



MAGNETOM Spectra

Application Packages

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SIEMENS

Preliminary Edition - 2/2012

Application Packages

Tim Planning Suite

Easy planning of extended Field of View examinations in an efficient way using Set-n-Go protocols. It allows planning of several stations at once e.g. on composed localizer images. The overlap of slice groups can be adjusted. All stations can have independent parameter settings although they are displayed together. A special coupling mode allows easy positioning of all stations at once according to the patient's anatomy. Fully supports scan@center and Phoenix functionality.

- Tim Planning UI with optimized layout for slice positioning
- Ready to use Set-n-Go protocols for different clinical questions
- Integrated toolbar for fast advanced slice planning: FoV-Plus, FoV-Minus, AlignParallel, AlignFieldOfViews

Tim Whole Body Suite

MAGNETOM Spectra features a full effective Field of View of 205 cm.

Table movement to its full extent can be controlled from the *syngo* Acquisition Workplace.

The large FoV helps in imaging metastases with sequences such as TIRM (Turbo Inversion Recovery Magnitude). Whole body MR Angiography is possible on the entire volume with iPAT.

- Max. scan range of 205 cm
- Protocols and programs for whole body MR Angiography and metastases detection

syngo MapIt

syngo MapIt provides the protocols and Inline calculation of parametric maps of T1, T2, and T2* properties of the imaged tissue. The application range includes cartilage evaluation of joints, liver, kidney, prostate, and more.

In particular, *syngo* MapIt supports the user in detecting osteo arthritis of the joint based on the T1, T2, and T2* properties of the cartilage.

- 3D VIBE sequence for Inline T1 mapping
- Multi-echo spin echo sequence for Inline T2 mapping
- Multi-echo gradient echo sequence for Inline T2* mapping
- Protocols for fully automated Inline parametric mapping

syngo SWI (Susceptibility Weighted Imaging)

Siemens-unique sequence technique for Susceptibility Weighted Imaging

- Visualization of local changes of the magnetic field due to tissue properties in general and due to the presence of deoxygenated blood or blood decomposition products
- 3D GRE sequence with full flow compensation to support venous angiography
- Enhanced susceptibility weighting of the magnitude images by phase images to increase sensitivity to intracerebral hemorrhage

Inline BOLD Imaging (Blood Oxygen Level Dependent)

Examination of intrinsic susceptibility changes in different areas of the brain, induced by external stimulation (e.g. motor or visual). Automatic real-time calculation of z-score (t-test) maps with Inline Technology, for variable paradigms.

- Compatible with single-shot EPI with high susceptibility contrast for fast multi-slice imaging
- ART (Advanced Retrospective Technique) for fully automatic 3D retrospective motion correction, for 6 degrees of freedom (3 translations and 3 rotations)
- Mosaic images for efficient storage and transfer of large data sets
- 3D spatial filtering
- Inline calculation of t-statistics (t-maps) based on a general linear model (GLM) including the hemodynamic response function and correcting for slow drifts
- Overlay of inline calculated statistical results on the EPI images

Neuro Perfusion

Inline Perfusion helps to streamline the clinical workflow by automating post-processing perfusion data during data acquisition. This makes it possible to see the clinical results immediately and facilitates instantaneous image quality assurance. Inline perfusion functionality is user-configurable. Neuro Perfusion measures perfusion deficits and assist in the diagnosis and grading of e.g. vascular deficiencies and brain tumors.

Neuro Perfusion provides the inline calculation of relative Cerebral Blood Volume (rel CBV), corrected relative CBV, relative Cerebral Blood Flow (rel CBF), relative Mean Transit Time (MTT), Global Bolus Plot, Percentage of Baseline at Peak and a task card for detailed post-processing of brain perfusion data sets. It also features retrospective motion correction of the time series. Color display of the relMTT, relCBV, and relCBF is supported. Flexible selection of the Arterial Input Function (AIF) for more reliable analysis taking into account the dynamics over time of the contrast agent enrichment, as well as the use of automated local AIFs are available.

3D PACE

3D PACE (Prospective Acquisition CorrEction) enhances Inline BOLD imaging with motion correction during the acquisition of a BOLD exam.

In contrast to a retrospective motion correction that corrects previously acquired data, the unique 3D PACE tracks the head of the patient, correcting for motion in real time during the acquisition. This increases the data quality beyond what can be achieved with a retrospective motion correction. As a result the sensitivity and specificity of BOLD experiments are increased.

