

# SINAPSE

Scottish Imaging Network: A Platform for Scientific Excellence.

## MIDAS Medical Imaging Data Access and Sharing

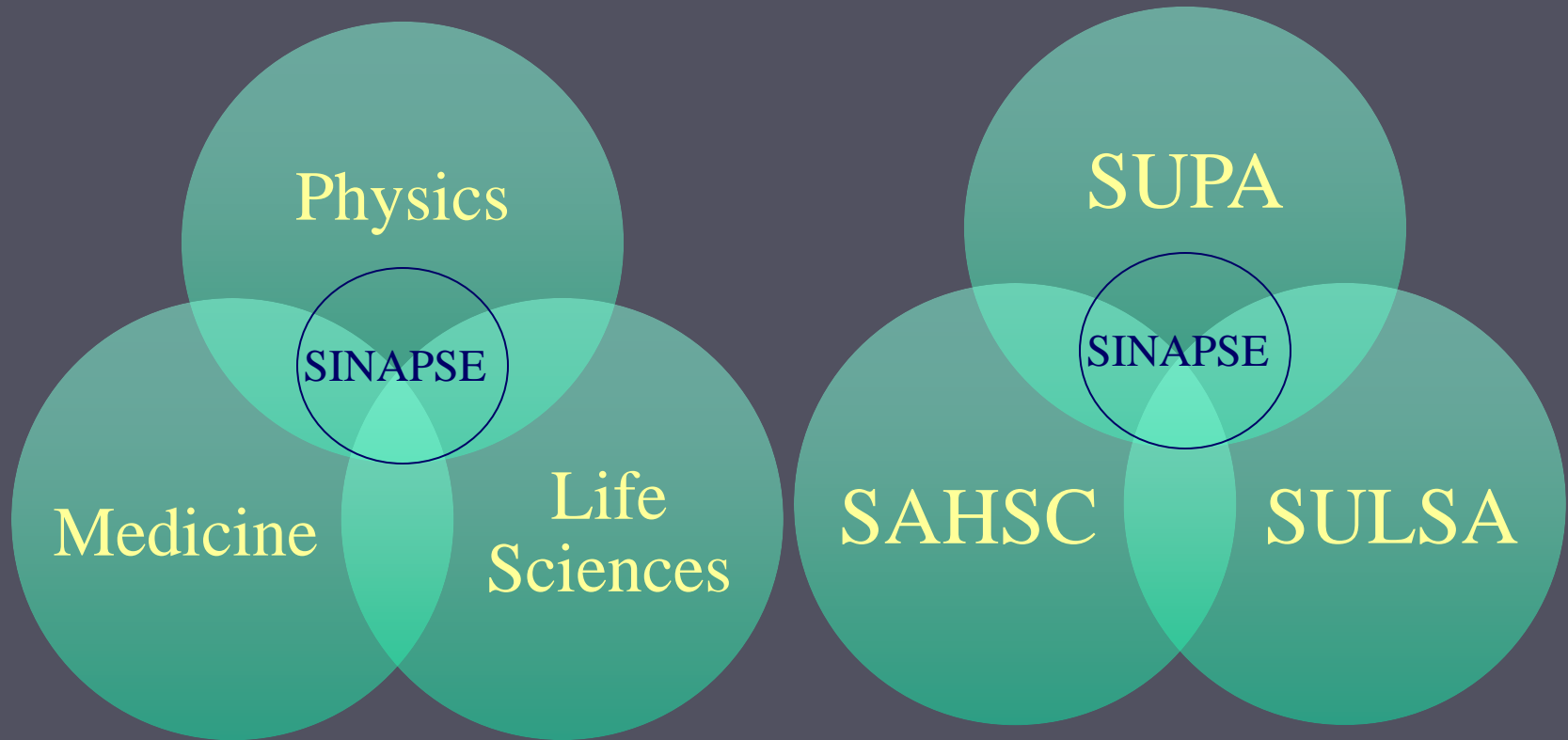
