



IntelliSpace Breast solution

Integrating your breast review environment

Today, clinical studies suggest radiologists use multiple modalities (mammography, ultrasound, and MRI) to assist in diagnosing and management of patients. With an increasing number of patients and the need to review studies from multiple modalities, radiologists are finding it difficult to keep up with the number of studies that must be reviewed and reported on multiple workstations.

Key advantages

- Save space in the reading room by reporting all studies on a single work spot
- Save time to review the patient history by having prior mammography, ultrasound and MRI automatically opened on a single work spot
- Improved quality of care – report consistently in compliance to standards by integrating review and BI-RADS entry

PHILIPS
sense and simplicity

IntelliSpace Breast solution highlights

“I was really surprised by the automatic breast tissue alignment. I have never seen this before. It is the most natural way to compare mammograms. What I also particularly like about this workstation is the feature that lets you view the priors, even from Ultrasound and MR. We used to do this separately at our PACS workstations.”

Dr. Schuur, St. Elizabeth Hospital, Tilburg, Netherlands

As a Breast Imager, imagine saving...

- **Time** reviewing patient images and history by having prior Mammography, Ultrasound, and MRI automatically open on a single work spot
- **Time** with integrated image review by high-performance, full resolution Mammography, Ultrasound and MRI modules and DynaCAD advanced visualization system for MRI
- **Time** by reporting consistently in compliance to BI-RADS®1 standards
- **Space** in the reading room by reading and reporting all studies in one workstation

No longer having to...

- Run between workstations and different reading rooms
- Use multiple systems for images
- Use multiple systems for reporting

Philips proudly introduces the IntelliSpace Breast solution, a solution that initially includes the products MammoDiagnost VU, Multi-modality Breast Applications, and DynaCAD on a single workstation. The IntelliSpace Breast solution addresses the need for integrated image and information management and takes it a step further by seamlessly interfacing advanced processing capabilities for Mammography, Ultrasound and MRI.

Addressing the need to review patient history, the IntelliSpace Breast solution automatically opens all prior images and reports across the three modalities, ready for comparison. Mammography viewing is provided on high-resolution, 5MP mammography monitors with automatic breast tissue alignment and a specially designed keypad for convenient review. It allows the radiologist to display CR and DR on the same screen from any vendor for simple, fast and seamless reviews.

Ultrasound and MRI studies are automatically displayed per specific hangings, including multiplanar reconstructions, maximum intensity projections and subtraction images over the dynamic series. Also 3D ultrasound volumes can be assessed in a volumetric way. The IntelliSpace Breast solution can scale up to three work areas.

To further enhance efficiency and increase diagnostic confidence, the IntelliSpace Breast solution is seamlessly interfaced with DynaCAD advanced processing system for breast MRI. The DynaCAD advanced visualization system offers motion correction, automatic curve analysis and a wide range of advanced tools, including custom hanging protocols.



Breast mammography and ultrasound

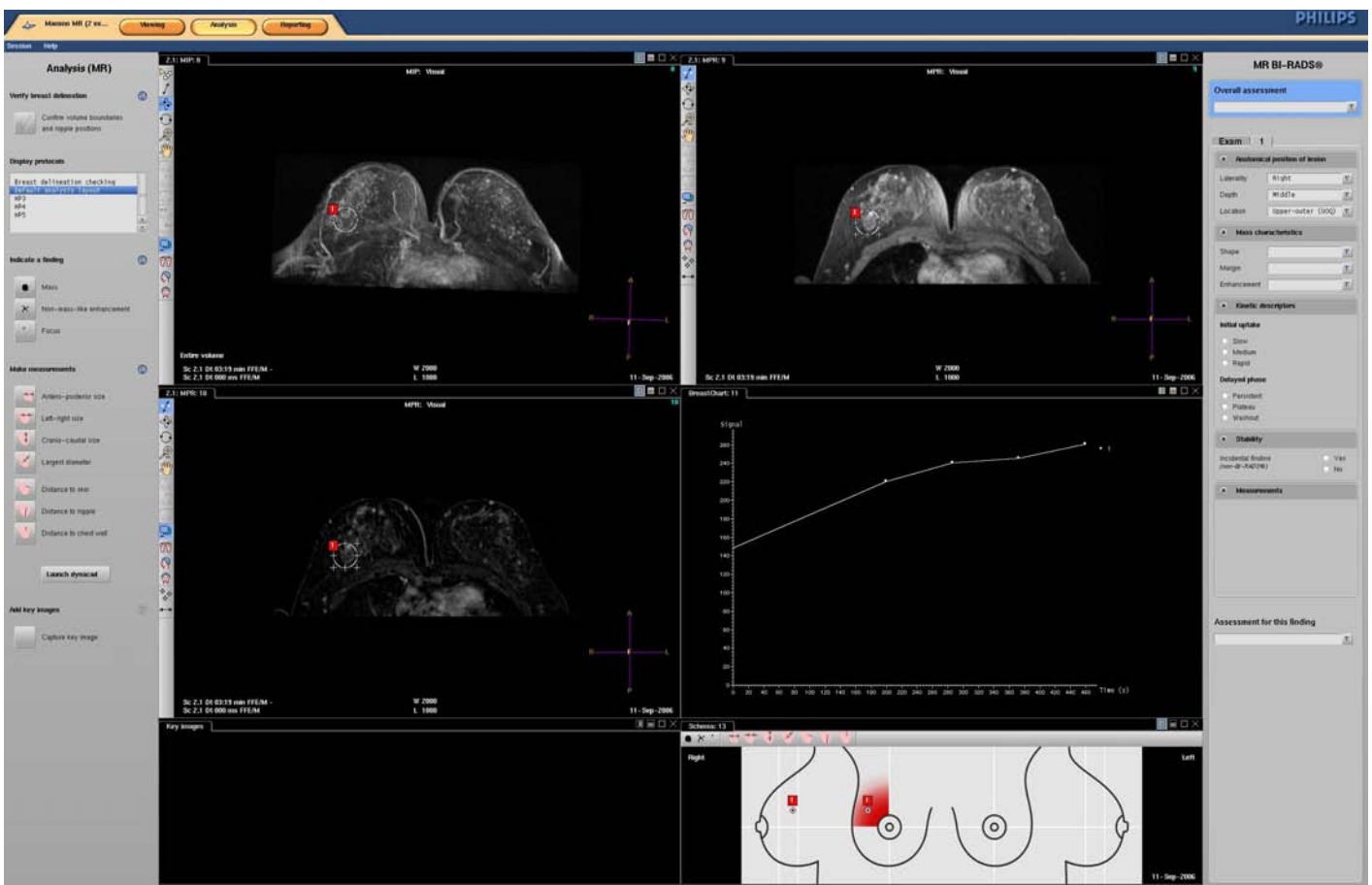
- Automated mammography hangings tailored to user preferences
- Automated hangings with priors from any vendor, CR, DR, Ultrasound or digitized film
- Mammography workflow keypad for quick access to often-used functions
- Fast display of images and hangings
- Up to 3 workstations can be used in parallel on a single database
- 5 MP mammography monitors to speed up full-resolution image inspection
- Structured reports with modality-specific BI-RADS® definition for Mammography and Ultrasound
- Automated breast tissue alignment between left and right delivers optimal symmetry for faster review
- Image inversion with background suppression
- Vendor neutral images using DICOM format

