

Case study:
Local experience setting up the
NHS-UoE networking in the new
Clinical Research Imaging Centre

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What will this talk cover?

- What is CRIC?
- Network design
- Workflow
- Data storage and archive
- Challenges
- Opportunities



Clinical Research Imaging Centre (CRIC)

- 320 slice CT scanner
- 3T MRI Scanner (whole body)
- 128 slice PET/CT scanner
- Cyclotron
- Image Analysis suite

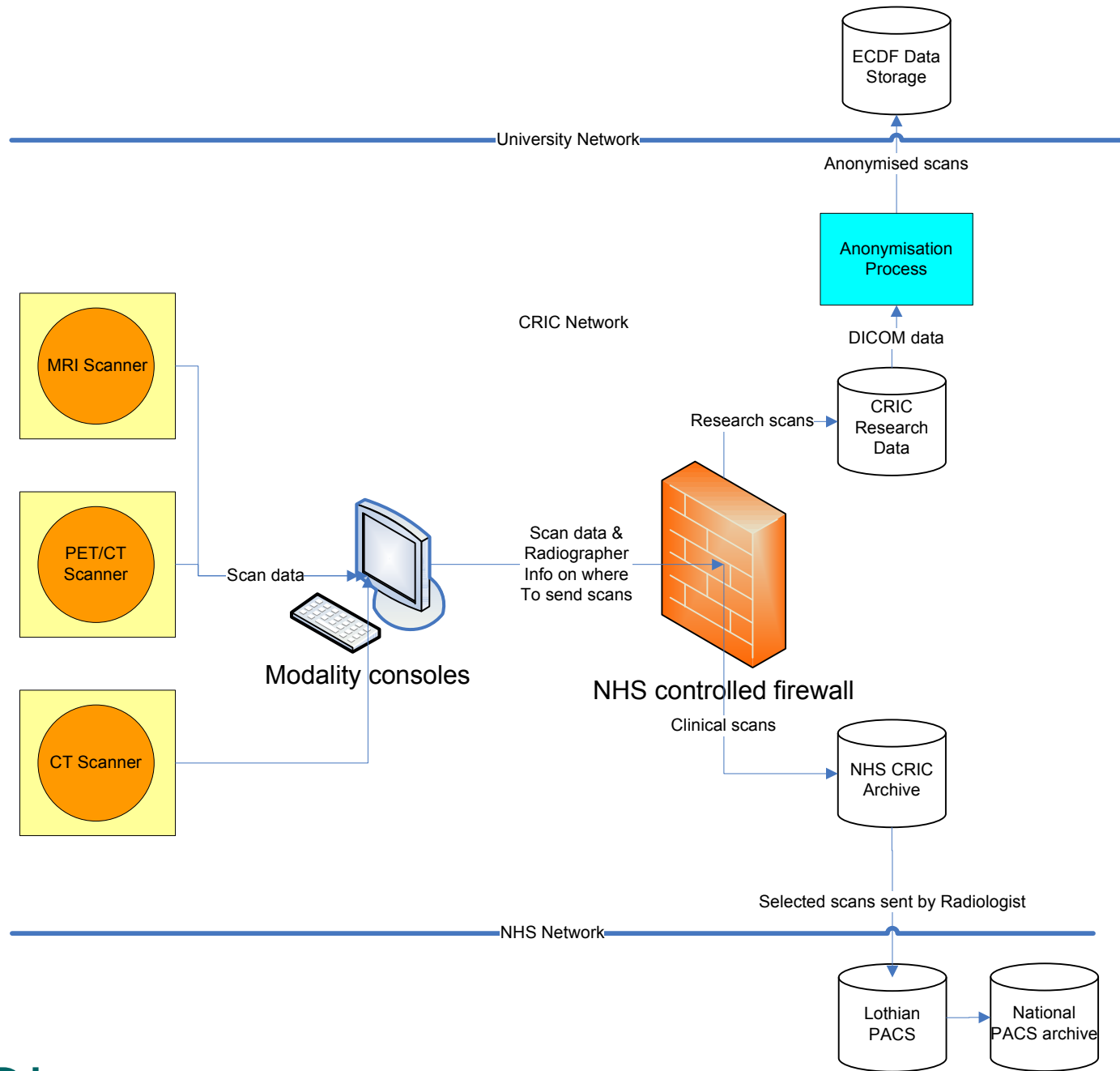
- Joint partnership between University Hospitals Division of NHS and University of Edinburgh
- <http://www.wtcrf.ed.ac.uk/CRIC/CRICdefault.htm>

