Picture Archiving and Communications Systems (PACS)

Description: During the past 35 years, ultrasound and nuclear medicine were introduced into clinical medicine, computed tomography (CT) revolutionized diagnostic procedures and magnetic resonance imaging (MRI) emerged, bringing new diagnostic information at the cellular level. X-ray morphed from analog films to digital, and virtually all medical images became "soft" files on the electronic networks. As imaging departments in healthcare facilities have migrated from film to digital, the display and storage systems have had to migrate too. These new digital imaging storage and display systems are called picture archiving and communication systems (PACS). Most PACS handle images from various medical imaging instruments, including ultrasound, MRI, positron emission tomography (PET), CT, endoscopy, mammograms, etc.

The focus of this TriMark Publications report is to analyze and describe the PACS market segments. PACS market penetration in the U.S. healthcare space has been significant, at almost 90%. A PACS network typically consists of a central server that stores a database containing the images connected to one or more clients via a local area network (LAN) or a wide area network (WAN) that provides or utilizes the images. More and more PACS utilize Internet-based technologies as their means of communication. This allows remote viewing and diagnosis with implications for both civilian and military healthcare facilities. Since radiology departments dominate the production of images, interconnections with radiology information systems (RIS) are also looked at in this study.

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