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Computing Services

Topics

- **Wireless Networking**
- **E-science**
- **E-learning**
- **Authentication**

Wireless Networking

- **After a long investigation by a Working Group –**
    - **Roll-out agreed for a wireless network in 'public' areas**
    - **Co-ordination with Schools etc welcomed**
    - **Pilots have been run, including EUCS, Darwin Building**

Wireless Security

- **Security based on VPNs back to a BlueSocket box**
- **Users need to apply for a name & password**
- **Purchased a site license for CISCO VPN Clients for general use**
- **Can also use built-in VPN in XP etc**

Wireless Issues - 2

- **Remaining problem is how to allow minimal-cost access to visitors, conferences etc**
  - **Without compromising security, IPR, Information etc**

- **Come to the UCISA-NG Seminar on the 30th October!**

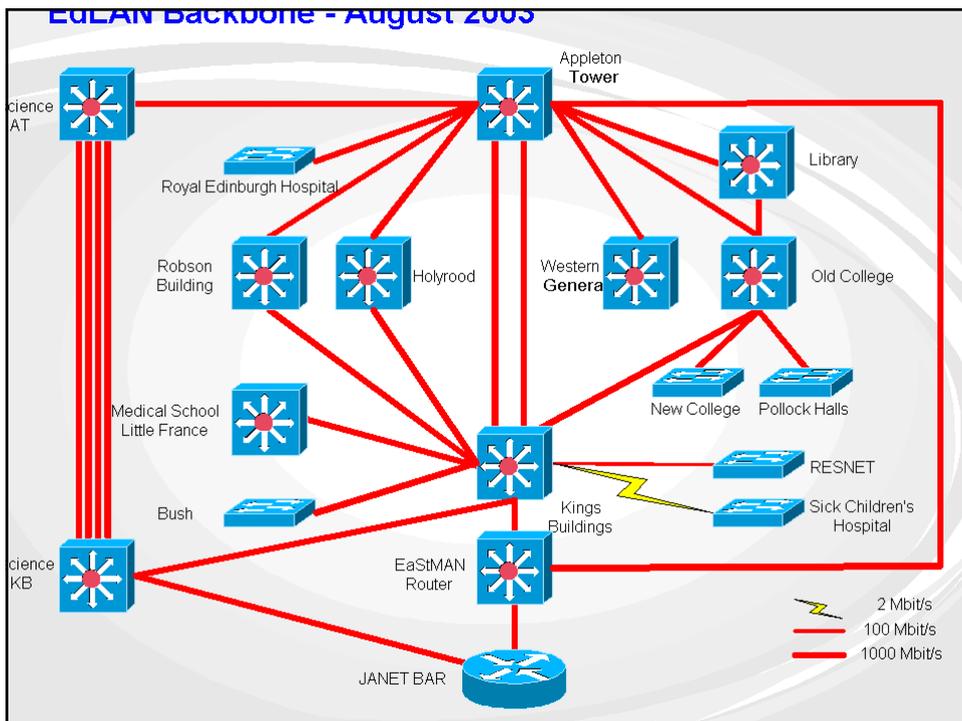## E-Science

- **Networks**
- **Storage**

E-science Networks

- **SRIF funding was used to put in a multi gigabit network.**

- **Usage of this has been 'disappointing' to date**

- **Hype ahead of reality?**

EdLAN Backbone - August 2003

Storage

- **SRIF/SRIF2 funding**
    - **SAN to be placed at Bush Estate**
    - **10 Gig link from KB to Bush**
    - **80 TB in the first instance**
    - **iSCSI and NFS access**
    - **Disc speeds/types will depend on cost**
    - **NO backup !**

