;
- Mounting clamp;

Docking device for wall mounting.

25	**989801220012	**Cable Spooler**	1

101822 DS FD20 Biplane with AD7

Line #	Part #	Description	Qty
26	**989801220037	**M LED 3MC Light**	1
	MAVIG M3 MC LED - Multi Color / power Supply Included Includes Portegra2 Ext Spring Arm 75/90cm		
27	**989801220080	**Portegra 2 360 Ceiling Column**	2
	Portegra 2 360 Column w/ trolley and ceiling track		
28	**Third Party Item**	**Video Conversion**	1
	Video conversion and DVI splitters for EP Cockpit.		
29	**SP019**	**Trade in Allowance**	1

Customer represents and warrants that (i) Customer has, and shall have when title passes, good and marketable title to the equipment being traded in and (ii) has the authority to effect such trade in.

Product: 100125.000 DS Allura 15-12 Biplane
Serial Number: 18176
Manufacturer: PHILIPS HEALTHCARE

Trade-In authorization number:	23889
Trade-In Value:	$55,000.00
De-install Date:	2/22/2012

Customer will be trading-in equipment that is described on the attached System Disclosure Form (the "Trade-In"), which Trade-In the parties agree (i) will be removed on the De-install Date and (ii) is currently in the condition as represented on the System Disclosure Form. In addition, the parties agree as follows:

1. Customer represents and warrants that Customer has good and marketable title to the Trade-In as of the date of this Quotation and will have good and marketable title when Philips removes the Trade-In from Customer's site (the "Removal Date");
2. Title to the Trade-In shall pass from Customer to Philips on the Removal Date, unless otherwise agreed by Philips and the Customer;
3. Notwithstanding anything to the contrary in any Business Associate Addendum, Customer represents and warrants that as of the Removal Date all Protected Health Information will have been de-identified or removed from the Trade-In;
4. Philips may test and inspect the Trade-In prior to de-installation. If the condition of the Trade-In is not substantially the same on the Removal Date (ordinary wear and tear excepted) as it is identified on the System Disclosure Form, then Philips may reduce the price quoted for the Trade-In;
5. If the removal date is delayed until after the De-Install Date, unless Philips causes the delay, then Philips may reduce the price quoted for the Trade-In by six percent (6%) per month.
6. Philips is responsible for normal de-installation costs of the Trade-In.
7. The trade-in value will not include costs associated for any facility modifications and/or rigging required for de-installation and must be accounted for separately.
8. Customer is responsible for all plumbing necessary to properly drain coolant from chiller system and cap the lines.
9. Prior to the Removal Date, Customer shall remove from the room all equipment that is not being de-installed.

30	**SEBLRSVNP1**	**Customer Note**	1

101822 DS FD20 Biplane with AD7

Line #	Part #	Description	Qty

Hospital will supply injector for 3D-ATG use.

********PROMOTIONS********

Promotion Name	Description
Biplane Closer Q3-Q4, 2011	All orders for this promotion must be received on or before December 30, 2011
Diamond Select Customer Loyalty Promotion Q3-Q4 2011	This special Customer Loyalty promotion provides an additional discount to existing Philips cardiovascular x-ray customers with selected Integris systems installed. In addition to the dollar discount this promotion provides, the Customer Loyalty Program can reduce room down time and room construction costs by installing the Allura Xper System within the existing room footprint. All orders for this promotion must be received on or before December 30, 2011. This promotion can be combined with other promotions.
Diamond Select EP Cockpit Q3-Q4 2011	This special promotion provides EP Cockpit at a greatly reduced price. All orders for this promotion must be received on or before December 30, 2011.
Diamond Select EP Navigator Promo Q3-Q4 2011	This special promotion provides EP Navigator at a greatly reduced price. EP Navigator is an interventional tool for overlaying CT images with live x-ray. All orders for this promotion must be received on or before December 30, 2011.

101822 DS FD20 Biplane with AD7

LIST PRICE	$3,130,110.00
DISCOUNT	$1,975,110.00
TRADE IN AMOUNT	($55,000.00)
NET PRICE	$1,100,000.00

Buying Group: NO CONTRACT Contract #: NONE

Addt'l Terms:

Each Quotation solution will reference a specific Buying Group/Contract Number representing an agreement containing discounts, fees and any specific terms and conditions which will apply to that single quoted solution. If no Buying Group/Contract Number is shown, Philips' Terms and Conditions of Sale will apply to the quoted solution.

Each equipment system listed on purchase order/orders represents a separate and distinct financial transaction. We understand and agree that each transaction is to be individually billed and paid.

Price above does not include any applicable sales taxes.

The preliminary delivery request date for this equipment is:_____.

If you do not issue formal purchase orders indicate by initialing here_____.

Tax Status:

Taxable_____ Tax Exempt_____

If Exempt, please indicate the Exemption Certification Number:_____, and attach a copy of the certificate.

Delivery/Installation Address:

_____

_____

_____

Invoice Address:

_____

_____

_____

Contact Phone #:

_____

Contact Phone #:

_____

Purchaser approval as quoted:

_____

Date:

_____

Title:

_____

This quotation is signed and accepted by an authorized representative in acknowledgement of the system configuration, terms and conditions stated herein.

Philips Standard Terms and Conditions of Sale

The products and services listed in the quotation are offered by Philips Healthcare, a division of Philips Electronics North America Corporation ("Philips") only under the terms and conditions described below.

1. Price; Taxes. The purchase price stated in the quotation does not include applicable sales, excise, use, or other taxes in effect or later levied. Unless Customer provides Philips with an appropriate exemption certificate reasonably in advance of the date the product is available for delivery, Philips shall invoice Customer for those taxes, and Customer shall pay those taxes in accordance with the terms of the invoice.