- Fully automatic 3D prospective motion correction during data acquisition, for 6 degrees of freedom (3 translations and 3 rotations)
- Motion correction covering the complete 3D volume
- Provides high accuracy
- Substantially reduced motion-related artifacts in t-test calculations
- Significantly increased signal changes in the activated neuronal volume
- Increased functional MRI (fMRI) sensitivity and specificity

syngo DTI (Diffusion Tensor Imaging)

Acquisition of data sets with multi-directional diffusion weighting to assess anisotropic diffusion properties of brain tissue

- Measurement of up to 256 directions of diffusion weighting with up to 16 different b-values
- Inline calculation of the diffusion tensor
- Inline calculation of Fractional Anisotropy (FA) maps (grey-value as well as color-coded for principle diffusion direction), Apparent Diffusion Coefficient (ADC) maps and trace-weighted images based on the tensor

Multiple Direction Diffusion Weighting (MDDW)

Diffusion tensor imaging measurements can be done with multiple diffusion-weightings and up to 12 directions for generating data sets for diffusion tensor imaging.

AutoAlign Spine

Single mouse click double oblique positioning of transverse slice packages in spine imaging. AutoAlign Spine localizes the intervertebral disk on sagittal images and positions the transverse slice packages parallel to the disk in a standardized way. This allows for a faster and easier exam and supports reading by delivering a higher and more standardized image quality.

Inline Composing

Automatic anatomical or angiographic composing of multiple adjacent coronal or sagittal images for presentation and further evaluation.

Composed images can be automatically loaded into Graphical Slice Positioning for planning purposes.

syngo TWIST

This package contains a Siemens-unique sequence and protocols for advanced time-resolved (4D) MR angiography and dynamic imaging in general with high spatial and temporal resolution. syngo TWIST supports comprehensive dynamic MR angio exams in all body regions. It offers temporal information of vessel filling in addition to conventional static MR angiography, which can be beneficial in detecting or evaluating malformations such as shunts. syngo TWIST can be combined with water excitation.

syngo NATIVE

Integrated software package with sequences and protocols for non-contrast enhanced 3D MRA with high spatial resolution. NATIVE particularly enables imaging of abdominal and peripheral vessel

NATIVE offers:

- Non-contrast MRA
- Separate imaging of arteries and veins
- Visualization of – e.g. – renal arteries or peripheral vessels

The *syngo* NATIVE package comprises:

- *syngo* NATIVE TrueFISP
- *syngo* NATIVE SPACE

syngo ASL (Arterial Spin Labeling) 2D

Arterial Spin Labeling (ASL) is an MR technique using the water in arterial blood as an endogenous contrast agent to evaluate perfusion non-invasively. *syngo* ASL provides unique insight into human brain perfusion and function physiology by evaluating cerebral blood flow. *syngo* ASL is capable of high spatial resolution perfusion imaging, making the technique very appealing in the evaluation of stroke, tumors, degenerative diseases, epilepsy but also in basic neuroscience, e.g. for studies of functional CBF changes.

- Fully compatible with iPAT
- Includes 3D PACE motion correction for increased reliability
- Fully automated Inline calculation of regional blood flow color maps
- Supports the "Pulsed Arterial Spin Labeling" – technique (PASL)

syngo ASL (Arterial Spin Labeling) 3D

Arterial Spin Labeling (ASL) is an MR technique using the water in arterial blood as an endogenous contrast agent to evaluate perfusion noninvasively. *syngo* ASL provides unique insight into human brain perfusion and function by evaluating cerebral blood flow. *syngo* ASL is capable of high spatial resolution perfusion imaging, making the technique very appealing in the evaluation of stroke, tumors, degenerative diseases, epilepsy but also in basic neuroscience, e.g. for studies of functional CBF changes.

- Fully compatible with iPAT
- Includes 3D PACE motion correction for increased reliability
- Fully automated Inline calculation of relative blood flow color maps
- Supports the "Pulsed Arterial Spin Labeling" – technique (PASL)
- 3D-GRASE ASL sequence: A 3D volume acquisition with echo planar imaging and multiple refocusing pulses to increase signal-to-noise and to speed-up scan times. Multi-phase and multislice acquisition is supported

Advanced Cardiac

This package contains special sequences and protocols for advanced cardiac imaging including 3D and 4D *syngo* BEAT functionalities. It supports advanced techniques for ventricular function imaging, dynamic imaging, tissue characterization, coronary imaging, and more.

syngo BEAT is a unique tool for fast and easy cardiovascular MR imaging. It provides 1-click switch from cine imaging to tagging for wall motion evaluation and 1-click switch from 2D to 3D imaging. *syngo* BEAT automatically adjusts all parameters associated with the changes.