- MRI and CT mid-year. PET/CT and Cyclotron end of year



CRIC – NHS and University IT Working Together

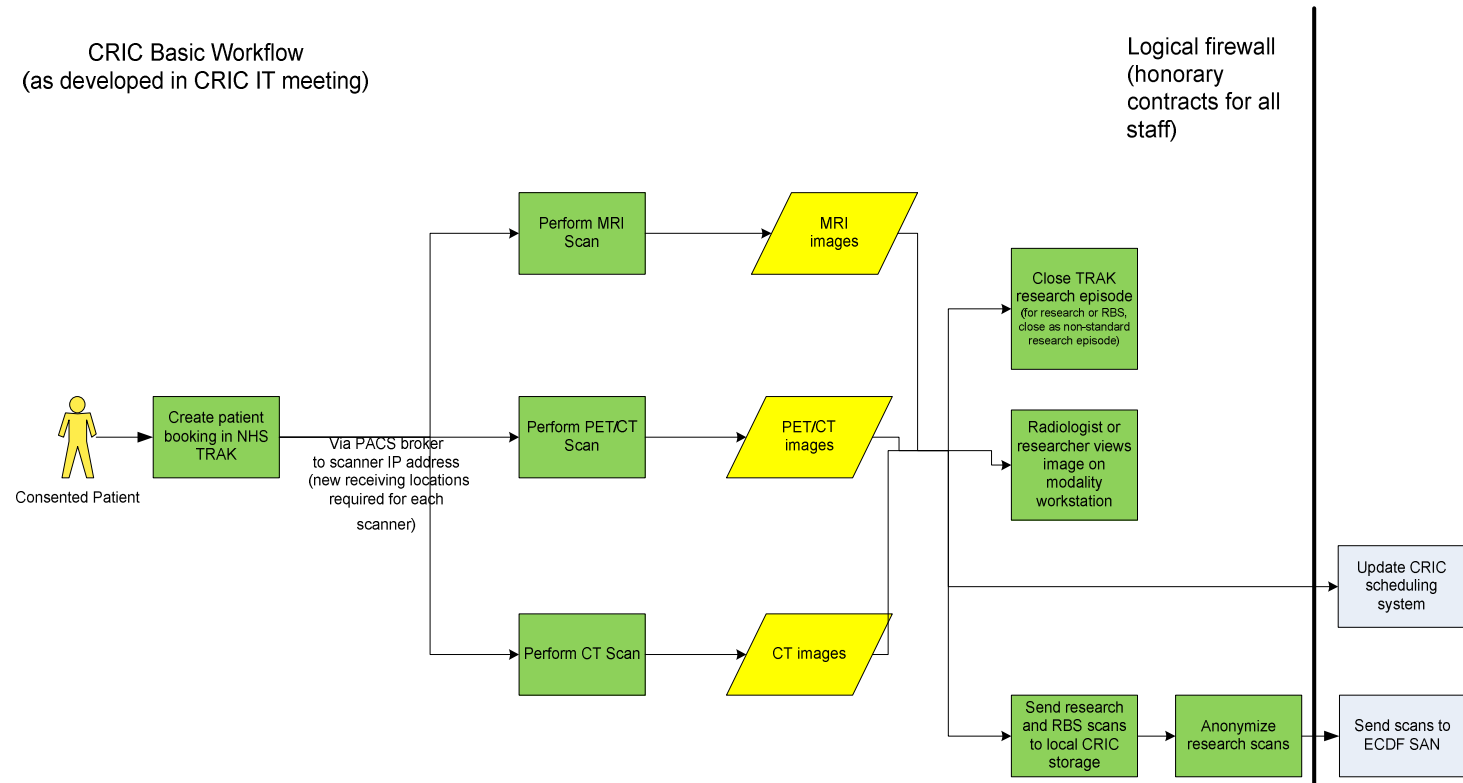
- Formed Memorandum of Understanding (MOU) between us which states
 - what we want to achieve in terms of IT
 - which party is responsible for doing what
- Hold infrequent but focussed IT meetings to resolve issues



Network Diagram

Workflow

CRIC Basic Workflow
(as developed in CRIC IT meeting)





Workflow

- Detailed workflow diagrams
- Viewing workstation location



Data Storage - Research

- Research scans to Edinburgh Compute and Data Facility (ECDF)
 - SBIRCS and new VET CT scanner and PACS may share same storage solution
- Non-DICOM data(spectroscopy, etc) will be stored at the CRIC local data server until we figure out how to anonymise it!



Research Data File Structure

Agreed data file structure, which will be automatically generated.

- PROJECT
- SUBJECT ID (GUID)
- STUDY DATE
- SERIES NUMBER
- Image UID
- raw data read only copied to data analysis folders

- e.g. E06389/GUID/20090120/1/128.216.177...DCM



Data Storage - NHS

- NHS plan to store data on a local NHS 'archive' server in CRIC
- Radiologists report and then send select images on to the National PACS
 - Cost prohibits storing all files on NHS National PACS as large volumes of data are expected, especially from CT scanner



Data Storage - Archive

- NHS.
 - National PACS Archive in Livingston.
 - All scans will have a small part of them sent to the archive.
 - Only 100Mb connection at present until N3 network is upgraded.
- University.
 - An archive service is being considered by the UoE Library services.
 - Anonymised data only
 - Moved to archive when the study complete.



Challenges

- Getting the right people together to attend key meetings and resolve issues
- Storage capacity difficult to estimate
- Scanners use different formats of DICOM
- Anonymising data for research
- Double data entry for patient bookings



Opportunities for Imaging

- New state of the art facility for doing clinical and research work
- SINAPSE forum to develop good practices and standards in IT for Scotland's Imaging facilities
 - Opportunity to review your processes while doing this



Questions?

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