2. Cancellation. Philips' cancellation policies are set forth in the applicable schedule attached to these Terms and Conditions of Sale.

3. Payment Terms.
3.1 Unless otherwise specified in the quotation, Philips will invoice Customer, and Customer will immediately pay such invoice on receipt for each product in accordance with the payment terms set forth in the applicable schedule attached to these Terms and Conditions of Sale:
3.2 Orders are subject to Philips' on-going credit review and approval.
3.3 Customer shall pay interest on any amount not paid when due at the maximum rate permitted by applicable law. If Customer fails to pay any amount when due, in addition to any other rights or remedies available to Philips at law or in equity, Philips may discontinue the performance of services, discontinue the delivery of the product, or deduct the unpaid amount from any amounts otherwise owed to Customer by Philips under any agreement with Customer. In any action initiated to enforce the terms of the quotation following a Customer default or product cancellation under an order arising from the quotation, Philips shall be entitled to recover as part of its damages all costs and expenses, including reasonable attorneys' fees, in connection with such action.
3.4 Credit Card. Philips, at its discretion, will accept a credit card for payment on orders with a net value of $50,000 or less.

4. Trade - In. If Customer will be trading-in any equipment ("Trade-In"), then:
4.1 Customer represents and warrants that Customer has good and marketable title to such Trade-In;
4.2 Title to the Trade-In shall pass from Customer to Philips upon Philips making the new equipment available for first patient use. Removal of the Trade-In from Customer's site shall occur no later than the date Philips makes the new product available for first patient use, unless otherwise agreed in writing between Philips and the Customer; and
4.3 Notwithstanding anything to the contrary in any Business Associate Addendum ("BAA"), Customer represents and warrants that Customer has removed or de-identified all Protected Health Information ("PHI") from the Trade-In equipment as of the date the equipment is removed. To the extent Customer has not done so, Customer agrees to reimburse Philips for any out-of-pocket costs Philips incurs to remove or de-identify PHI from the Trade-In.
4.4 If (a) the condition of the Trade-In is not substantially the same when Philips removes the Trade-In (ordinary wear and tear excepted) as it was when Philips quoted the Trade-In value; or (b) Customer delays the removal of the Trade-In, then Philips may reduce the price quoted for such Trade-In or cancel the Trade-In and Customer will pay the adjustment amount within thirty (30) days of receipt of invoice.
4.5 If Philips does not receive possession of the Trade-In, Philips will charge Customer, and Customer will pay within thirty (30) days of receipt of invoice, the amount of the Trade-In allowance.
4.6 Evidence that Customer intends to trade in an asset as part of the purchase or lease of any product(s) shall be in the form of, but not limited to: (a) receiving a trade in quote and/or authorization from Philips on the value of the asset to be traded in; (b) providing Philips with serial numbers of assets to be traded in; and/or, (c) providing Philips with a de-installation date to remove an existing asset in order to install Philips quoted equipment.

5. Leases. If Customer desires to convert the purchase of any product to a lease, Customer will arrange for the lease agreement and all other related documentation to be reviewed and approved by Philips not later than ninety (90) days prior to the date of the availability for delivery of major components of the product. The Customer is responsible for converting the transaction to a lease, and is required to secure the leasing company's approval of all of these Terms and Conditions of Sale. No product will be delivered to the Customer until Philips has received copies of the fully executed lease documents and has approved the same.

6. Security Interest. Customer hereby grants to Philips a purchase money security interest in the products until all payments have been made. Customer shall sign any financing statements or other documents necessary to perfect Philips' security interests in the products. Where permitted by applicable law, Customer's signature on the quotation or on a purchase order issued as a result of the quotation gives Philips the right to sign on Customer's behalf and file any financing statement or other documents to perfect Philips' security interest in the product.

7. Shipment and Risk of Loss.
7.1 The applicable schedule attached to these Terms and Conditions of Sale shall apply for delivery.
7.2 Title to any product (excluding software), and the risk of loss or damage to any product shall pass to the Customer F.O.B. destination. Customer shall obtain and pay for insurance covering such risks at destination.

8. Installation, Site Preparation, Remote Services.
8.1 **Installation.** Customer shall provide Philips full and free access to the installation site and suitable and safe space for the storage of the products before installation. Customer shall advise Philips of conditions at or near the site, including any hazardous materials, that could adversely affect the installation or pose a health or safety risk to Philips' personnel, and shall ensure that those conditions are corrected and hazardous materials removed, and that the site is fully prepared and available to Philips before installation work begins. Customer shall ensure, at no charge to Philips, that there are no obstacles preventing Philips from moving the product from the entrance of the Customer's premises to the installation site. Customer shall be responsible, at its expense, for rigging, the removal of partitions or other obstacles, and restoration work. The products will be installed during normal working hours. Philips will unpack the product, construct applicable pads (if required for certain products), connect the product to a safety switch or breaker to be installed by the Customer, and calibrate and test the product. If local labor conditions, including but not limited to a requirement to utilize union labor, require the use of non-Philips employees to participate in the installation of the product, then such participation of non-Philips employees shall be at Customer's expense. In such case, Philips will provide engineering supervision during the installation.