Cardiac and vessel morphology	<ul style="list-style-type: none"> • Multi echo technique thalassemia assessment • 3D aortopathy imaging with free breathing (SPACE)
Morphology and global or regional ventricular wall motion analysis with <i>syngo</i> BEAT	<ul style="list-style-type: none"> • 3D cine acquisition for full CT-like heart coverage • 2D segmented FLASH for visualization of the regional wall motion using various tagging techniques (grid or stripes)
Dynamic myocardial imaging with <i>syngo</i> BEAT	<ul style="list-style-type: none"> • Ultra-fast, high-SNR sequence for dynamic imaging with GRE EPI contrast for stress and rest exams
Tissue characterization with <i>syngo</i> BEAT	<ul style="list-style-type: none"> • Robust myocardial tissue characterization with 3D PSIR (phase-sensitive inversion recovery), e.g. after myocardial infarction or for differentiation of cardiomyopathies. • Fast and complete coverage of the myocardium with IR 3D FLASH and TrueFISP
Coronary imaging with <i>syngo</i> BEAT	<ul style="list-style-type: none"> • 3D whole heart non-contrast coronary MRA • 3D whole heart MRA with advanced free-breathing navigator compensating diaphragm shifts during the acquisition (motion-adaptive respiratory gating)

TGSE (Turbo Gradient Spin Echo)

Ultra-fast sequence providing high resolution imaging or extremely short acquisition times

Hybrid Turbo Spin Echo/Gradient Echo used primarily for T2-weighted imaging

- Shorter measurement time
- Decreased RF power deposition
- Improved visualization of hemorrhage, due to magnetic susceptibility differences
- High resolution imaging of brain and spine

Flow Quantification

Special sequences for quantitative flow determination studies

- Non-invasive blood/CSF flow quantification
- ECG Triggered 2D phase contrast with iPAT support
- Retrospective reconstruction algorithms for full R-R interval coverage

Interactive Realtime

Sequences and hardware for interactive real-time scanning

Uses ultra-fast Gradient Echo sequences for high image contrast

Real-time reconstruction of the acquired data

The user can navigate in all planes on-the-fly during data acquisition

- Real-time cardiac examinations
- Real-time interactive slice positioning and slice angulation for scan planning

Single Voxel Spectroscopy

Integrated software package with sequences and protocols for proton spectroscopy. Streamlined for easy push-button operation

- Matrix Spectroscopy – phase-coherent signal combination from several coil elements for maximum SNR based on the Head/Neck 2D
- Spectral suppression (user definable parameter) to avoid lipid superposition in order to reliably detect e.g. choline in the breast
- Up to 8 regional saturation (RSat) bands for outer volume suppression can be defined by the user.
- Physiological triggering (ECG, pulse, respiratory or external trigger) in order to avoid e.g. breathing artifacts. Clinical application: brain, liver, neck soft tissue, spine

SVS Techniques SE and STEAM

- Short TEs available
- Fully automated adjustments including localized shimming and adjustment of water suppression pulses
- Also available: Interactive adjustments and control of adjustments
- Optimized protocols for brain applications

syngo CSI 2D: Chemical Shift Imaging

Integrated software package with sequences and protocols for Chemical Shift Imaging (CSI)

Extension of the Single Voxel Spectroscopy (SVS) package, offering the same level of user-friendliness and automation

- Matrix Spectroscopy – phase-coherent signal combination from several coil elements for maximum SNR with configurable prescan-based normalization for optimal homogeneity
- 2D Chemical Shift Imaging
- Hybrid CSI with combined volume selection and Field of View (FoV) encoding
- Short TEs available (30 ms for SE, 20 ms for STEAM)
- Automated shimming of the higher order shimming channels for optimal homogeneity of the larger CSI volumes
- Weighted acquisition, leading to a reduced examination time compared to full k-space coverage while keeping SNR and spatial resolution
- Outer Volume Suppression
- Spectral Suppression
- Semi-LASER sequence available for CSI examination of the brain

syngo CSI 3D: Chemical Shift Imaging

Integrated software package with sequences and protocols for Chemical Shift Imaging (CSI)

Extension of the SVS package, offering the same level of user-friendliness and automation

- Matrix Spectroscopy – phase-coherent signal combination from several coil elements for maximum SNR with configurable prescan-based normalization for optimal homogeneity
- 3D Chemical Shift Imaging
- Hybrid CSI with combined volume selection and Field of View (FoV) encoding
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- Automated shimming of the higher order shimming channels for optimal homogeneity of the larger CSI volumes
- Weighted acquisition, leading to a reduced examination time compared to full k-space coverage while keeping SNR and spatial resolution
- Outer Volume Suppression
- Spectral Suppression
- Protocols for prostate spectroscopy

syngo GRACE (GeneRALized breast speCtroscopy Exam)

SVS technique (spin echo sequence) optimized for breast spectroscopy.

