



Merlin™ PACS, Cardiology & Web from CDN

An overview

Implementing RIS, PACS and Web solutions often leads to a compromise in functionality through attempting to integrate and support systems from multiple vendors.

With RIS and PACS from Central Data Networks (CDN) users no longer have to make these compromises as we provide a single vendor, "Best of Breed" solution developed in Australia for world markets.

Over 16 years of development with large scale Private radiology and Public hospital customers, have lead to the current generation of CDN RIS and Merlin PACS. By utilizing the latest Microsoft .NET and Silverlight™ programming platforms, CDN have created a RIS/PACS & Web solution comprising:

CRIS RIS

Merlin PACS (Radiology & Cardiology)

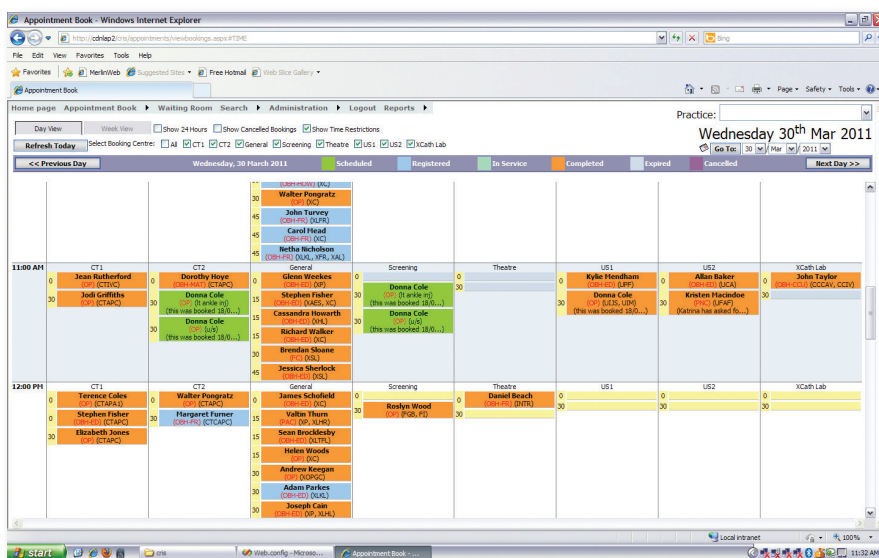
Merlin Web

Merlin Typist

cdn
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Real World Innovations

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The concepts
behind the design
of these solutions
are: **Flexibility**
Expandability
Functionality.



CDN CRIS RIS

CDN products are developed and supported via our local Australian based help desk and development team. Being an Australian software development company, CDN can also provide all your additional Information System and Communications requirements including, communications systems, LAN and WAN designs.

CRIS™

CRIS streamlines processes and procedures to deliver a more efficient radiology department workflow. The system consists of patient tracking and scheduling, result reporting, billing and image tracking capabilities. CRIS compliments HIS (Hospital Information Systems) and is critical to efficient workflow within radiology practices. CRIS has also been proven with integrations to Electronic Medical Record (EMR) solutions.

Within the CRIS product CDN provide the following features:

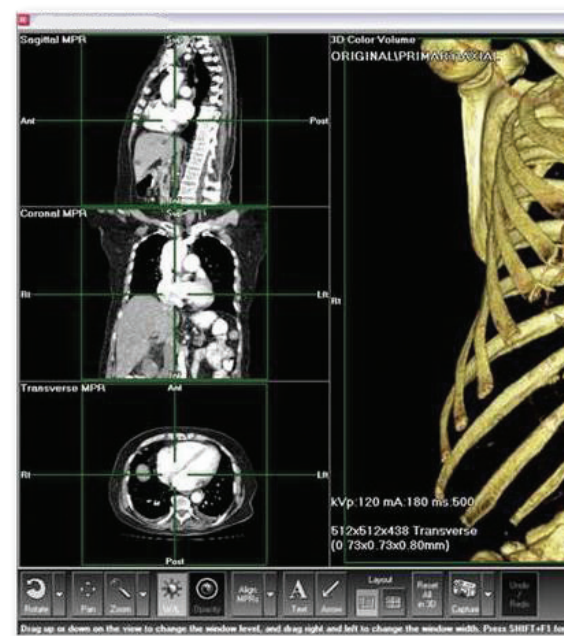
- Web deployable for remote access by referrers and clinical users across low bandwidth networks.
- Cross platform deployment using Microsoft Silverlight to provide Windows and Apple MAC compatibility.
- Intuitive, easy to learn and use providing the right information at the right place at the right time.
- Secure, role based access ensuring patient confidentiality.