8.2 **Site Preparation.** Except where Philips has agreed in writing to provide construction services for a fee pursuant to a construction agreement and scope of work signed by Customer, Customer shall be responsible, at its expense, for the preparation of the installation site where the product will be installed including any required structural alterations. Customer shall provide any and all plumbing, carpentry work, conduit, wiring including communications and/or computer wiring, network equipment, power supply, surge suppression and power conditioning (except to the extent they are expressly included in the quotation), fire protection and environmental controls, ground fault and isolation system, and other fixtures and utilities required to properly attach, install, and use the product. Site preparation shall be in compliance with all safety, electrical, RF or magnetic shielding and acoustical suppression and building codes relevant to the product and its installation and use. The sufficiency of any installation site plans shall be the responsibility of Customer. Customer, at its expense, shall obtain all permits and licenses required by federal, state, or local authorities in connection with the installation and operation of the product, including any certificate of need and zoning variances. PHILIPS MAKES NO WARRANTY AND ASSUMES NO LIABILITY FOR THE FITNESS OR ADEQUACY OF THE SITE IN WHICH THE PRODUCT IS TO BE INSTALLED OR USED. CUSTOMER INDEMNIFIES PHILIPS AGAINST ANY CLAIMS, INCLUDING SUBROGATION CLAIMS, ARISING FROM CUSTOMER'S SITE PREPARATION RESPONSIBILITIES.
8.3 **Remote Services Network ("RSN").** Customer will (a) provide Philips with a secure location at Customer's premises to store one Philips RSN router (or a Customer-owned router acceptable to Philips at Customer's option) for connection to the equipment and to Customer's network; and (b) at all times during the warranty period provide Philips with full and free access to the router and a dedicated broadband Internet access node, including but not limited to public and private interface access, suitable to establish a successful connection to the products through the Philips RSN and Customer's network for Philips' use in remote servicing of the product, remote assistance to personnel that operate the products, updating the products software, transmitting automated status notifications from the product and regular uploading of products data files (such as but not limited to error logs and utilization data for improvement of Philips products and services and aggregation into services). Customer's failure to provide such access at the scheduled time will constitute Customer's waiver of the scheduled planned maintenance service and will void support or warranty coverage of product malfunctions until such time as planned maintenance service is completed or RSN access is provided. Customer agrees to pay Philips at the prevailing demand service rates for all time spent by Philips service personnel waiting for access to the products.

9. Product Warranty.
9.1 If a separate product warranty page prints as part of this quotation, that product warranty applies to your purchase and is incorporated herein; otherwise Section 9.2-9.7 shall apply.
9.2 **Hardware/Systems.** Philips warrants to Customer that the Philips equipment (including its operating software) will perform in substantial compliance with its performance specifications in the documentation accompanying the products, for a period of 12 months beginning upon availability for first patient use.
9.3 **Stand-alone Licensed Software.** For a period of ninety (90) days from the date Philips makes Stand-alone Licensed Software available for first patient use, such Stand-alone Licensed Software shall substantially conform to the technical user manual that ships with the Stand-alone Licensed Software. "Stand-alone Licensed Software" means sales of Licensed Software without a contemporaneous purchase of a server for the Licensed Software. If Philips is not the installer of the Stand-alone Licensed Software, the foregoing warranty period shall commence upon shipment.
9.4 If the start of the installation is delayed for any reason beyond the control of Philips for more than thirty (30) days following the date that Philips notifies Customer that the major components of the product are available for delivery, the warranty period begins on the thirty-first (31st) day following that date.
9.5 Philips' sole obligations and Customer's exclusive remedy under any product warranty are limited, at Philips' option, to the repair or the replacement of the product or a portion thereof within thirty (30) days after receipt of written notice of such material breach from Customer ("Product Warranty Cure Period") or, upon expiration of the Product Warranty Cure Period, to a refund of a portion of the purchase price paid by the Customer, upon Customer's request. Any refund will be paid to the Customer when the product is returned to Philips. Warranty service outside of normal working hours (i.e, 8:00 A.M. to 5:00 P.M., Monday through Friday, excluding Philips' observed holidays), will be subject to payment by Customer at Philips' standard service rates.
9.6 This warranty is subject to the following conditions: the product (a) is to be installed by authorized Philips representatives (or is to be installed in accordance with all Philips installation instructions by personnel trained by Philips); (b) is to be operated exclusively by duly qualified personnel in a safe and reasonable manner in accordance with Philips' written instructions and for the purpose for which the products were intended; and (c) is to be maintained and in strict compliance with all recommended and scheduled maintenance instructions provided with the product; and Customer is to notify Philips immediately if the product at any time fails to meet its printed performance specifications. Philips' obligations under any product warranty do not apply to any product defects resulting from improper or inadequate maintenance or calibration by the Customer or its agents; Customer or third party supplied interfaces, supplies, or software including without limitation loading of operating system patches to the Licensed Software and/or upgrades to anti-virus software (except DAT file changes) running in connection with the Licensed Software without prior validation approval by Philips; use or operation of the product other than in accordance with Philips' applicable product specifications and written instructions; abuse, negligence, accident, loss, or damage in transit; improper site preparation; unauthorized maintenance or modifications to the product; or viruses or similar software interference resulting from connection of the product to a network. Philips does not provide a warranty for any third party products furnished to Customer by Philips under the quotation; however, Philips shall use reasonable efforts to extend to Customer the third party warranty for the product. The obligations of Philips described herein and in the applicable product-specific warranty document are Philips' only obligations and Customer's sole and exclusive remedy for a breach of a product warranty.
9.7 THE WARRANTIES SET FORTH HEREIN AND IN PHILIPS' WARRANTY DOCUMENT WITH RESPECT TO A PRODUCT (INCLUDING THE SOFTWARE PROVIDED WITH THE PRODUCT) ARE THE ONLY WARRANTIES MADE BY PHILIPS IN CONNECTION WITH THE PRODUCT, THE SOFTWARE, AND THE TRANSACTIONS CONTEMPLATED BY THE QUOTATION, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, WHETHER WRITTEN, ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Philips may use refurbished parts in the manufacture of the products, which are subject to the same quality control procedures and warranties as for new products.

10. Philips Proprietary Service Materials. Any Philips maintenance or service software and documentation provided with the product and/or located at Customer's premises is intended solely to assist Philips and its authorized agents to install and to test the products or to assist Philips and its authorized agents to maintain and to service the products under warranty or a separate support agreement with Customer. Customer agrees to restrict access to such software and documentation to Philips' employees and those of Philips' authorized agents only and to permit Philips to remove its Proprietary Service Materials upon request.