The technique contains a special spectral lipid suppression pulse (user definable) for lipid signal reduction.

Siemens unique water reference detection to visualize the normalized choline ratio.

Online frequency shift correction for reduction of breathing related artifacts, Inline implementation – no additional user interaction is required.

- | | |
|------------------------|---|
| Clinical applications: | <ul style="list-style-type: none">• Can help the physician improve the specificity for tumor diagnoses• Predicting clinical response to neoadjuvant chemotherapy in an early stage (24 hours after receiving the first dose) |
|------------------------|---|

syngo Security

Security package for general regulatory security rules

The option supports customers to achieve compliance with HIPAA (Health Insurance and Accountability Act)

- User authentication
- Restricts access to functions and data through privileges and permissions
- Logs relevant data security information in audit trail

syngo Expert-i¹⁾

Interactive real-time access to imaging data and exam information from any PC within the hospital network during the MR exam.

Until now, radiologists or other experts had to stop what they were doing and go to the MR scanner to see the acquired images, help with the scan set-up, or answer an open question.

Now, questions can be addressed quickly and efficiently via remote PC.

Benefits of syngo Expert-i

- Excellent results right from the first examination
- Streamlined workflow and faster patient throughput
- Reduced repeat rates with a check on images while the patient is still in the examination room
- Reduced training effort by enabling expert assistance for specialized procedure

1) within hospital enterprise

syngo Remote Assist

Direct computer link to the local Siemens service department or the Siemens service centers (via router with telephone connection)

Image transfer for further evaluation

- Image and file transfer in batch mode
- Reading of entries in the error logbook
- Remote trouble shooting
- Remote access to service manuals written in easy-to-use HTML format
- Remote access to Service Site Database
- Start of preventive maintenance and quality assurance routines.
Provided in conjunction with a service contract with Siemens (UPTIME Services)
- Remote access granted only with permission of the institution. Data security is ensured by secure access

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Local Contact Information

In the USA

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway
Malvern, PA 19355
Phone: +1 888-826-9702
Phone: +1 610-448-4500
Fax: +1 610-448-2254

In Japan

Siemens-Asahi
Medical Technologies Ltd.
Takanawa Park Tower 14F
20-14, Higashi-Gotanda 3-chome
Shinagawa-ku
Tokyo 141-8644
Phone: +81 3 5423 8411

In Asia

Siemens Healthcare Sector
Asia-Pacific Headquarters
The Siemens Center
60 MacPherson Road
Singapore 348615
Phone: +65 6490 6000
Fax: +65 6490 6001

Global Business Unit

Siemens Healthcare Sector
Magnetic Resonance
Henkestr. 127
DE-91052 Erlangen
Germany
Phone: +49 9131 84-0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