- Intelli-sense automated functionality for post codes, address, booking codes, scan types
- Drag and Drop between Electronic Order Entry (EOE) requests from 3rd party Electronic Medical Record (EMR) Systems using HL7 messaging.
- Full HIC on-line functionality with Medicare and e-Claims billing
- Integrated with 3rd party Billing and Accounting facilities.
- Enterprise wide news broadcast and staff reminders by user, location, time.
- DB4 form generation, pre and post exam.
- Colour coded 'at-a-glance' features indicating progress and gaps for appointments on a single page with day or week view
- Management and resource utilisation reports with export to Excel or Crystal reports
- Visual time in waiting features and seamless information exchange with PACS.
- Minimal user management activities through streamlined and logical functions.
- Single action access for complete cost effective Practice Management
- Secure e-mail delivery of reports, and SMS reminders to your patients.
- Integrated Voice Recognition with Merlin PACS
- 24/7 support for your CRIS RIS and Merlin PACS from a single provider.

Merlin Radiology and Cardiology PACS™

Merlin PACS is an "Industrial Strength" PACS facility designed to meet the large scale requirements of Public hospitals and large corporate Private radiology practices. The system has been designed to provide the facilities required to handle large volumes with the security and stability necessary for major deployments.

CT Thin slice optimisation and 3D MIP/MPR



CT Thin slice optimisation and 3D MIP/MPR

CDN has developed specialist CT thin slice processing whereby we are able to automatically separate thin slices from thick during the acquisition process.

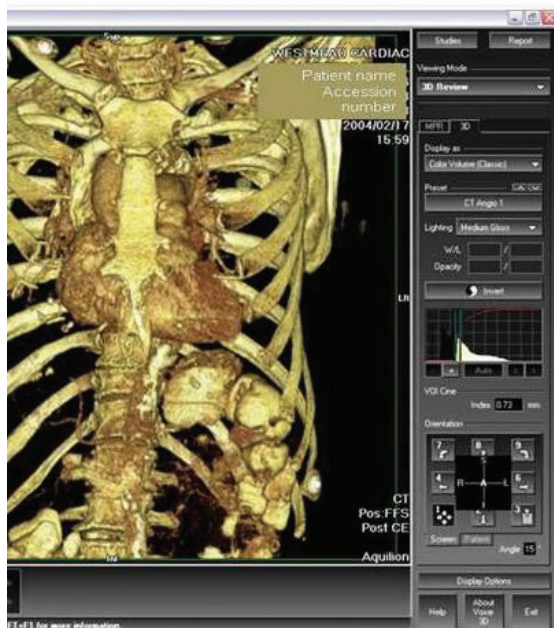
The benefit is that MPR and 3D reconstruction can be performed using the supplied MPR/3D modelling tools on the thin slice data for highest resolution and diagnostic quality.

Once the report is concluded a Business decision can then be made as to whether the thin slice data should be retained and archived or only the thick slice data be retained. This has a bearing on the long term archive storage space and retrieval of images for potential future review.

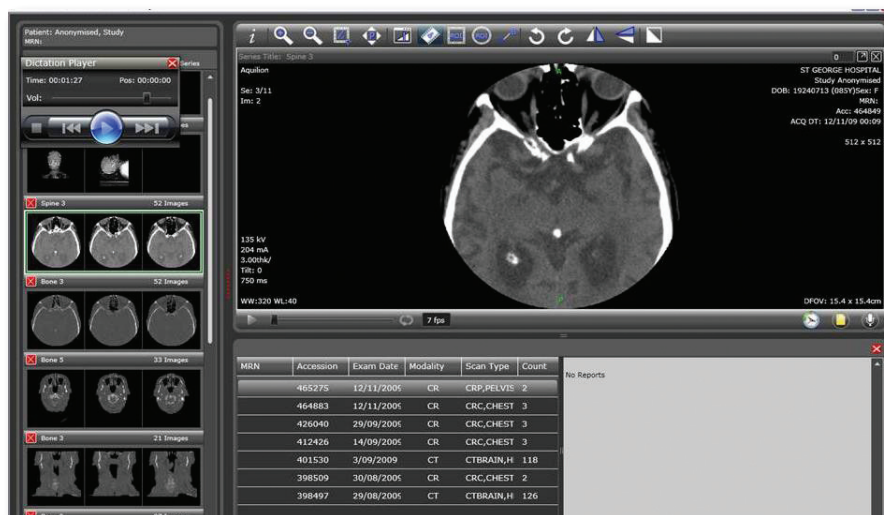
CDN Merlin PACS also supports the display and reporting of Cardiology images and studies. As such, CDN Merlin PACS is a truly integrated, single vendor single reporting solution for both Radiologists and Cardiologists.