Professor David Wyper PhD

Director: SINAPSE

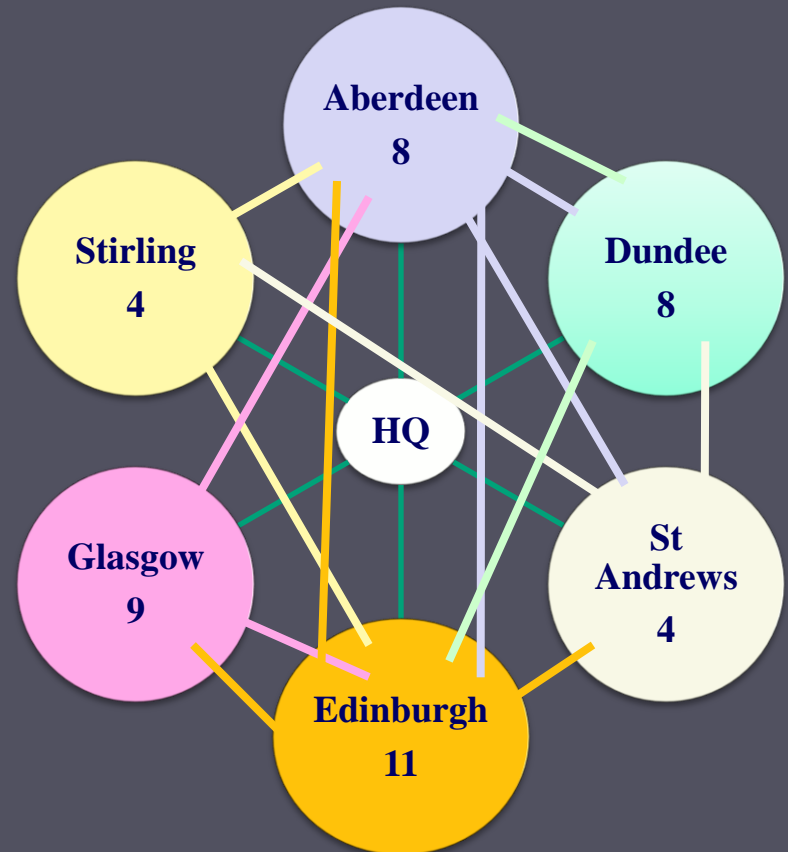
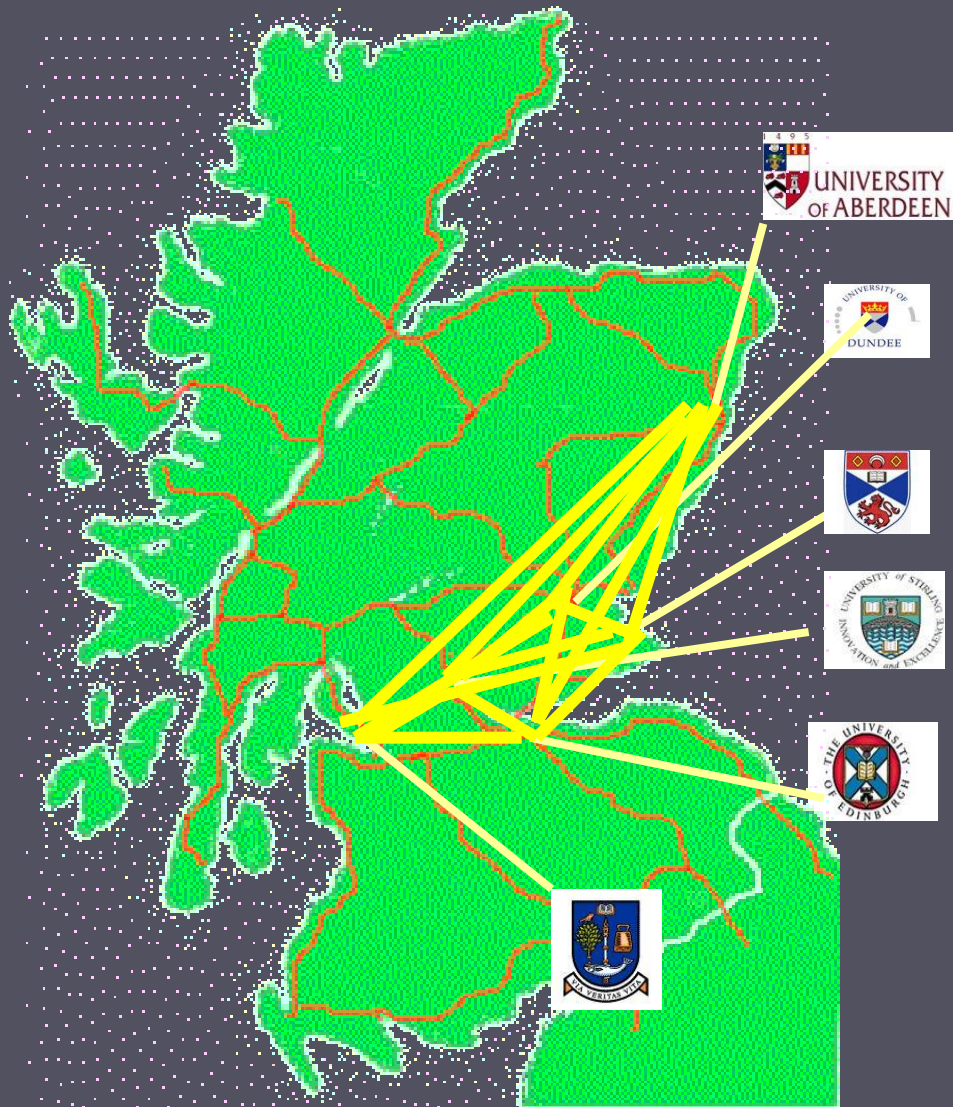
[dave.wyper@glasgow.ac.uk](mailto:dave.wyper@glasgow.ac.uk)

