GeoSciences at Edinburgh

Introducing the GeoSciences Computing Environment

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www.geos.ed.ac.uk/~gisteac/wkzero/

Session 1

Lecture and Practical Handouts

- www.geos.ed.ac.uk/~gisteac/wkzero/

Material may be updated until immediately before a session is given in Welcome Week - check then for the most recent version.

Outline

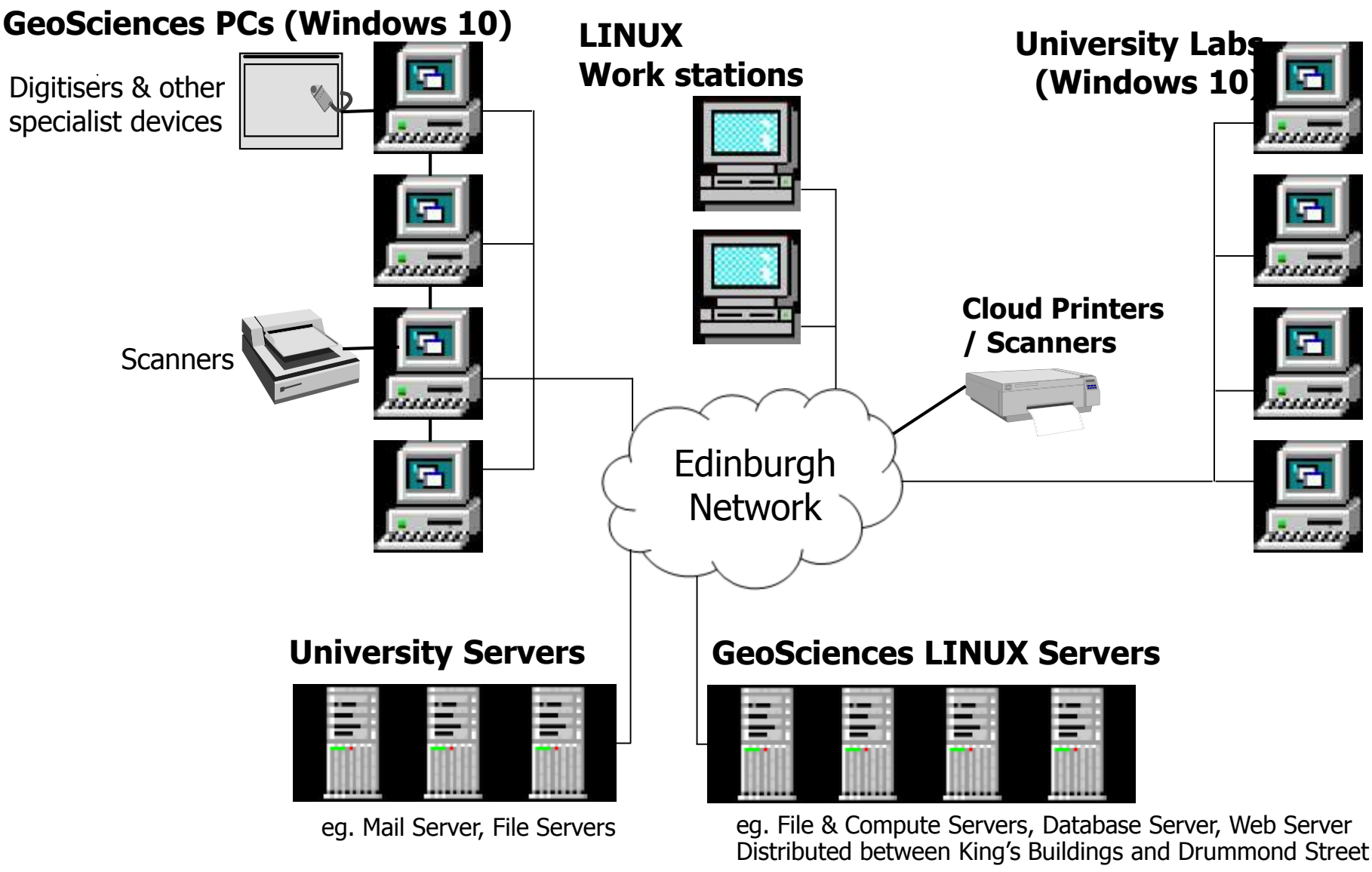
- What facilities are available
- Timetable in the context of what *you* need
- Getting access
- Storing files
- Software and data
- UoE web resources
- Printing
- Getting help
- Connecting your own computer
- Check list before you leave !

Introducing Computer Systems

- You have been sent a username and password with your matriculation papers which gives you access to:
- University Systems
  - This is required to use all the PC labs (Upstairs in Geography, Library, Appleton Tower, King's Buildings, University Halls)
- GeoSciences Systems
  - Distributed across Drummond St, Grant Inst and Crew
  - Range of facilities meeting specialist GeoSciences requirements, not available elsewhere
  - Access to particular software and data
  - Thus word-processing, preparing presentations and spreadsheets are low-priority activities

GeoSciences at Edinburgh

Facilities available in GeoSciences



What do all these machines do?