Breast MRI

- Comparison of all prior studies
- Structured report in modality-specific BI-RADS® definitions on exam level and per lesion
- Lesion locations indicated on a breast diagram
- MRI images automatically matched to diagram positions
- Automatically relates to BI-RADS® location fields
- Annotations automatically result in related key images
- DynaCAD advanced visualization system available

DynaCAD advanced visualization system for Breast MRI

- Automated curve analysis
- Lesion size measurements
- Motion correction
- Subtractions generated
- Custom hanging protocols



The IntelliSpace Breast solution is configured with lots of freedom of space, proportionate to the needs of all the data displayed. A current MRI study is displayed conveniently next to the prior studies (mammograms, ultrasound and/or MRI's) while the 5 MP monitors offer full detail for Mammography review.

IntelliSpace Breast solution is delivered with the following hardware

- Windows 2003 server
- 1 server CPU
 - Dell T310
 - 3 Tb redundant database (RAID-5)
- 1 client CPU (can be extended with 2 additional clients for parallel reading from same database)
- 5MP Mammography monitors
- 30" color monitor
- 19" color monitor for worklist, navigation, etc
- Dedicated Mammography workflow keypad
- Keyboard, mouse
- Quick reference card
- User documentation



Dedicated Mammography workflow keypad for quick access to often used functions

“This integration (of all my images and information to assess the history of the patient) is making our lives much easier. Think of all the duplicate work we currently do with all the separate systems. Integration will save us a lot of time. And, at the same time it connects to better care for the patients by more accurately relating findings from the different modalities.”

Dr Gillian Newstead, University of Chicago Hospital

Connectivity

- DICOM data from all scanners can be transferred to central server of IntelliSpace Breast solution
- Multi-vendor proven for Mammography, breast MRI and 2D Ultrasound.
- CAD server (R2 or iCAD) produces DICOM overlays that are sent to IntelliSpace Breast solution
- CAD overlays contain markers to suspicious areas in the images
- IntelliSpace Breast solution merges the overlays to the DICOM images (automatically) so the user can display the CAD markers over the images (e.g. from the keypad)

Workflow configuration with PACS

- Images from FFDM, Ultrasound, MRI, and DynaCAD are sent to either:
 - IntelliSpace Breast solution and PACS in parallel
 - PACS that then auto forwards to Integral Breast Workspace
- CAD server sends results to PACS and IntelliSpace Breast solution
- IntelliSpace Breast solution merges CAD display and facilitates review
- Review results are sent to PACS for storage in DICOM GSPS

Radiologists can now experience...

- Smooth, fast review of images, analysis and patient information across Mammography, Ultrasound and MRI modalities
- Prior and current images and reports automatically displayed in the same workspot
- A single diagnostic findings system that supports BI-RADS® reporting
- Consistent reporting to other disciplines across the hospital enterprise
- No more re-selecting patients and running between systems
- More space in the reading room
- DynaCAD's advanced visualization system for MRI
- A system that is both multi-modality and multi-vendor

¹ Breast Imaging-Reporting System (BI-RADS®) is an assessment system for Mammography, US, and MRI, trademarked by the American College of Radiology and allows for unambiguous understanding of patient records between multiple doctors.

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