# SINAPSE: The SPIRIT programme

- The Scottish Funding Council SPIRIT programme [Strategic Priority Investments in Research and Innovation Translation] and aims to encourage university-industry collaborations in the area of physics and life sciences or medicine.*



# SINAPSE Graduate School, 2007-2011



> 10 applicants for every place

- 24 Phd studentships from original SFC award
  - 14 more in 2010
  - 8 more in 2011.
  - 17 of these in partnerships with industry
- Residential Induction Course; topic-specific workshops; on-line training; dual supervision.

# Key Strengths

## Research and teaching in PET and MRI

### Positron Emission Tomography

- ◆ PET-CT for clinical trials
- ◆ SPECT - in particular neuroSPECT
- ◆ Tracer development
- ◆ Micro-PET and micro-SPECT
- ◆ International partners



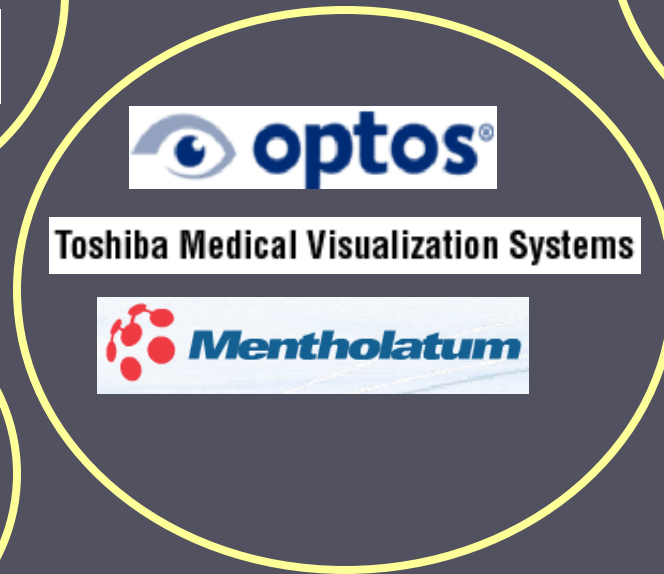
### MRI

- ◆ Full range of platforms
- ◆ Distributed expertise in MRI physics
- ◆ 7T experimental facilities
- ◆ Novel MRI techniques
- ◆ Quality assurance



# SINAPSE KE partners

## Global



## UK



## Overseas



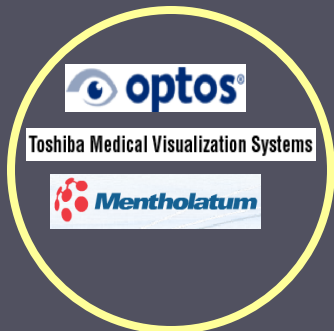
# SINAPSE KE partnerships: Global companies



PHARMACEUTICAL COMPANIES are increasingly contracting out components of R&D. We have expertise in the development of tracers that can be used as surrogate biomarkers and access to the NHS for phase 2 and 3 clinical trials



MEDICAL EQUIPMENT COMPANIES. Our work could lead to equipment add-ons that will help the company gain a market lead – new scanning methods or new image analysis methods.  
Good academic publications help to promote sales



We can explore new technologies with companies that have a LOCAL BASE and provide clinical data required to develop and validate new methods.

## SINAPSE KE partnerships: Smaller companies



UK COMPANIES can benefit from fine tuning and evaluation of their technologies in a clinical setting. SINAPSE can promote the partnership and ensure that there is a national dimension.



OVERSEAS COMPANIES will partner with us if we have skills or facilities that are easier to access here than locally.

# KE partnerships: obstacles

- Finance is tight
- Global competition
- There doesn't appear to be a common process for IP agreements. For example do 'in-kind' contributions entitle companies to a share of IP.
- Pools are not legal entities and so cannot close out deals. This can be a major frustration with multi-sight projects
- Transfer of images from NHS scanners for analysis in Universities.



