

MONASH University



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# ITS Staff meeting

## 8<sup>th</sup> June 2006

[www.monash.edu.au/eresearch](http://www.monash.edu.au/eresearch)

# e-Research

- Bring researchers together to collaborate to answer questions which they could not answer making efficient and effective use of the ICT infrastructure

# Example: Biomedical Imaging

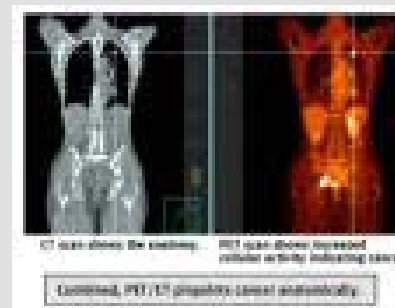
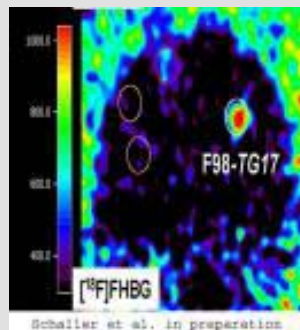
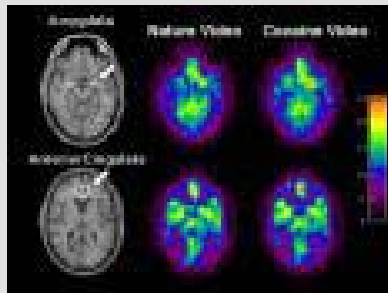
- There are various biomedical imaging facilities, e.g. computed tomography, ultrasound, X-ray, in the University
- These are located in different places within the university
- Data management might be an issue
- Difficult for researchers to collaborate

# Facilities to be installed

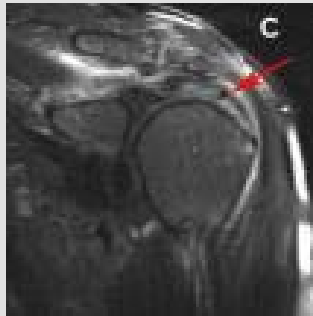
- Positron Emission Tomography (PET)
- Magnetic Resonance Imaging (MRI)
- Computed Tomography (CT)
- Digital X-Ray
- Digital Ultrasound
- Synchrotron biomedical imaging beamline

Co-locating them in the same vicinity

# PET



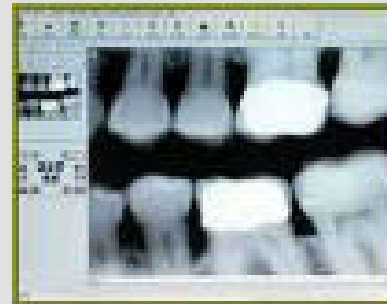
# MRI



# Digital X-Ray



A digital X-ray



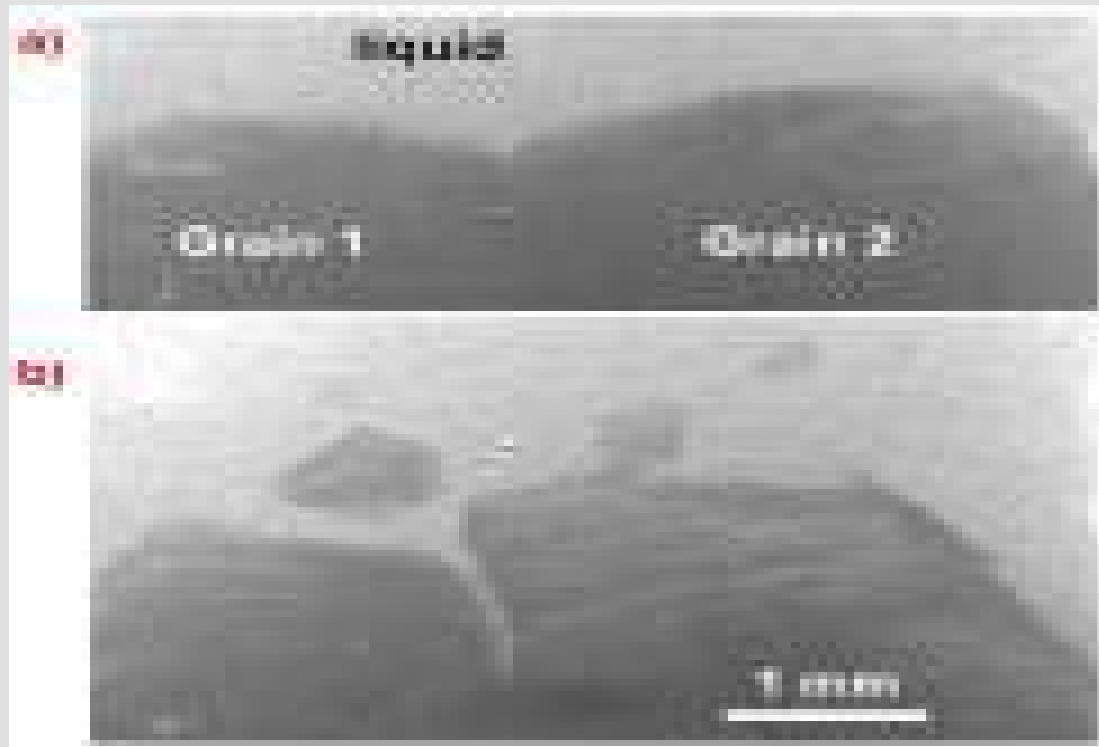
# Digital Ultrasound



# CT (64 slices)



# Synchrotron imaging



# Research/clinical facility

- User can get access to raw data to experiment with different image processing techniques
- Facilitate users to use multiple modalities to diagnose complicated medical situation

# Types of research

- Derivation of organ functions from multiple modalities of the same organ
- Personalised therapies
- Image processing techniques
- Data management issues
- Visualisation of data

# ITS support

- Data management support
- Network support
- User support
- Data management tool creation and maintenance
- Support collaborative research