11. Patent Infringement Claims.
11.1 Philips shall indemnify, defend, and hold harmless Customer against any new claim that a Philips Product provided in the quotation infringes, misappropriates, or violates any third party intellectual property right, whether patent, copyright, trademark, or trade secret, provided that Customer:
(a) provides Philips prompt written notice of the claim;
(b) grants Philips full and complete information and assistance necessary for Philips to defend, settle, or avoid the claim; and
(c) gives Philips sole control of the defense or settlement of the claim.
11.2 The provisions of this section shall not apply if the product is sold or transferred.
11.3 If (a) a Philips Product is found or believed by Philips to infringe such a claim; or, (b) Customer has been enjoined from using the Philips Product pursuant to an injunction issued by a court of competent jurisdiction, Philips may, at its option, (i) procure the right for Customer to use the product, (ii) replace or modify the product to avoid infringement, or (iii) refund to Customer a portion of the product purchase price upon the return of the original product. Philips shall have no obligation for any claim of infringement arising from: Philips' compliance with Customer's designs, specifications, or instructions; Philips' use of technical information or technology supplied by Customer; modifications to the product by Customer or its agents; use of the product other than in accordance with the product specifications or applicable written product instructions; use of the product with any other product; if infringement would have been avoided by the use of a current unaltered release of the products; or use of the Philips Product after Philips has advised Customer, in writing, to stop use of the Philips Product in view of the claimed infringement. Philips will not be liable for any claim where the damages sought are based directly or indirectly upon the quantity or value of products manufactured by means of the products purchased under this quotation, or based upon the amount of use of the product regardless of whether such claim alleges the product or its use infringes or contributes to the infringement of such claim. The terms in this section state Philips' entire obligation and liability for claims of infringement, and Customer's sole remedy in the event of a claim of infringement.

12. Limitation of Liability. THE TOTAL LIABILITY, IF ANY, OF PHILIPS AND ITS AFFILIATES FOR ALL DAMAGES AND BASED ON ALL CLAIMS, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE, ARISING FROM A PRODUCT, LICENSED SOFTWARE, AND/OR SERVICE IS LIMITED TO THE PRICE PAID HEREUNDER FOR THE PRODUCT, LICENSED SOFTWARE, OR SERVICE. THIS LIMITATION SHALL NOT APPLY TO THIRD PARTY CLAIMS FOR BODILY INJURY OR DEATH CAUSED BY PHILIPS' NEGLIGENCE OR PROVEN PRODUCT DEFECT.

13. DISCLAIMER. IN NO EVENT SHALL PHILIPS OR ITS AFFILIATES BE LIABLE FOR ANY INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA, OR THE COST OF SUBSTITUTE PRODUCTS OR SERVICES WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT.

14. Confidentiality. Each party shall maintain as confidential any information furnished or disclosed to one party by the other party, whether disclosed in writing or disclosed orally, relating to the business of the disclosing party, its customers and/or its patients, and the quotation and its terms, including the pricing terms under which Customer has agreed to purchase the products. Each party shall use the same degree of care to protect the confidentiality of the disclosed information as that party uses to protect the confidentiality of its own information, but in no event less than a reasonable amount of care. Each party shall disclose such confidential information only to its employees having a need to know such information to perform the transactions contemplated by the quotation. The obligation to maintain the confidentiality of such information shall that (a) is or becomes generally available to the public without violation of this Agreement or any other obligation of confidentiality or (b) is lawfully obtained by the receiving Party from a third party without any breach of confidentiality or violation of law.

15. Compliance with Laws & Privacy.
15.1 Each party shall comply with all laws, rules, and regulations applicable to the party in connection with the performance of its obligations in connection with the transactions contemplated by the quotation, including, but not limited to, those relating to affirmative action, fair employment practices, FDA, Medicare fraud and abuse, and the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"). Health care providers are reminded that if the purchase includes a discount or loan, they must fully and accurately report such discount or loan on cost reports or other applicable claims for payment submitted under any federal or state health care program, including but not limited to Medicare and Medicaid, as required by federal law (see 42 CFR 1001.952[h]).
15.2 In the course of providing project implementation related services and/or warranty services to Customer, hereunder, it may be necessary for Philips to have access to, view and/or download computer files from the products that might contain Personal Data. "Personal Data" means information relating to an individual, from which that individual can be directly or indirectly identified. Personal Data can include both personal health information (i.e. images, heart monitor data, and medical record number) and non-health information (i.e. date of birth, gender). Philips will process Personal Data only to the extent necessary to perform and/or fulfill its project implementation related service, warranty service and/or warranty obligations hereunder.
15.3 It is Customer's responsibility to notify Philips if any portion of the order is funded under the American Reinvestment and Recovery Act ("ARRA"). To ensure compliance with the ARRA regulation, Customer shall include a clause stating that the order is funded under ARRA on its purchase order or other document issued by Customer.

16. Excluded Provider. Philips represents and warrants that Philips, its employees and subcontractors, are not debarred, excluded, suspended or otherwise ineligible to participate in a federal health care program, nor have they been convicted of any health care related crime for the products and services provided under this Agreement (an "Excluded Provider"). Philips shall promptly notify Customer when it becomes aware that Philips or any of its employees or subcontractors, providing services hereunder, have become an Excluded Provider whereupon Customer may terminate this order by express written notice for product and services not yet shipped or rendered.

