



Automated output of medical images to CD/DVD

Perennity Dicom offers a turnkey solution for the medical industry to output examination results from any DICOM 3 (Digital Imaging & Communication in Medicine) compliant device to CD or DVD. While substantially reducing production costs compared to traditional film, the output can be used for archiving purposes or the produced media can be used and distributed for further investigation. Furthermore, digital medical images offer higher resolutions and extended manipulation options. The produced media can also contain a custom application to view and/or process the contents ('Dicom Viewer').

Automated CD/DVD production

Perennity uses CD/DVD autoloaders (robots) to automate the production, and at the same time personalize the media with a custom label. Any information can be printed on top of the CD/DVD: patient name or identifier, date and time, examinations enclosed, etc. Of course you can also add logos and pictures to the printout, or even thumbnails of included images.

Perennity interfaces with the majority of CD/DVD autoloaders available in the market today (e.g. Rimage). This allows you to choose a device that deals with your own requirements in terms of throughput and output quality. You have the choice between several printing technologies: thermal printing for a highly professional indelible print quality, or inkjet, which offers the best price to quality ratio. Some systems, like the Prism printer from Rimage, also offer the possibility to personalize preprinted media.

Limited investment

Perennity Dicom edition is one of the most affordable solutions in its kind available in the market today. It offers all the functionality of competing products at just a fraction of the cost.

100% Dicom compatible

With Perennity Dicom, a CD/DVD autoloader becomes a real Dicom server, to which any Dicom client (modality, PACS...) can transmit images to record to CD/DVD using the TCP/IP based Dicom transmission protocols. The output media are also fully Dicom compliant and include the general index (DICOMDIR).

Traceability and query

Perennity extracts all metadata from the Dicom documents that it processes, and stores them in its internal database. Through the Perennity Finder utility, queries can then be launched to locate the media containing the needed data (using criteria such as patient name or ID, modality type, etc.).

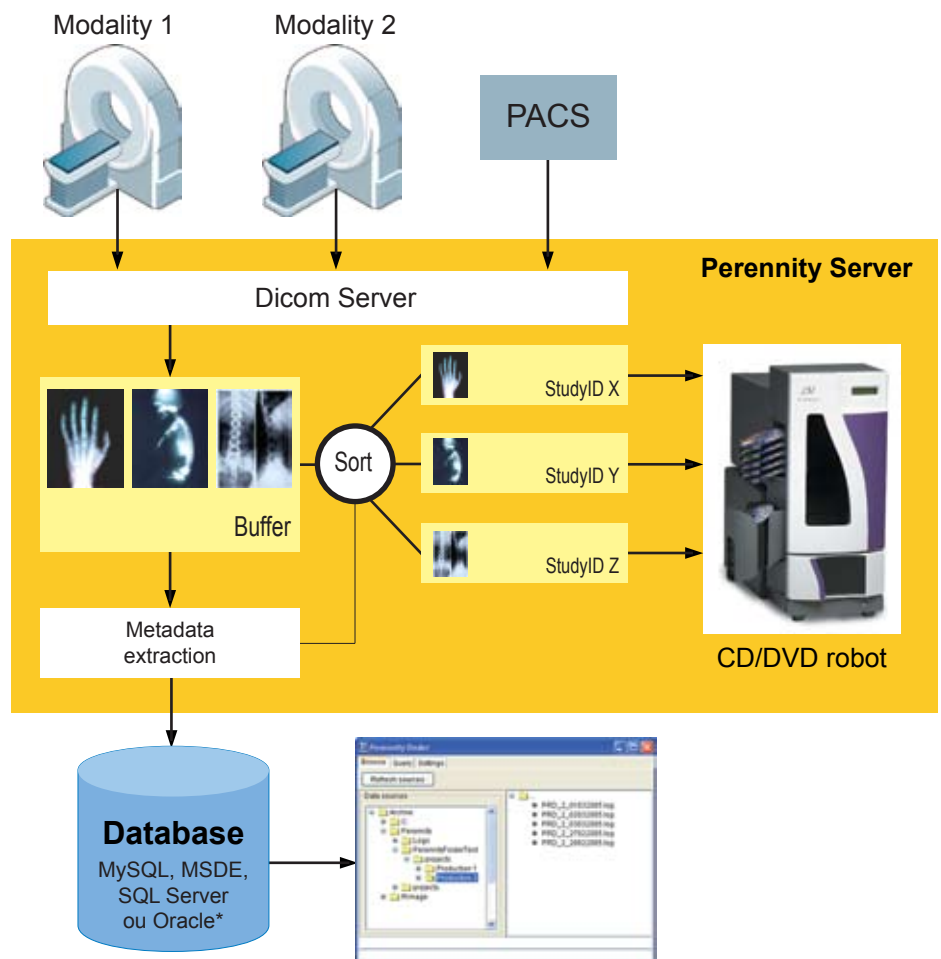
Custom "Dicom Viewer"

You can choose which Dicom application(s) to add to each CD/DVD. This choice will normally be dictated by your environment (Windows, UNIX, Mac...), by the type of images (scan, MRI...) or by your budget (commercial software versus freeware). The Dicom viewer can also be configured to autorun when inserting a CD/DVD in a reader.



Rimage Producer III
CD/DVD autoloader
with integrated printer

How it works ...



System requirements

Operating system

Windows 2000, XP, 2003

Linux*

Solaris*

Mac OSX*

JAVA (JRE 1.4.2) required

Memory

1GB RAM

Processor

Pentium IV processor

Hard disk space

At least 40GB

Database

Perennity is delivered with MySQL

Possible link to MS SQL Server,

MSDE or Oracle* databases

CD/DVD output

Rimage Desktop Publisher

Rimage Producer II/III

Rimage DL5200/DLN5200

* Planned Q3/2006

A CD/DVD autoloader is connected to a workstation running Perennity Dicom edition, the 'Perennity Server'. Different modalities and/or the PACS send images to the Perennity Server over the local area network using the Dicom Store protocol over TCP/IP, whereby the Perennity Server acts as a genuine Dicom server.

The images are temporarily stored in a buffer. Perennity extracts their metadata (study ID, patient name or identifier, type of examinations...) and stores them in its internal database (MySQL or SQL Server). The Perennity Finder application permits to launch queries on this database to track the data.

Perennity can calculate a unique 'digital fingerprint' (using CRC32 or MD5 algorithm) per image or document to assure the integrity of the data in the long term. A utility on every CD/DVD can be used to check the authenticity of the files. These digital fingerprints are also stored in the Perennity database.

The images are ordered by examination number (Study ID). From a list of all current examinations the radiologist can select those he wants to record to CD or DVD. He can specify the number of copies and optionally add some comments to be printed on the disk. By default every examination will be output to a different CD/DVD. When the capacity exceeds the media capacity the data will be split over several media. If desired, the radiologist can also combine multiple examinations on a single disk, for instance for archiving purposes. Finally, the CD/DVD will be recorded and printed by means of the autoloader.

The recording process can also be fully automated, in which case every examination will automatically be recorded to a CD or DVD after a predefined latency period (e.g. when nothing has been added during the last 5 minutes). The CD/DVD production can also be planned to happen at certain times of the day - for instance at night, not to disturb the network traffic.

Perennity

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