# The MIDAS protocol

Dominic Job (BRIC), presented by  
David Wyper, SINAPSE



BRAIN RESEARCH  
IMAGING CENTRE  
Edinburgh



SINAPSE

# The MIDAS protocol: Purpose

- *Securely*: accessing and transferring medical images between institutions
- *Safely*: the appropriate removal of ‘Personally Identifiable Information’
- *Simply*: A clear protocol, applicable to any site
- *Transparently*: A protocol that all involved parties understand and support

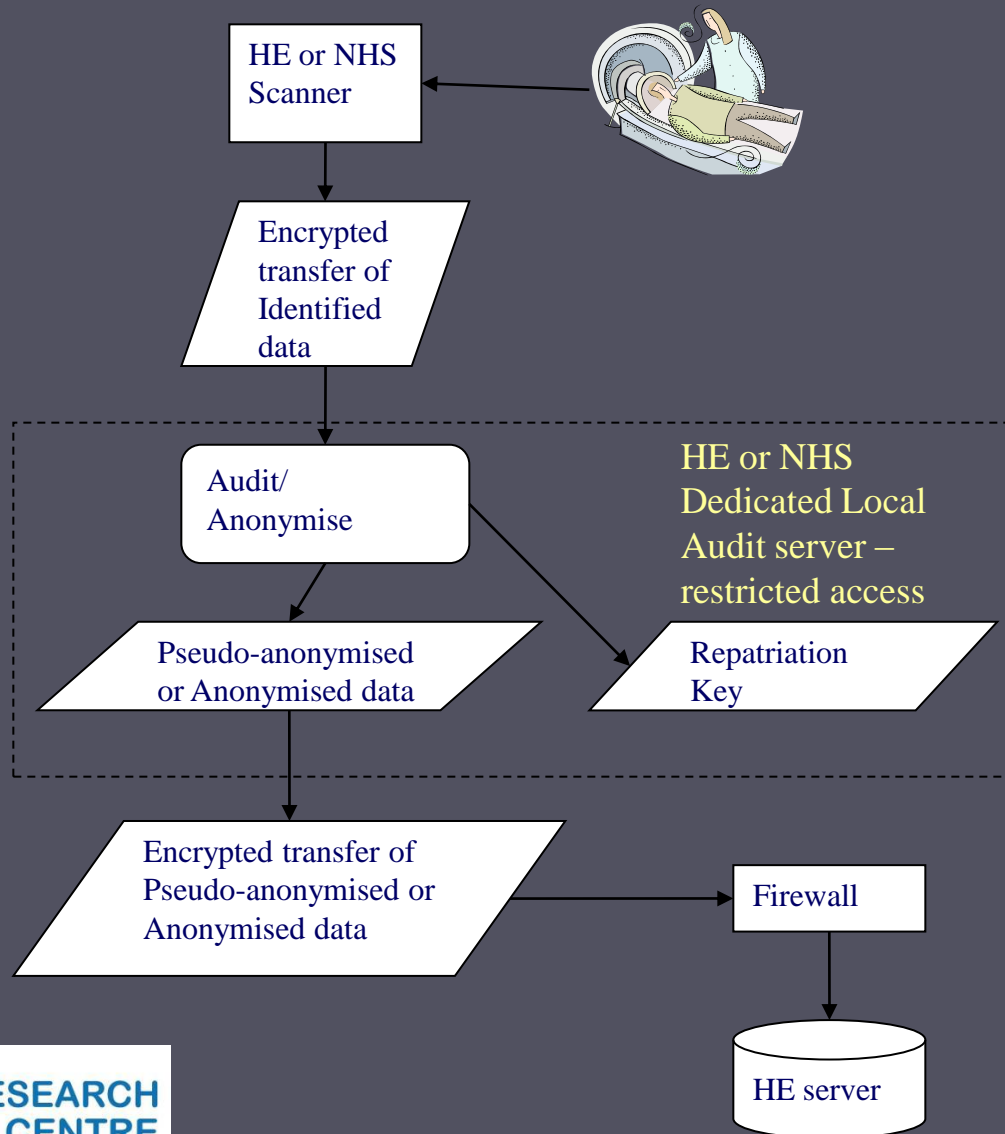


# The MIDAS protocol: Scenarios

- Images that are acquired in NHS or HE scanners, and are transferred to HE, or to another HE institution, respectively.
- Images acquired on HE scanners transferred to NHS. In Edinburgh this is already covered by a 'Memorandum of Understanding' (appendix 4), which should be portable to other Scottish sites if needed. This has been working well for years and is not discussed further here.



# The MIDAS protocol



# The MIDAS protocol: upkeep

- Site specific implementations signed off by Caldicott Guardian/ NHS/ HE site
- Site specific implementations are added to the MIDAS protocol document when signed off
- *Closing the loop*: Protocol updates and site specific implementations are open and available for all to comment on as they become available or updated



# The MIDAS protocol: discussion

Anonymisation of NHS images; the options are

1. anonymisation on NHS server
2. anonymisation on a dedicated HE audit server within NHS
3. anonymisation of HE images on HE server

Can NHS images can be anonymised on HE dedicated audit servers?

- avoids any costs to the NHS with the exception of implementing firewall access
- However, this may not be implementable in all local sites  
(( but it may be possible for these sites to retrieve anonymised and pseudo-anonymised data from another HE, by prior agreement.))

