

(Web) PACS ¹

1, 2 . 2 . 2 . 1, 2 . . .
. . . 3 . 4 . 1, 2

: PACS PACS Web
PACS(Web ER PACS)

: Web ER PACS CT, MR, CR
Windows 2000 Server, MS-

SQL 7.0, Visual C++ 6.0, ASP .

PACS

: Web MR 5:1, CR 20:1 . JPEG2000 CT
3 . 2

: Web ER PACS PACS Web PACS
Web PACS

가 가 Web

(Full Picture archiving and communicating system, PACS) . PACS

(1-3). PACS 가 가 PACS 가 가
Web PACS Web PACS
PACS Web PACS
Web PACS PACS PACS PACS PACS
PACS(Web ER PACS) Web

1
2
3
4

MR, computed Radiography (CR)
 가
 . Web ER
 PACS Windows 2000
 XP (Microsoft, U.S.A.), Web Browser Explore
 5.0 (Microsoft, U.S.A.)
 Web (Web server)
 2000 (Microsoft, U.S.A.)
 Visual Studio 6.0 - Visual C++ 6.0 (Microsoft, U.S.A.),
 MS SQL 7.0 (Microsoft,
 U.S.A.)
 2 GHz CPU, 1 GB DDR 가
 120 GB
 RAID 1 (Mirroring, Redundant Array of Inexpensive
 Disk level 1) PC
 Web ER PACS가 PACS
 가

: (Web) PACS
 ,
 가
 2
 가
 가 가 3
 가
 , , , , ,
 (thumb
 가
 가
 DICOM

가
 가
 1280 x 1024
 가
 가
 가
 PACS
 PACS



Fig. 1. The picture shows image download at a hard disk of personal viewing station by personal case storage module in hospital PACS system.

DICOM
 가
 DICOM CT MR 5:1,
 20:1 JPEG 2000 DICOM sever
 DICOM DICOM sender
 , , ,
 PACS

Web Based ER PACS
 Web Based Emergency Room PACS

검색일 : 2003-06-15 ~ 2004-06-17 Patient ID: []

Patient ID	Patient Name	Age	Sex	Body Part	Modality
0233270	최영례	74	F		CT
0333805	김희명	46	M		CT
0236763	김재복	62	M		CT
0337435	이현주	31	F		CT
0197789	임사택	72	M		CT
0329852	박옥순	70	F		CT
0329852	박옥순	70	F		CT
0280471	이선열	60	M		CT
0333114	백원선	55	M	ABDOMEN	CT
0224807	박기선	64	M		MR

[1] [2]

Fig. 2. The worklist shows patient's information.

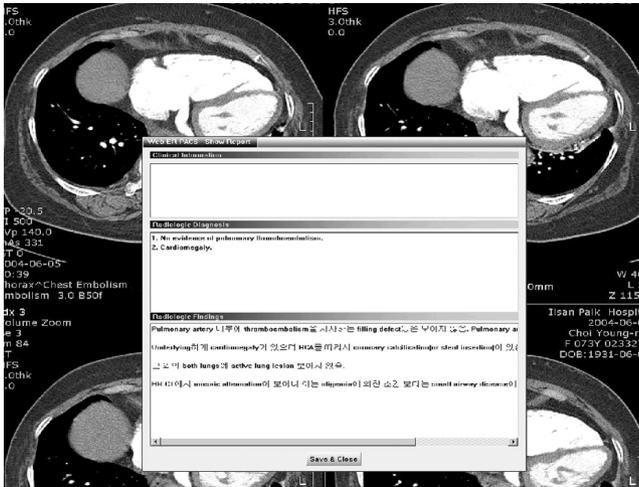


Fig. 3. The viewing program shows images and radiological report module.

er) , DICOM (head -
 CT, MR
 (background)
 8 Mbps ADSL
 170 가
 4 , 3 12 CT 가
 10 - 12 10 , 가
 가 가
 2 가 .
 5 가 10 가
 1024 x 768, 1280 x 1024
 CT MR 가
 가
 CR 가
 가
 가
 가
 Web ER PACS
 PACS
 DICOM 가
 PACS PACS

DICOM
 가
 (1 - 3). DICOM
 가
 DICOM
 가 가 가
 (4). Web ER PACS
 PACS PACS
 DICOM
 DICOM 가 가
 DICOM Web
 가
 가 가
 가
 가
 DICOM
 PACS
 (5, 6). Web ER PACS
 가
 (7).
 가
 CR (4 K)
 JPEG
 40 - 50:1 가
 (8). 가
 가
 가
 JPEG2000
 JPEG PACS 가
 PACS JPEG2000

Web Based Emergency Room PACS¹

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Purpose: We wished to develop the web based Picture Archiving and Communication System in the emergency room for early decision making in emergency treatment planning at a full PACS Hospital.

Materials and Methods: The program tools were Microsoft Visual Studio 6.0 - Visual C++ 6.0, and the Microsoft SQL 7.0 under the Microsoft Windows 2000 server operation system. The achievement of images was performed by an auto transport program installed in the ER and the radiology department.

Results: The average compression rates were 5:1 for CT and MR, and 20:1 for CR with JPEG 2000 lossy compression. All the images were stored on hard disk for 3 months. The patients' information was displayed for 2 weeks for reducing the security risk. For interdepartmental consultation, patient query by patient hospital number was available.

Conclusion: Our Web based ER PACS could be useful system for early decision making for treatment planning in the emergency room because it reduces the risk factors for the security of the Web PACS by using a system independent from PACS in the hospital and minimizing the information patients.

Index words : Computer
PACS
Digital images

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