
25) The Differentiation of PACS

Medical Standard Co., Ltd
Kyu Kim, Sunchil Kim, Hyungshik Choi

I. Introduction : This year, the domestic PACS market is expanding at a rapid speed. But realistically, it is true that due to excessive cost competition, the PACS, which are being set up and operated in Korea, are regarded as a great burden to both companies and hospitals. Our company concluded that the reason for this kind of excessive cost competition is due to no differentiation existing among PACS products, and so I would like to explain the differentiation of PACS through Hybrid PACS and image quality improvement.

II. Main Subject : As time passes by the previous centralized PACS has shown inefficient expansion of storage volume due to extern Fetch (3 times the basic examine quantity) increase, the breakdown of hospital workflow due to storage unit or server failure and future upgrade, or difficulties in equipment exchange. In order to resolve these problems economical efficiency attainment and system variation by efficient allocation of storage volume have been implemented and under the objective of attaining safe hospital working environment, the Hybrid PACS concept was adopted. This kind of decentralized system can be a great help in sustaining image specialty and work efficiency. Also, we were aware of the demand of image quality improvement and regarded that enhancing the accuracy of patient diagnose will act as the major factor of future PACS. As an example, for the purpose of making an epochal image quality improvement, we have developed a non-linear LUT which has greatly enhanced the Q.C. function and radiological technologist's workload by allowing image quality control by each medical equipment, photographing section, radiological technologist, and radiologist. The Hybrid PACS fully implemented Modality Interface, Server & Storage, Diagnostic & Clinical Workstation, HIS Interface, and other part supplier's characteristics and merits, which form the PACS and the organic structure in accordance with DICOM standard optimized its economical efficiency and function. The Hybrid PACS is divided into three parts which are the Core Part that saves and analyze the DICOM images attained from medical equipment, the Backup (Clinical) Part that maintains images used for extern, ward, and conference room purposes and executes Backup function of images, and lastly the Web Solution that is capable of inquiry through the Internet Web Browser. Each department will be supplied with adequate functions according to work characteristics in order to maximize work efficiency.

III. Conclusion : If you look at the result of the PACS satisfaction level of major hospitals, it shows that in terms of doctors, they were very contented with its usefulness and work efficiency and evaluated that it has contributed in attaining work environment improvement. But it also showed that the satisfaction level in terms of image quality, accessibility, user friendliness, and etc. were relatively low. In order to resolve these problems, we have considered the decentralized system and by LUT the image quality was enhanced compared to previous PACS and the workflow with the radiology department has improved. Medical Standard is willing to present a futuristic standard of PACS by implementing differentiation.