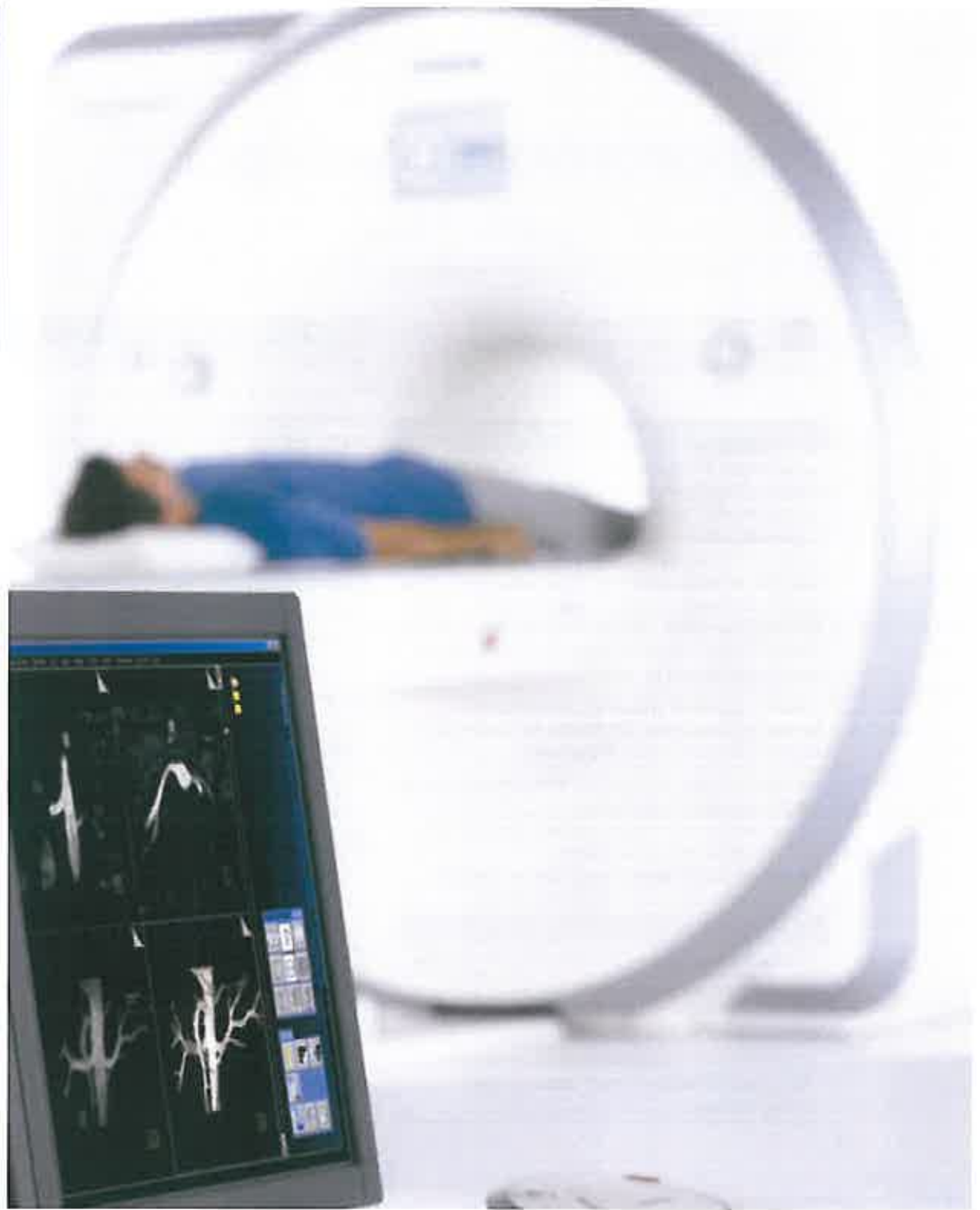
Global Siemens Healthcare Headquarters

Siemens AG
Health care Sector
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
www.siemens.com/healthcare

Legal Manufacturer

Siemens Shenzhen Magnetic
Resonance Ltd. (SSMR)
Siemens MRI Center,
Gaoxin C. Ave. 2nd,
Hi-Tech Industrial Park
Shenzhen 518057
P.R. China
Phone: +86 755-26525421
Fax: +86 755-26549253

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MAGNETOM Spectra

Post-processing Packages

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Post-processing Packages

All post-processing packages are separately available for the **syngo** Acquisition Workplace or the **syngo** MR Workplace.

syngo Argus 4D Ventricular Function

syngo Argus 4D VF software processes MR cine images of the heart and generates quantitative results for physicians in the diagnostic process. It provides volumetric cardiac data of a given patient very quickly and easily. Parametric results and volume-time curves are being calculated upon automatic creation and adaptation of a 4D model of the left ventricle. The resulting 4D model of the patient's heart can be visualized superimposed to anatomical images as reference.

syngo Argus 4D VF includes the well-known functionalities of Argus Function, the automated tool for cardiac function evaluation.

- Fully automatic left ventricle and semi-automatic right ventricle segmentation
- Easy user guidance with graphical selection of ED, ES, basal and apical slices
- Volumetric and regional wall motion analysis (e.g. stroke volume and bull's-eye plots)

Argus Flow

Automated tool for analysis of blood and CSF flow.

- Semi-automatic detection of regions of interest over time
- Color-coded display of velocity values
- Calculation of flow and velocity parameters (e.g. peak velocity, average velocity, flow, integral flow)

Argus Dynamic Signal

Automated tool for dynamic data analysis.

- Manual or automatic segmentation
- Automatic compensation of contours in regard to translation or deformation of organs over time
- Sector-based or ROI-based evaluation
- Evaluation of Time-to-Peak, Peak Value, Uptake Slope, Area under the Curve
- Graphical display of results in parameterized bull's eye plots

Vessel View

Interactive analysis of vessel disease using MR or CT angiography data.