17. General Terms. The following additional terms shall be applicable to the purchase of a product:
17.1 **Force Majeure.** Each party shall be excused from performing its obligations (except for payment obligation) arising from any delay or default caused by events beyond its reasonable control including, but not limited to, acts of God, acts of third parties, acts of any civil or military authority, fire, floods, war, embargoes, labor disputes, acts of sabotage, riots, accidents, delays of carriers, subcontractors or suppliers, voluntary or mandatory compliance with any government act, regulation or request, shortage of labor, materials or manufacturing facilities.
17.2 **Bankruptcy.** If Customer becomes insolvent, is unable to pay its debts when due, files for bankruptcy, is the subject of involuntary

bankruptcy, has a receiver appointed, or has its assets assigned, Philips may cancel any unfulfilled obligations, or suspend performance; however, Customer's financial obligations to Philips shall remain in effect.
17.3 **Assignment.** Customer may not assign any rights or obligations in connection with the transactions contemplated by the quotation without the prior written consent of Philips, which consent shall not be unreasonably withheld, and any attempted assignment without such consent shall be of no force or effect.
17.4 **Export.** Customer shall assume sole responsibility for obtaining any required export authorizations in connection with Customer's export of the products from the country of delivery.
17.5 **Governing Law.** All transactions contemplated by the quotation shall be governed by the laws of the state where the equipment will be installed, without regard to that state's choice of law principles, and expressly excluding application of the Uniform Computer Information Transactions Act ("UCITA"), in any form. EACH PARTY, KNOWINGLY AND AFTER CONSULTATION WITH COUNSEL, FOR ITSELF, IT'S SUCCESSSORS' AND ASSIGNS, WAIVES ALL RIGHT TO TRIAL BY JURY OF ANY CLAIM ARISING WITH RESPECT TO THIS AGREEMENT OR ANY MATTER RELATED IN ANY WAY THERETO.
17.6 **Entire Agreement.** These Terms and Conditions of Sale, the terms and conditions set forth in the quotation and the applicable Philips' product-specific warranty document constitute the entire understanding and agreement by and between the parties with respect to the transactions contemplated by the quotation, and supersede any previous understandings or agreements between the parties, whether written or oral, regarding the transactions contemplated by the quotation. The pricing in the quotation is based upon the terms and conditions in the quotation. No additional terms, conditions, consents, waivers, alterations, or modifications shall be binding unless in writing and signed by the parties. Customer's additional or different terms and conditions, whether stated in a purchase order or other document issued by Customer, are specifically rejected and shall not apply to the transactions contemplated by the quotation.
17.7 **Headings.** The headings in the quotation are intended for convenience only and shall not be used to interpret the quotation.
17.8 **Severability.** If any provision of the quotation is deemed to be illegal, unenforceable, or invalid, in whole or in part, the validity and enforceability of the remaining provisions shall not be affected or impaired, and shall continue in full force and effect.
17.9 **Notices.** Notices or other communications shall be in writing, and shall be deemed served if delivered personally, or if sent by facsimile transmission, by overnight mail or courier, or by certified mail, return receipt requested and addressed to the party at the address set forth in the quotation.
17.10 **Performance.** The failure of Customer or of Philips at any time to require the performance of any obligation will not affect the right to require such performance at any time thereafter. Course of dealing, course of performance, course of conduct, prior dealings, usage of trade, community standards, industry standards, and customary standards and customary practice or interpretation in matters involving the sale, delivery, installation, use, or service of similar or dissimilar products or services shall not serve as references in interpreting the terms and conditions of the quotation.
17.11 **Obligations.** Customer's obligations are independent of any other obligations the Customer may have under any other agreement, contract, or account with Philips. Customer will not exercise any right of offset in connection with the terms and conditions in the quotation or in connection with any other agreement, contract, or account with Philips.
17.12 **Additional Terms.** Schedule 1 is incorporated herein and its additional terms shall apply solely to Customer's purchase of Interventional X-Ray (iXR), Diagnostic X-Ray (DXR), Computed Tomography (CT), Magnetic Resonance (MR), Cardiovascular (CV), Positron Emission Tomography (PET), Nuclear Medicine (NM) and Ultrasound (US) products (including Image Guided Intervention and Therapy (IGIT) products). If any terms set forth in a schedule conflict with terms set forth in these Terms and Conditions of Sales, the terms set forth in the schedule shall govern.

LICENSED SOFTWARE

1. License Grant.
1.1 Subject to any usage limitations for the Licensed Software set forth on the product description of the quotation, Philips grants to Customer a nonexclusive and non-transferable right and license to use the computer software package ("Licensed Software") in accordance with the terms of the quotation. The License shall continue for as long as Customer continues to own the product, except that Philips may terminate the License if Customer is in breach or default. Customer shall return the Licensed Software and any authorized copies thereof to Philips immediately upon expiration or termination of this License.
1.2 The License does not include any right to use the Licensed Software for purposes other than the operation of the product. Customer may make one copy of the Licensed Software in machine-readable form solely for backup purposes. Philips reserves the right to charge for backup copies created by Philips. Except as otherwise provided under section 1.6, Customer may not copy, reproduce, sell, assign, transfer, or sublicense the Licensed Software for any purpose without the prior written consent of Philips. Customer shall reproduce Philips' copyright notice or other identifying legends on such copies or reproductions. Customer will not (and will not allow any third party to) decompile, disassemble, or otherwise reverse engineer or attempt to reconstruct or discover the product or Licensed Software by any means whatsoever.
1.3 The License shall not affect the exclusive ownership by Philips of the Licensed Software or of any trademarks, copyrights, patents, trade secrets, or other intellectual property rights of Philips (or any of Philips' suppliers) relating to the Licensed Software.
1.4 Customer agrees that only authorized officers, employees, and agents of Customer will use the Licensed Software or have access to the Licensed Software (or to any part thereof), and that none of Customer's officers, employees, or agents will disclose the Licensed Software, or any portion thereof, or permit the Licensed Software, or any portion thereof, to be used by any person or entity other than those entities identified on the quotation. Customer acknowledges that certain of Philips' rights may be derived from license agreements with third parties, and Customer agrees to preserve the confidentiality of information provided by Philips under such third party license agreements.
1.5 The Licensed Software shall be used only on the product(s) referenced in the quotation.
1.6 Customer may transfer the Licensed Software in connection with sale of the product to a healthcare provider who accepts all of the terms and conditions of this License; provided that Customer is not in breach or default of this License, the Terms and Conditions of Sale, or any payment obligation to Philips.