Within the Merlin PACS product we provide the following features:

- Low bandwidth requirements design – enabling Wide Area Network deployment with minimal communications network infrastructures.
- Enhanced thin slice viewing via MIP/MPR & 3D



CDN have worked closely with industry leaders to provide a cost effective, multi site / multi room PACS



- Automated management and separation of Thin slice CT data
- PACS background cache & routing rules
- Microsoft DOT NET development
- Voice Recognition by Nuance Speech-Magic™
- Hanging protocols defined by Users
- All modalities accepted via DICOM including scanned documents
- Triple screen setup w 2MP/3MP or 5MP Medical grade diagnostic monitors.
- Separate work-list screen with user selectable work-list filters
- Web Managed for enterprise wide PACS across District/Area/Region
- Includes user defined work-list, HL-7, EMR & EHR interfaces
- Operates on Blade/Clustered servers with HP EVA storage for STA and LTA
- Disaster Recovery (DR) 1.6TByte LTO is available for reliable backup
- Image Montage and events manager included in suite
- HL-7/ IHE/DICOM compliant

Merlin WEB™ – Cross Platform viewing

Merlin Web from CDN is for use where delivery of images, reports and Voice files are necessary for 24/7 access across an enterprise/internet via use of proxy server or other secure means. This is a single application that runs on both Apple Mac and PC's across a hospital network or clinical environment including remote referring physicians.

Merlin Web is ideal for your referrers as patient history and reports are easily displayed. Merlin Web is delivered with referrer grouping to allow only those patients details to the particular referrer, and across a clinic where necessary. Merlin Web is also for use within an Emergency Department or ICU for urgent delivery of Radiology dictation 24/7 via a single click of a button.

Thus Merlin Web is a scalable enterprise grade diagnostic web viewer capable of delivering high quality DICOM images across the enterprise.

Other inbuilt features include:

- Dynamically re arranges your image layout by simply drag and drop.

The screenshot shows the Merlin Typist application window. At the top, there's a title bar and a menu bar. Below that, there are tabs for 'REPORTED TODAY', 'INTERIMED REPORTS', and 'AUTHORISED'. The main area displays a table of medical reports with columns for Mode, Status, AU/D, MRN, Report Date, Episode Date, Priority, First Name, Surname, S., DOB, Scan Types, Accession, and Radiologist. The table contains several rows of data, including reports from 2/03/2011 and 1/03/2011. The bottom status bar indicates 'Total Records: 9'.

Mode	Status	AU/D	MRN	Report Date	Episode Date	Priority	First Name	Surname	S.	DOB	Scan Types	Accession	Radiologist
Reported	Reported	8694653		2/03/2011 2:11 PM	31/12/2010 2:35 PM	Urgent			M	9/12/1929	CTABDO-ABDOM...	459868	Serrano J
Reported	Reported	268944		2/03/2011 2:12 PM	31/12/2010 11:44 AM	High			M	14/04/1991	X-RAY PERFORM...	1007400001	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 2:51 PM	High			F	25/11/2009	?		Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 3:33 PM	Normal			O	20/10/2009	?	11MPY-0246	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 3:41 PM	Urgent			F	1/08/2009	?	11MPY-0102	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 4:16 PM	High			F	27/10/2009	?	11MPY-0417	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 4:25 PM	Normal			M	1/08/2009	?	11CLY-0099	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 4:53 PM	High			M	9/10/2009	?	11CLY-0237	Serrano J
Authorised	Authorised	985100010...		1/03/2011 9:37 AM	7/02/2011 4:53 PM	Normal			M	30/10/2009	?	11CLY-0146	Serrano J

Merlin Typist

- Access the dictated report in audio form ahead of the report being typed for urgent situations.
- Close-up-mode to use all available screen real estate for particular image display.
- Workflow and results to be the same regardless of whether users are MAC or PC.
- View at a glance current studies and related history with ease
- Merlin Web allows reports from either work-list screen or image view screen, no need to change between views.
- Removes the need for Administrator rights for Active X or OCX downloads
- Merlin Web does away with the troublesome CD and lack of flexibility CD's impose.

Merlin Typist™

Distribution of tagged images to your referrers is straightforward, and so is delivery of reports via Merlin Web using Fax, secure e-Mail, or high quality printing all via use of Merlin Typist.

Merlin Typist provides a facility where your typist can type or use structured format templates to efficiently deliver reports. Alternatively there is the ability to use the Nuance Speech-Magic™ digital dictation and voice recognition software. This client engine is inbuilt to your Merlin PACS client providing efficient and rapid response to your reporting needs.

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