Viewing with VRT, MPR, or MIP mode.

- Semi-automatic detection of vessel segments
- Quantification of changes in vessel size (e.g. stenosis graduation, aneurysm volume measurement)
- Protocol-based software for workflow support
- Creates and edits DICOM structured reports

Vessel View Artery-Vein-Separation

This package allows semi-automated segmentation and separation of arteries and veins, as well as suppression of surrounding tissue. Supports modes allowing the display of only arteries or only veins, or arteries and veins together in different colors. (Prerequisite: Vessel View)

3D VRT Volume Rendering Technique

3D visualization for clearer depiction of complex anatomy and relationship of anatomy in 3D for contrast MR Angiography and VIBE imaging.

More productive surgical planning and discussion with referring physicians.

- Integrated with other 3D functionality
- Color image creation
- Color gallery of icon presets
- Additional threshold-based segmentation of 3D objects
- Volume measurements

syngo BOLD 3D Evaluation

Comprehensive processing and visualization package for BOLD fMRI. It provides a full set of features for clinical fMRI, as well as advanced features for more research oriented applications.

This package provides statistical map calculations from BOLD datasets and enables the visualization of task-related areas of activation with 2D or 3D anatomical data. This allows the visualization of the spatial relation of eloquent cortices with cortical landmarks or brain lesions.

On the syngo Acquisition Workplace the unique Inline function of BOLD 3D Evaluation merges, in real time, the results of ongoing BOLD imaging measurements with 3D anatomical data. Additionally, evolving signal time courses in task-related areas of activation can be displayed and monitored.

Functional and anatomical image data can be exported for surgical planning as DICOM datasets, additionally all color fused images and results can be stored or printed.

- Statistical map generation: paradigm definition, calculation of t-value map with General Linear Model or t-test
- 3D Visualization: fused display of fMRI results, color t-value maps on anatomical datasets
- Inline 3D real time monitoring of the fMRI acquisition
- On-the-Fly Adjustment for t-value thresholding, 3D clustering, and opacity control
- Data export to neurosurgical planning software
- Fly Through the Volume: Zoom, pan, rotate, cut planes
- Analysis of Signal Time Curves
- Data Quality Monitoring: B0 field map, cine display of the BOLD time series
- Archiving & Distribution of results and views as colored DICOM images and bit maps
- If the respective options are available, results from Diffusion Tensor Imaging and DTI Tractography can be displayed together with fMRI results and anatomy

DTI Evaluation

Offline post-processing to generate and visualize parametric maps derived from the diffusion tensor in order to assess anisotropic diffusion properties of brain tissue

- Generation of diffusion maps based on tensor including: Fractional Anisotropy (FA), Volume Ratio (VR), trace-weighted, ADC, E1–E3, E1, linear, planar, tensor maps
- Display of maps in scalar mode (grey scale), vectorized mode (directions color coded) and tensorized mode (using tensor graphics like ellipsoid or cuboids); overlay of maps onto anatomical images
- Side by side display of several maps (e.g. ADC, FA, and trace-weighted) and anatomy for simultaneous ROI based evaluation; generation of a results table in order to support the assessment of diseases of the white matter
- Integrated into Neuro 3D taskcard: display of DTI maps in the context of an anatomical 3D data set; arbitrary oriented clip planes allow to explore the 3D volume
- Fused display with white matter tracts if the "DTI Tractography" option is present.
- Export of reformatted images for neuro navigation
- Together with the "BOLD 3D Evaluation" option: simultaneous display of anatomical, fMRI, and DTI data

syngo DTI Tractography

syngo DTI Tractography allows the visualization of multiple white matter tracts based on diffusion tensor imaging data. DTI Tractography is optimized to support the presurgical planning and to allow for neuro physiological research with respect to connectivity and white matter pathology.

- Advanced 3D visualization of white matter tracts in the context of 2D or 3D anatomical and DTI datasets
- Texture Diffusion, a highly versatile in-plane visualization of white matter tracts, allows to display and read DTI Tractography results on PACS reading stations and in the OR
- Seed points for tracking with single ROI and with multiple ROIs to assess connectivity
- Tract and seeding ROI statistics (mean / max FA value, min / mean / max ADC value, and more)
- DICOM export of views, HTML export of Tract, and seeding ROI statistics
- Interactive QuickTracking displays the tract originating from the mouse pointer position while moving over the DTI data set

Neuro Perfusion Evaluation

Dedicated task card for quantitative processing of neuro perfusion data.