2. Modifications.
2.1 If Customer modifies the Licensed Software in any manner, all warranties associated with the Licensed Software and the products shall become null and void. If Customer or any of its officers, employees, or agents should devise any revisions, enhancements, additions, modifications, or improvements in the Licensed Software, Customer shall disclose them to Philips, and Philips shall have a non-exclusive royalty-free license to use and to sub-license them.
2.2 The Licensed Software is licensed to Customer on the basis that (i) Customer shall maintain the configuration of the products as they were originally designed and manufactured and (ii) the product includes only those subsystems and components certified by Philips.

The Licensed Software may not perform as intended on systems modified by other than Philips or its authorized agents, or on systems which include subsystems or components not certified by Philips. Philips does not assume any responsibility or liability with respect to unauthorized modification or substitution of subsystems or components.

Schedule 1
Interventional X-Ray (iXR), Diagnostic X-Ray (DXR), Computed Tomography (CT), Magnetic Resonance (MR), Cardiovascular (CV), Positron Emission Tomography (PET), Nuclear Medicine (NM), and Ultrasound (US) products (including Image Guided Intervention and Therapy (IGIT) Products)

1. Payment Terms.
Unless otherwise specified in the quotation, Philips will invoice Customer, and Customer will pay such invoice on receipt, as follows:
1.1 For Interventional X-Ray (iXR), Diagnostic X-Ray (DXR), Computed Tomography (CT), Magnetic Resonance (MR), Cardiovascular (CV), Positron Emission Tomography (PET), and Nuclear Medicine (NM) products:
(a) 10% of the purchase price shall be due with Customer's acceptance of the quotation.
(b) 70% of the purchase price shall be due on delivery of the major components of the product. Product installation will not begin until Customer has paid this portion of the purchase price.
(c) 20% of the purchase price shall be due when the product is available for first patient use. Available for first patient use means the product has been installed and substantially meets Philips' published specifications.
1.2 For Ultrasound(US) products (including IGIT Products):
(a) 100% of the purchase price shall be due thirty (30) days from Philips' invoice date.
1.3 If the start of the installation is delayed for any reason beyond the control of Philips for more than thirty (30) days following the date that Philips notifies customer that the major components of the product are available for delivery, the unpaid portion of the purchase price shall be due on the thirty-first (31st) day following such date.

2. Cancellation. The quotation is subject to change or withdrawal prior to written acceptance by Customer. All purchase orders issued by Customer are subject to acceptance by Philips. If Customer cancels an order prior to product shipment, Customer shall pay a cancellation charge of fifteen percent (15%) of the net order price. Orders may not be cancelled after shipped.

3. Delivery.
3.1 Philips will use reasonable efforts to ship the product to the Customer by: (a) by the mutually agreed upon shipment date; or (b) by the date stated in the quotation; or (c) as otherwise agreed in writing. Philips will ship the product according to Philips' standard commercial practices. Philips will deliver the equipment during normal working hours, 8:00 - 5:00 PM, in the time zone where the Customer is located. Philips may make partial shipments. Philips will pay shipping costs associated with product shipment.
3.2 Prior to the shipment of any product, Philips may change the construction or the design of the product without notice to the Customer so long as the function, footprint, and performance of the product are not substantially altered.
3.3 If Customer requests a delay in the date major components of the product are available for delivery, then Philips will place the product in storage and the unpaid portion of the purchase price shall be due. Customer will reimburse Philips for all storage fees incurred upon receipt of invoice.

4. Additional Customer Installation Obligations for Magnetic Resonance.
4.1 Customer's contractor or Customer's architect is required to provide detailed information on the proposed Helium Exhaust Pipe for their MRI system prior to installation to ensure safety specifications are being met.
Required Details include:
(a) Architectural drawing or sketch with complete dimensions including lengths, bending radii, bending angles, and pipe diameters for entire Helium Exhaust Pipe run from RF enclosure to discharge location.
(b) Completed Helium Exhaust Pipe Verification Checklist (Provided by Local Philips Project Manager)
(c) Picture showing the area where the Helium Exhaust Pipe will discharge.
4.2 Magnets will not be released for delivery unless and until Helium Exhaust Pipe details are provided for verification and have been confirmed to meet all life safety specifications.

5. Additional Terms Related to Sales of IGIT Products.
5.1 As part of installation, Philips will connect the IGIT product to such DICOM compatible scanners as Customer may designate (in writing), including CT and MR scanners and, if ultrasound navigation is included in the product, an iU22 ultrasound system.
5.2 If Customer requires that Philips connect the IGIT product to more than two (2) scanners or other devices, then Philips shall invoice Customer and Customer shall pay for installation services at Philips' then-current daily service rate. Additionally, Customer shall (a) make the scanner(s) the Customer has designated available to Philips' installation representative, (b) create and provide a data set of the installation phantom on or before the installation date, and (c) have its IT representative available to assist in connecting the IGIT product to Customer's DICOM devices during the agreed installation time. If such installation and connection is delayed due to Customer failing in its obligations described in this section, then Philips may invoice Customer and Customer shall pay either for (a) any time that Philips spends waiting at the site for such obligation to be fulfilled, at Philips' then-current service rate, or (b) reasonable travel expenses if Philips has to reschedule such installation.
5.3 Training on the IGIT Product is not included with the purchase of the IGIT product unless it is separately identified on the quotation.