E-learning

- **What are we doing?**

E-Learning

- **New Principal (Tim O'Shea) very keen to set a strategy**
- **Number of meetings**
- **Some initial funding**
- **Still a possible contradiction between e-cpd type activities and 'undergraduate' e-learning**
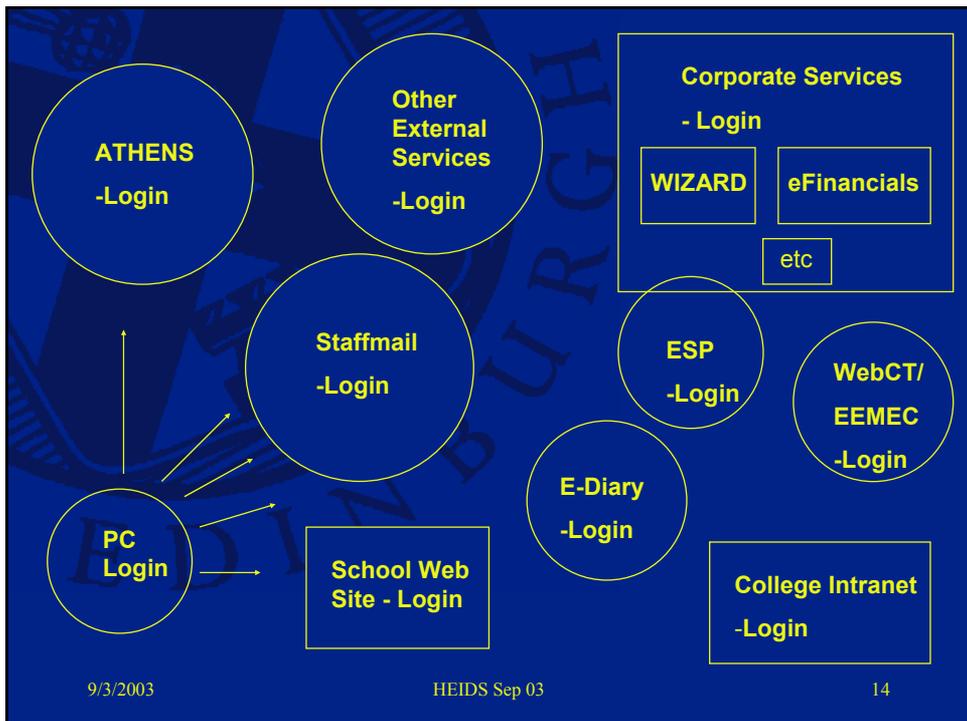
Authentication

- **What is the problem?**

What is the Problem?

- **Everyone has multiple names and passwords**
  - **Anything from 5 to 25**

- **The next slide shows *some* of these logins**

ATHENS -Login

Other External Services -Login

Corporate Services - Login

WIZARD   **eFinancials**

etc

Staffmail -Login

ESP -Login

WebCT/ EEMEC -Login

E-Diary -Login

PC Login

School Web Site - Login

College Intranet -Login

Why is it *still* a problem?

- **Systems tend to be built one at a time**

- **Commercial systems can be limited in the way they can authenticate**

- **It is difficult to export 'credentials' from one system to another**

Single or Reduced Sign-on?

- **Why shouldn't you logon *once* and that is it?**

  - **Different applications have different security needs**
    - **Should it be as easy to access your bank account as read your personal details?**

  - **A single login means that once the weakest system is broken, access is gained to all**

Reduced Sign-on

- **The concept is thought of as a (few) layers, like onion rings, of increasing security strength**
    - **Most activities are probably in the same layer, so a single logon over that layer is reasonable**
    - **A Risk Analysis needs to be done to assign levels**

Types of System

- **Systems can be classified into two types**
    - **Web based systems**
    - **The rest**

Web Based Systems

- **They are the 'easiest' to get to work together**

- **But, either the method is quite simple and has consequential security problems**

- **Or, the method is complex and has considerable overheads for everyone**

Web based systems - continued

- **A further complication arises for 'local' or 'remote' web systems**
  - **We don't have control over remote systems**
  - **Some mechanisms have significant privacy issues**

Non Web Based Systems

- **Each of these systems tend to be individual**
    - **It is very difficult to get a common method of authentication**
    - **The 'kerberos' system is the most hopeful way forward and is probably going to be implemented University wide**
    - **But, significant systems are missing out**

'Non Local' Solutions

- **Shibboleth – Internet 2 in the USA**
    - **Gives very good integration of global and local web facilities with good privacy**
    - **New, not simple to implement**
- **PAPI – From RedIris in Spain**
    - **Good for national type content**
    - **Still developmental**

The Way Forward ?

- **A first step would be**
  - **Reduce the number of different name/passwords in use**
- **Them move to systems which can invisibly pass authentication through**

How to reduce the number of names?

- **There is a Universal Name for everyone in the University**
  - **First step is to switch the corporate services including the Edinburgh Student Portal to use this name & password**

Problems

- There is a body of opinion which believes that *any* use of a name/pass pair that is not fully protected should never be permitted
- What is the risk?
- How do we balance risk against significant inconvenience
- People can be the biggest risk!

ATHENS

- Used to access most UK wide JISC services
  - Up to now has used its own set of usernames & passwords
  - But, can now use local methods (ie University name/pass) to authenticate
- We are seriously looking to implement this by the end of the year

ATHENS Follow on

- **JISC (body that funds JANET) is currently out to tender on replacement systems**
- **The same debate is occurring over what future architecture should be followed**
- **There is a significant danger to us in jumping too fast**

Who Can do What

- **New Issue**
  - **In the past, owner of a system gives you a name/pass**
  - **Now, Universal name/pass already exists, therefore you need to be Authorised**
- **Making this coherent in the University will not be easy!**

Summary

- **Important first step is to reduce the number of separate name/pass pairs that users have**

- **Investigate the emerging systems to attempt to find a method of significantly reducing the logins**

- **May need to look to the procurement cycle to force some systems into the game**