- Color display of relative Mean Transit Time (relMTT), relative Cerebral Blood Volume (relCBV), and relative Cerebral Blood Flow (relCBF)
- Flexible selection of Arterial Input Function (AIF) for reliable analysis. This function takes into account the dynamics over time of the contrast agent enhancement

Composing

Composing of images from different table positions.

- Automatic and manual composing of sagittal and coronal images
- Dedicated algorithms for spine, angiography, and adaptive composing algorithms
- Measurement on composed images (angle, distance)

Fly Through

Simulated endoscopic views of the inside of bronchi, vessels, colon, and any other hollow structures.

Multi-modality application for CT, MR, and 3D AX data.

Fully integrated into the familiar 3D workflow and user interface.

- Ready-to-use from day one
- One click to action

syngo Tissue 4D

syngo Tissue 4D facilitates the detection of tumor tissues in organs such as the prostate or the liver. It is an application card for visualizing and post-processing dynamic contrast-enhanced 3D datasets.

Evaluation options	<ul style="list-style-type: none">• Standard curve evaluation• Curve evaluation according to a pharmacokinetic model
Visualization features	<p>4D visualization (3D and over time)</p> <p>Color display of parametric maps describing the contrast media kinetics such as:</p> <ul style="list-style-type: none">• Transfer constant (Ktrans)• Reflux constant (Kep)• Extra vascular extra cellular volume fraction (Ve)• Plasma volume fraction (Vp)• Initial Area-Under-Curve (iAUC) for the first 60 seconds <p>Additional visualization of 2D or 3D morphological dataset</p>
Post-processing features	<p>Elastic 3D motion correction</p> <p>Fully automatic calculation of subtracted images</p>
Pharmacokinetic model	<p>Pharmacokinetic calculation on a pixel-by-pixel basis using a 2-compartment model.</p> <p>Calculation is based on the Tofts model. Various model functions are available.</p> <p>Manual segmentation and calculation on the resulting images.</p> <p>The following resulting images can be saved as DICOM images:</p> <ul style="list-style-type: none">• 3D motion-corrected, dynamic images• Colored images• Storage of calculated results• Export of results in the relevant layout format

Spectroscopy Evaluation

Integrated software package with extensive graphical display functionality

Comprehensive and user-friendly evaluation of spectroscopy data

Display of CSI data as colored metabolite images or spectral overview maps, overlayed on anatomical images

- Export of spectroscopy data to a user-accessible file format
- Relative quantification of spectra, compilation of the data to result table

Automated peak normalization tissue, water or reference

New dedicated Single Voxel Spectroscopy breast evaluation protocols

Image Fusion

Image fusion of multiple 3D data sets with alpha blending, i.e. overlay of two images with manual setting of the opacity

- Multiple 3D data sets from different modalities (MR, CT, Nuclear Medicine, PET)
- Visual alignment, automatic registration, or landmark based registration

syngo Breast Biopsy Software

Easy to use *syngo*-based post-processing software helps finding the coordinates for needle insertion for biopsy or localization of breast lesions detected by MR

Allows calculation of the coordinates after clicking the center of the lesion and the 0 marker of the breast biopsy device

- Printout of working sheet
- Multi-lesion calculation

Prerequisites

- Breast Biopsy Device
- Loop Flex coil, large

Soft Tissue Motion Correction

3D elastic motion correction, for offline 3D correction in all directions over entire 2D and 3D data sets suitable for e.g. soft tissue MR exams

Allows higher conspicuity and accuracy especially for multi-focal lesion detection

New image data is reconstructed and saved in a separate series within the patient browser. It can be combined with the original non-corrected image data

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Local Contact Information

In the USA

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway
Malvern, PA 19355
Phone: +1 888-826-9702
Phone: +1 610-448-4500
Fax: +1 610-448-2254

In Japan

Siemens Asahi
Medical Technologies Ltd.
Takanawa Park Tower 14F
20-14, Higashi-Gotanda 3-chome
Shinagawa-ku
Tokyo 141-8644
Phone: +81 3 5423 8411

In Asia

Siemens Healthcare Sector
Asia Pacific Headquarters
The Siemens Center
60 MacPherson Road
Singapore 348615
Phone: +65 6490 6000
Fax: +65 6490 6001

Global Business Unit

Siemens Healthcare Sector
Magnetic Resonance
Henkestr. 127
DE-91052 Erlangen
Germany
Phone: +49 9131 84-0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters

Siemens AG
Health care Sector
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
www.siemens.com/healthcare

Legal Manufacturer

Siemens Shenzhen Magnetic
Resonance Ltd. (SSMR)
Siemens MRI Center,
Gaoxin C. Ave. 2nd,
Hi-Tech Industrial Park
Shenzhen 518057
P.R. China
Phone: + 86 755 26529421
Fax: + 86 755 26549253

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Parts & Accessories

Patient Video Monitoring

Dedicated MAGNETOM Spectra video camera for comprehensive patient observation in the examination room.