- Workstations and PCs are things you sit at
- Each may have its own set of software
- Most people will use PC software most of the time
- LINUX servers provide space for 'big' datasets or computationally-intensive work. They also store your PC files
- You usually don't have to move data between systems
- PCs runs a *managed desktop* - you don't have the freedom you would have on your own machine
- LINUX is command-based but
  - is more flexible that Windows
  - very widely used in the RS, GIS and modelling world
  - provides a good programming environment

So what am I likely to need?

- Those involved with GIS, Remote Sensing or Modelling will need to use most of the systems
- If your work will involve sizeable datasets, programming or database management then you may need to know about LINUX
- If your computing activities are likely only to involve word-processing, statistics, graphics etc. then you only need to know how to use the PCs
- Unfettered access to the Internet from all machines

Introductory Course Timetable

Wed 10.00 :	Introduction to the Systems
Wed 14.00 :	Repeat this morning
Wed 16.30 :	Connecting from Home
	Drop-In Surgery
Thurs 10.00:	Introduction to LINUX
Thurs 14.00:	LINUX Advanced Topics

- *Each lecture session is followed by a practical*
- *Just attend what you need, but don't leave gaps*
- *Make sure any problems are solved by end*
- *You may not know you have problems!*

Other Training Opportunities

- This course represents the main computer training provided to all new postgraduates
- Various MSc modules provide training in GIS, remote sensing and database management packages
- The University's Information Services provides many courses on a range of software
- These repeat through the year
- Also laptop 'drop in' sessions
- Further information on MyEd or the Information Services Web Site www.ed.ac.uk/information-services
- Also courses through Institute for Academic Development: www.ed.ac.uk/institute-academic-development

A Word of Warning !

- Computer Misuse Act 1990 makes 'hacking' illegal
- 'Inappropriate' use of the University's computers is regarded as a serious disciplinary offence
- All defined by University Computing regulations:
  - www.ed.ac.uk/information-services/about/policies-and-regulations/computing-regulations
  - You sign that you understand these on matriculation
- You must:
  - use the facilities for the purpose you were given access
  - protect your password to prevent unauthorised access
  - not access data or facilities which are not permitted
  - not do anything illegal (or immoral!)
- And, no food or drink in the computer labs !

Logging On

- 'Logging on' is a security procedure to ensure only you get access to your information
- As well as files and printers, you should get access to your customised windows settings
- You will have used your username and password
- Reflect on how secure your password is - if its a word that appears in any dictionary its insecure
- "geo39?logy" is an example of a good password; memorable, not in dictionary, good length
- DO NOT tell anyone your password for any reason

Standardised PC Environment

- Used Windows? Our *managed desktop* is just a little different!
- Software appears on the START menu, but exactly what software varies depending on where you are
- Some software is ubiquitous (eg. MS Office)
- Utilities are provided to let you access the LINUX servers
- You cannot install your own programs
- Your files appear as icons in folders which are allocated to disk drives, which sit on the network
- Most of your settings are remembered

Where to keep your PC files

- **Your network drive (M:)**
- The normal location for all your files
- Accessible everywhere
- Secure (needs your password)
- 'Backed up' nightly, so you can get files back if you accidentally delete / corrupt them

- **The local hard disk (C:)**
- You can only write to 'workspace' folder
- *Temporary only*
- Not very secure
- Never 'backed up'
- May be wiped when you log-off
- Only available on the machine you are sitting at
- Faster than the network for temporary storage

Not wise to run files directly off a memory stick - that's slow and dangerous! USB hard drives are more reliable BUT **always** keep a backup. Cloud drives better still (OneDrive, GoogleDrive)

PC Software

- Full Microsoft Office (Word, Excel, PowerPoint, Access)
- Open Office (freeware)
- Email, web, communications, etc.
- Graphics (Paint, Irfanview, Inkscape, Powerpoint etc.)
- Creating PDFs - just save as a PDF from Office 2010
- Database management systems (Access, Oracle, PostgresSQL)
- Project management (MS Project)
- GIS & RS software (ESRI ArcGIS, Erdas Imagine)
- Programming (MS Visual Studio, Java, Python)
- Statistics (SPSS)
- Lots of discipline-dependent software
- Not all software is on every machine

Software, Facilities and Data

- Use the *applications catalog* for details of software available
- Simple instructions and more details on popular software is available here: www.ed.ac.uk/geosciences/intranet/it/faq
- If we haven't got it and you think you need it email ithelp@geos – but remember someone has to pay
- Some GeoSciences PCs have scanners, also Resource Centre at Kings Buildings and uCreate in Main Library
- You can load your own data, but
  - be aware of copyright / licensing issues
  - keep the size as small as possible
  - data is backed up daily, but no harm to keep a copy
- The University Data Library can help with data
- Also EDINA, services like DigiMap (OS, geology, marine)

Email

- Email is read using the office365 system
- There are other ways of reading email and your home computer or smartphone can be configured to pick up UoE email
- Thunderbird is a free email reader that you can download - allows quick and efficient reading of email
- Various GeoSciences mail-lists are available:

  `geos.gis@mlist.is.ed.ac.uk` – all MSc in GIS students

  (others described in postgraduate handbooks, or here:
  www.ed.ac.uk/geosciences/intranet/it/communications/sympa-lists)