Non Disclosure Agreement for Philips Confidential Pricing Information

The parties specified below agree to the following terms:

A. Philips

Name	Philips Healthcare, a division of Philips Electronics North America Corporation
Address	22100 Bothell-Everett Highway, Bothell, WA 98021 United States of America

B. Company

Name	DUKE UNIVERSITY MEDICAL CENTER
Address	2301 ERWIN RD DURHAM, NC 27710

C. Confidential Information

Authorized Purpose	To evaluate Philips' confidential information relating to pricing for imaging equipment ("Pricing") in connection with the potential purchase of such imaging equipment.
Period	Begins on the date Pricing is first disclosed and continues for 5 years from date Pricing is last disclosed.

D. Philips Contact

Name	Bethann Griffith-Subik
Title	
Telephone	(919) 677-9046
Fax	(919) 677-9047
e-mail	
Signature	

Company Contact

Name	
Title	
Telephone	
Fax	
e-mail	
Signature	

1. The following terms and conditions (the "Agreement") apply to Pricing disclosed by Philips and its Affiliates ("Philips") to Company and its Affiliates ("Company"), in connection with the Authorized Purpose.

   (a) Subject to Philips' prior written consent, Company may disclose, or request that Philips disclose, Pricing to Company's Affiliates that need to know the Pricing for carrying out the Authorized Purpose, provided they are advised of and agree to be bound by this Agreement. Company is responsible for any breach of this Agreement by its Affiliates.

   (b) An Affiliate is any corporation, company, or other entity, that: (i) is under the Control of a party hereto; or (ii) has Control of a party hereto; or (iii) is under common Control with a party hereto. For this purpose "Control" means that more than fifty percent (50%) of the controlled entity's shares or ownership interest representing the right to make decisions for such are owned or controlled, directly or

2. Philips may disclose Pricing to Company with respect to the Authorized Purpose in writing, orally, or otherwise. All information is assumed to be Pricing, and confidential, if the confidential or proprietary nature is reasonable under the circumstances.
3. All Pricing disclosed by Philips shall remain Philips' the property. Company does not, by implication, estoppel, or otherwise, acquire any intellectual property right, title, or ownership, nor a license to any such intellectual property right, with respect to any Pricing disclosed by Philips hereunder.

   ALL PRICING IS PROVIDED ON AN "AS IS" BASIS, WITHOUT ANY WARRANTY WHATSOEVER. PHILIPS SHALL HAVE NO LIABILITY WHATSOEVER RESULTING FROM THE USE OF THE INFORMATION PROVIDED.
4. Company shall:
   (a) not use the Pricing for any purpose other than the Authorized Purpose;
   (b) not disclose the Pricing to any third party;
   (c) protect the Pricing against disclosure in the same manner and with the same degree of care with which Company protects its own confidential information but not less than a reasonable degree of care; and
   (d) limit circulation of the Pricing to Company's employees as have a need to know in connection with the Authorized Purpose.

   These obligations shall survive the termination of this Agreement. Philips may terminate this Agreement at any time by means of a written notice to Company. Company shall return to Philips, or certify destruction of, all Pricing, immediately upon termination or expiration of this Agreement.
5. Information disclosed by Philips to Company pursuant to this Agreement shall not be confidential to the extent that the information:
   (a) is or becomes part of the public domain without violation of this Agreement or any other obligation of confidentiality;
   (b) is known by Company prior to disclosure by Philips;
   (c) is lawfully obtained by Company from a third party without any breach of confidentiality or violation of law; or
   (d) is developed by Company completely independently of any such disclosure by Philips.
6. If Company is required, pursuant to administrative or judicial action or subpoena, to disclose the Pricing, Company shall use its best efforts to maintain the confidentiality of the Pricing, e.g. by asserting in such action any applicable privileges. Immediately after gaining knowledge or receiving notice of such action or subpoena, Company shall notify Philips and give Philips the opportunity to seek any other legal remedies so as to maintain such Pricing in confidence, including a reasonable protective order.
7. Company may not transfer or assign any or all of its rights and/or obligations or delegate the performance of any or all of its obligations under this Agreement, directly or indirectly, through acquisition, merger or otherwise, without the prior written consent of Philips. Any transfer, assignment or delegation in contravention of the foregoing shall be void.
8. Company shall not disclose, export or release the Pricing in contravention of any applicable laws or regulations.
9. This Agreement shall be governed and construed in accordance with the laws of the State of New York, without giving effect to its conflict of laws provisions.
10. This Agreement contains the entire understanding of the parties and supersedes any previous understandings or agreements with respect to the subject matter hereof. This Agreement may be amended only in writing signed by authorized representatives of each party.

Exhibit 5

PHILIPS

Ms. Gina L. Deatrick
Administrative Director
Cardiac Invasive Services
Duke Heart Center
DUMC 3460
Durham, NC. 27710

Philips Healthcare

Atlanta Zone Office
One Deerfield Centre
Alpharetta, GA. 30004

Date: 12/13/11

Dear Gina Deatrick,

The purpose of this letter is to confirm that Philips Healthcare Refurbished Systems will be responsible for removing your EP Lab#2 Allura 15/12 Serial number 18176, installed at Duke University Hospital in Durham, as part of your purchase of Allura BiPlane 20/10. The cost for the deinstallation and removal is included in the price quotation for the replacement equipment. There are no additional costs for deinstallation and removal.

We will work closely with you to insure proper timing of the deinstallation. It is understood that Philips will take possession of the existing equipment and will permanently remove it from the State of North Carolina. Philips will not sell the existing equipment to any North Carolina facility unless the facility has the appropriate Certificate of Need approval.