Color 640×480 pixel LCD monitor may be positioned at the *syngo* Acquisition Workplace or at a convenient wall location

Remote Viewing Monitor

Color LCD monitor (1280×1024) to be connected in parallel to the Workplace monitor.

Data transfer via ethernet for high signal quality over a long distance allows the computer and user to be located anywhere on the 100 or 1000 Mbps network with full routing of data across routers, switches and subnets (1 Gbit/s recommended).

The system supports SSL (Secure Sockets Layer) via a TCP/IP connection. All media streams transferred in the network are encrypted.

Foot Switch

In-room foot switch with two pneumatic buttons for start and stop of a preset MR sequence. The foot switch is MR compatible and is positioned near the patient table on the examination room floor.

syngo MR Workplace

Additional integrated Workplace with host computer for post-processing and image evaluation.

Same user interface as the *syngo* Acquisition Workplace, except for scan control.

Shared database with *syngo* Acquisition Workplace, therefore eliminating image copy time.

> Host Computer and LCD Monitor technical data: refer to "Computer System" section of the main data sheet.

In-Room syngo Acquisition Workplace

Operation and **evaluation Workplace**, placed in the examination room close to the patient. Operates in parallel to the *syngo* Acquisition Workplace.

- MR-compatible trackball as input device
- Moveable, height-adjustable Workplace trolley with connection cable
- Alternatively the monitor can be mounted via overhead boom

> Host Computer, LCD Monitor technical data: refer to "Computer System" section of the main data sheet.

Workplace Table

Ergonomically designed table for:

- Color monitor
- Keyboard
- Mouse
- Patient communication unit
- Patient supervision display

Patient Transport Stretcher

MR-compatible design on wheels for transporting a patient into the examination room.

Useful when the removable tabletop and trolley option are not purchased

- Non-ferromagnetic, height-adjustable design
- Trendelenburg positioning possible

Max. patient weight	160 kg (350 lbs)
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Comfort Kit

Vacuum cushions for stable and comfortable positioning of the patient during the examination

Vacuum pump connection at the Tim Table

3 anatomically shaped cushions of different size for patient stabilization and comfort (spine, head, multi-purpose)

May significantly reduce patient set-up times and improve image quality by minimizing the occurrence of motion artifacts

Coil Storage Cart

Specially designed non-ferromagnetic cart for easy storage of some of the most commonly used coils and accessories

May be rolled to convenient locations in the examination room

Additional storage space on the inside of the doors when doors are opened

Coil storage	Width	cart closed	140 cm (4'7")
		cart opened	280 cm (9'2")
	Depth		54 cm (1'9")
	Height		121 cm (3'12")
Upper drawer	Height		13.3 cm
Tray	Height		9.0 cm
Lower drawer	Height		24.0 cm

> Additional optional accessories and consumables for MR: www.siemens.com/healthcare-accessories



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Please find fitting accessories:
www.siemens.com/healthcare/accessories

Local Contact Information

In the USA

Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway
Malvern, PA 19355
Phone: +1 888-826-9702
Phone: +1 610-448-4500
Fax: +1 610-448-2254

In Japan

Siemens-Asahi
Medical Technologies Ltd.
Tokanawa Park Tower 14F
20-14, Higashi-Gotanda 3-chome
Shinagawa-ku
Tokyo 141-8644
Phone: +81 3 5423 8411

In Asia

Siemens Healthcare Sector
Asia Pacific Headquarters
The Siemens Center
60 MacPherson Road
Singapore 348615
Phone: +65 6490 6000
Fax: +65 6490 6001

Global Business Unit

Siemens Healthcare Sector
Magnetic Resonance
Henkestr. 127
DE-91052 Erlangen
Germany
Phone: +49 9131 84-0

Global Siemens Headquarters

Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters

Siemens AG
Health care Sector
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
www.siemens.com/healthcare

Legal Manufacturer:

Siemens Shenzhen Magnetic
Resonance Ltd. (SSMR)
Siemens-MRI Center,
Gaoxin C. Ave. 2nd,
Hi-Tech Industrial Park
Shenzhen 518057
P.R. China
Phone: +86 755-26525421
Fax: +86 755-26549253

www.siemens.com/healthcare