Web Services

- The University has a (sort-of) integrated web-based information service
- Some driven by the School of GeoSciences (eg. info on people (including you!)
- GeoSciences also has 'internal' web pages:
  - Courses
  - Information (eg. handbooks)
  - Services, such as
    - Demonstrating / Tutoring database (https://www.geos.ed.ac.uk/postgraduate)
    - Research Costs Database (https://www.geos.ed.ac.uk/admin/finance/rcosts_student/)
- Email addresses can be found on GeoSciences and University web servers
- Remember to login to see internal GeoS pages

MyEd

- Centred around you - rather useful !
- Accessible via your EASE password at:
  www.myed.ed.ac.uk
- It is your personal University of Edinburgh *web portal* allowing you to:
  - Get announcements and access to your email
  - Get details of **your courses** and **timetable**
  - *Access LEARN*
  - Update your personal details
  - Get info on the library, EUSA, finance, careers
  - Special 'channel' for international students
  - Get the news (national and university) and weather
  - Keep bookmarks and get quickly to useful web sites

LEARN

- Learn is the University's Virtual Learning Environment
- Different courses use it in different ways, but typical facilities include:
  - Point of contact for lecturer and students
  - Pointer to web resources
  - Repository for course materials, such as course description, lecture notes and practical handouts
  - E-submission and mark-return facility for course-work

    (But you may be required to submit a paper copy too!)
  - If you are a course tutor / lab demonstrator for undergraduate courses, you may need to use WebCT to mark work
- Problems? See your course lecturer

Finding information on the Web

- The web remains a huge unstructured library
- There is lots of useful information, but its often difficult to find
- There are two classes of tool which help:
  - Search engines (eg. university web site, Google)
  - Virtual libraries (eg. thematic collections of web links maintained by institutions or individuals)
- Don't regard the web as an alternative to a real library when writing essays etc.
- Look at EU Library resources like DiscoverEd
- Think carefully before you use Wikipedia !
- Respect copyright; just because its on the web doesn't mean you can steal it

Printing

- Make sure you are printing something you really want, its environmentally-unfriendly
- Cloud Printing is via Xerox Multi Function printers, which also serve as photocopiers and scanners
- Cloud Printing means you print to a 'virtual queue'
- The job is 'pulled' to a physical printer when you swipe your University Smart Card
- Print to either ***cloud-mono*** or ***cloud-colour***
- One large mono (b&w) printer in each GeoSciences building; more smaller colour printers scattered around
- Don't print to colour unnecessarily

Printing in IS Labs (eg. HSY)

- Also cloud printers, but you have to have credits before you can print
- Price is:

  5p per A4 page, 8p double-sided, 30p colour

  15p for A3, 26p A3 double-sided, 48p A3 colour
- Check credits via utility on task bar on machines in open-access labs or via MyEd ➔ Accounts ➔ Print Credit
- Add credit credit via MyEd
- You can print to cloud printers from the UCS labs in pick up your printing in GeoSciences for free

Getting Help

- Read your class-notes and the software manual
- Most systems today provide online manuals
- There is much documentation provided on the GeoSciences web pages: www.geos.ed.ac.uk/it/
- Remember: technology changes, so check this link regularly
- You may be able to find appropriate manuals or tutorials elsewhere on the web – but with care…
- Let us know if there's something obvious which is missing

More Help and Reporting Problems

- Email ithelp@geos.ed.ac.uk
  (24 hours, but only acted on during working hours!)
- Speak to the Duty Computing Officer directly
  (10.00 - 12.00; 14.00 - 16.00)
- Name displayed on noticeboard
  (Drummond St or go to Room 144 in Grant, Room 112 in Crew)
- Also Information Services: IS.Helpline@ed.ac.uk or phone 0131 651 5151 (longer hours, incl. Sat)
- Explain the problem clearly
- What exactly were you doing, what software, what files, what machine, error message etc.
- Report broken equipment or other failures too
- Vague explanations result in unhelpful solutions !

Connecting your own device

- You can connect your own laptop, iPad or smartphone by WiFi
  www.ed.ac.uk/information-services/computing/get-connected
- EduRoam is a WiFi service that runs across a network of universities
- To connect outside Edinburgh add @ed.ac.uk to your username
- You can connect from home using a Virtual Private Network (VPN)
- You need to register for these services
- There are also laptop clinic sessions
- Laptops can also be borrowed for short periods
- More on remote access at the end of this afternoon!

IT provision for new PhD students

- The School tries to ensure that all postgraduate students have reasonable access to a computer
- MSc students have dedicated labs
- Following research council funding expectations, research students will be provided with a machine on their desk soon after arrival
- Machine remains school property
- See Postgraduate Research Student handbook for further details

Have you…?

- Been through the EASE password-setting procedure and reflected on the security of your password?
- Got access to the systems
- Checked you have the correct M: drive, problems may occur if:
  - you have ever previously been a UoE student
  - some other circumstances
- Checked you can send and receive email
- Found *MyEd* and *Learn*
- Found the GeoSciences internal web pages / course intranet