Sincerely,

Beth Griffith-Subik
Philips Healthcare Account Manager Raleigh/Durham, NC

Philips Refurbished Systems Contact Information
Refurbished Systems
Philips Healthcare
595 Miner Rd.
Cleveland, OH 44143
Tel: 440-483-7410

Exhibit 6

DukeMedicine

Duke Heart Center
Duke University Health System

Christopher O'Connor, MD, Medical Director, CV Services
Sean Sondej, Interim Associate VP, CV Services DUHS

December 15, 2011

Re: EP Lab Equipment Replacement

To Whom It May Concern:

The EP biplane equipment in room 7231 is still in use, and will continue to be, until its replacement through this project.

If there are any questions, please do not hesitate to reach me at (919) 681-4060.

Sincerely,

Sean W Sondej
Interim Associate Vice President, Cardiovascular Services for DUHS
Vice President, Emergency Services for DUH

PROPOSED TOTAL CAPITAL COST OF PROJECT **Exhibit 7**

Project Name: Replacement of EP Lab #2
Provider/Company: Duke University Health System d/b/a Duke University Hospital

A. Site Costs

(1) Full purchase price of land ..... $ 0
Acres 0 Price per Acre $ 0
(2) Closing costs ..... $ 0
(3) Site Inspection and Survey.....$ 0
(4) Legal fees and subsoil investigation ..... $ 0
(5) Site Preparation Costs [Include]
Soil Borings.....$ 0
Clearing and Earthwork...$ 0
Fine Grade For Slab .....$ 0
Sidewalks .....$ 0
Water and Sewer....$ 0
Excavation and Backfill....$ 0
Termite Treatment ....$ 0
Sub-total Site Preparation Costs ..... $ 0
(6) Other (Specify).....$ 0
(7) **Sub-Total Site Costs** ..... $ 0

B. Construction Contract

(8) Cost of Materials [Include]
General Requirements
Concrete/Masonry
Woods/Doors & Windows/Finishes
Thermal & Moisture Protection
Equipment/Specialty Items
Mechanical/Electrical
Sub-Total Cost of Materials..... $ 204,000
(9) Cost of Labor ..... $ 306,000
(10) Other .... $ 0
(11) **Sub-Total Construction Contract** ..... $ 510,000

C. Miscellaneous Project Costs

(12) Building Purchase.....	$ 0
(13) Fixed Equipment Purchase/Lease	$ 1,231,524
(14) Movable Equipment Purchase/Lease	$ 10,000
(15) Furniture	$ 0
(16) Landscaping.....	$ 0

PROJECT CAPITAL COST (Continued)

Project Name: Replacement of EP Lab #2
Provider/Company: Duke University Health System d/b/a Duke University Hospital

(17) Consultant Fees
Architect and Engineering Fees ..... $ 51,150
Legal Fees ..... $ 0
Market Analysis ..... $ 0
Other... $ 0
Sub-Total Consultant Fees ..... $ 51,150
(18) Financing Costs (e.g. Bond, Loan, etc.) $ 0
(19) Interest During Construction ..... $ 0
(20) Other (See Note) ..... $ 148,944
(21) **Sub-Total Miscellaneous** ..... $ 1,441,618

D. Total Capital Cost of Project (Sum A-C above) $ 1,951,618

Notes:

1) The total shown on line 11 is the total certified by the architect (Exhibit 7). The most recent estimate is $508,882, which is slightly less.
2) The total for fixed equipment on line 13 includes the net price ($1,100,000) and the trade-in allowance ($55,000) shown on page 26 of the quotation and the cost of modifications to existing fixed equipment that support the existing lab will support the new lab.
3) The $10,000 entered on line 14 is for telephones
4) Other costs totaled on line 20 include:

Utilities, Permits & Inspections	$13,973
Printing / Reimbursables	$7,500
Project Management	$25,000
Construction Administration	$471
Provision for Contingency (20% of construction cost)	$102,000
Total	**$148,944**

Exhibit 8

Isley | Hawkins
Architecture

Isley Hawkins, Inc.
112 S. Duke Street, #5
Durham, NC 27701
919.489.7417
isleyhawkins.com

December 13, 2011

Duncan Yaggy, Ph.D.
Chief Planning Officer
Duke University Health System
Box 3229
Durham, North Carolina, 27710

Re: **Construction Cost certification**
FPDC No. 3321HSDC
EP 2 Fluoroscopy Equipment Replacement and room renovation - room 7230
Duke Hospital, Level 7
Durham, NC

Dear Dr. Yaggy:

This is to certify that our office has reviewed the preliminary construction cost estimate prepared by Skanska USA Building Inc. for the replacement of the equipment in EP lab no. 2 and associated renovations. The estimate is based on a preliminary study prepared and provided to the contractor. The study was conducted by our office and Edmondson Engineers in consultation with the equipment vendor.

This estimate is of the "rough order of magnitude" variety and is not meant to be definitive. Historical data indicate that in work of this nature, the construction cost for material and labor is usually 60% labor and 40% material.

Labor and Material Costs:

Material	(@ 40%) =	$ 204,000
Labor	(@ 60%) =	$ 306,000
	Total =	$ 510,000

Respectfully,

J. Malcolm Hawkins, AIA

CC: Shawn Subasic, Director DUHS FPDC
Steve Metcalf, DUHS FPDC Project Manager
Gina Deatrick, Duke Heart Center Administrative Director

Nathan Isley AIA, LEED AP, NDA
J. Malcolm Hawkins AIA, EDAC
Max Isley AIA Emeritus

DukeMedicine

Duke Heart Center
Duke University Health System

Christopher O'Connor, MD, Medical Director, CV Services
Sean Sondej, Interim Associate VP, CV Services DUHS

I assure that, to the best of my knowledge, the above capital costs for the proposed project are complete and correct and that it is my intent to carry out the proposed project as described.

SEAN W SONDEJ

Signature of Office Authorized to Represent Provider/Company

Interim Associate VP, CV Services DUHS