BYOHospital

A hospital playground for breaking stuff where nobody gets hurt

Evan Chavis, Jeremy Erickson, Peter Honeyman, Kevin Fu

University of Michigan

Radiology Infrastructure

Doctor's Workstation

PACS

Modality

1. Patient Presents

Doctor records medical information--stored in Picture Archiving and Communication System (PACS).

2. Patient Arrives for Imaging

Medical record is retrieved. Scan taken. Images archived with medical records.
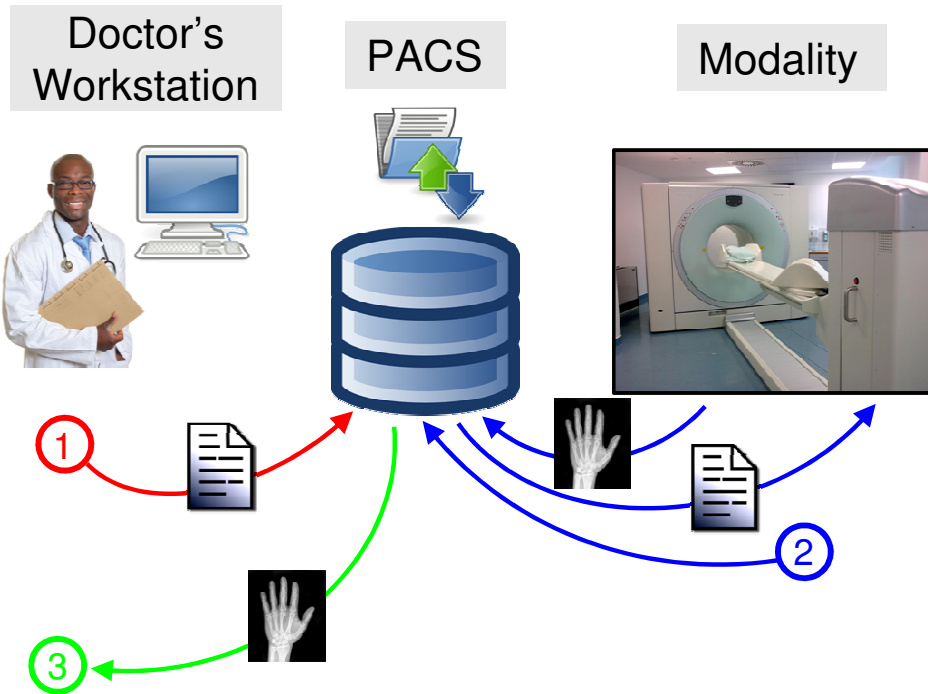
3. Diagnosis

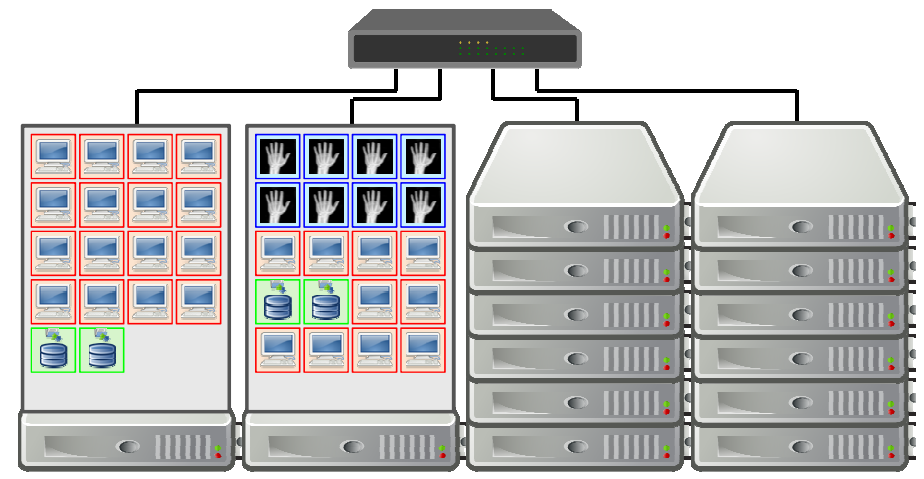Doctor analyzes images. Presents diagnosis.

Virtualization Platform

minimega:

A tool for launching and managing virtual machines. It can run on your laptop or distributed across a cluster. minimega is fast, easy to deploy, and can scale to run on massive clusters with virtually no setup.

-- minimega.org

Research Goals

1. Model the propagation of malware in a hospital
   a. Discover what works and what doesn't in containing malware through a hospital environment where it is safe to release and then track malware
   b. A virtual hospital is much easier to tear down and restructure than a real one when setting up a new experiment
2. Testing new devices
   a. New medical devices inserted into the virtual hospital can be evaluated in a simulated hospital network before use in real hospitals
   b. A potentially useful tool for hospital network administrators to avoid surprises when integrating new devices

Special thanks to Dale Fay and Joseph Schulte from UM Hospital

---

thaw.org