

All Wales Connectivity

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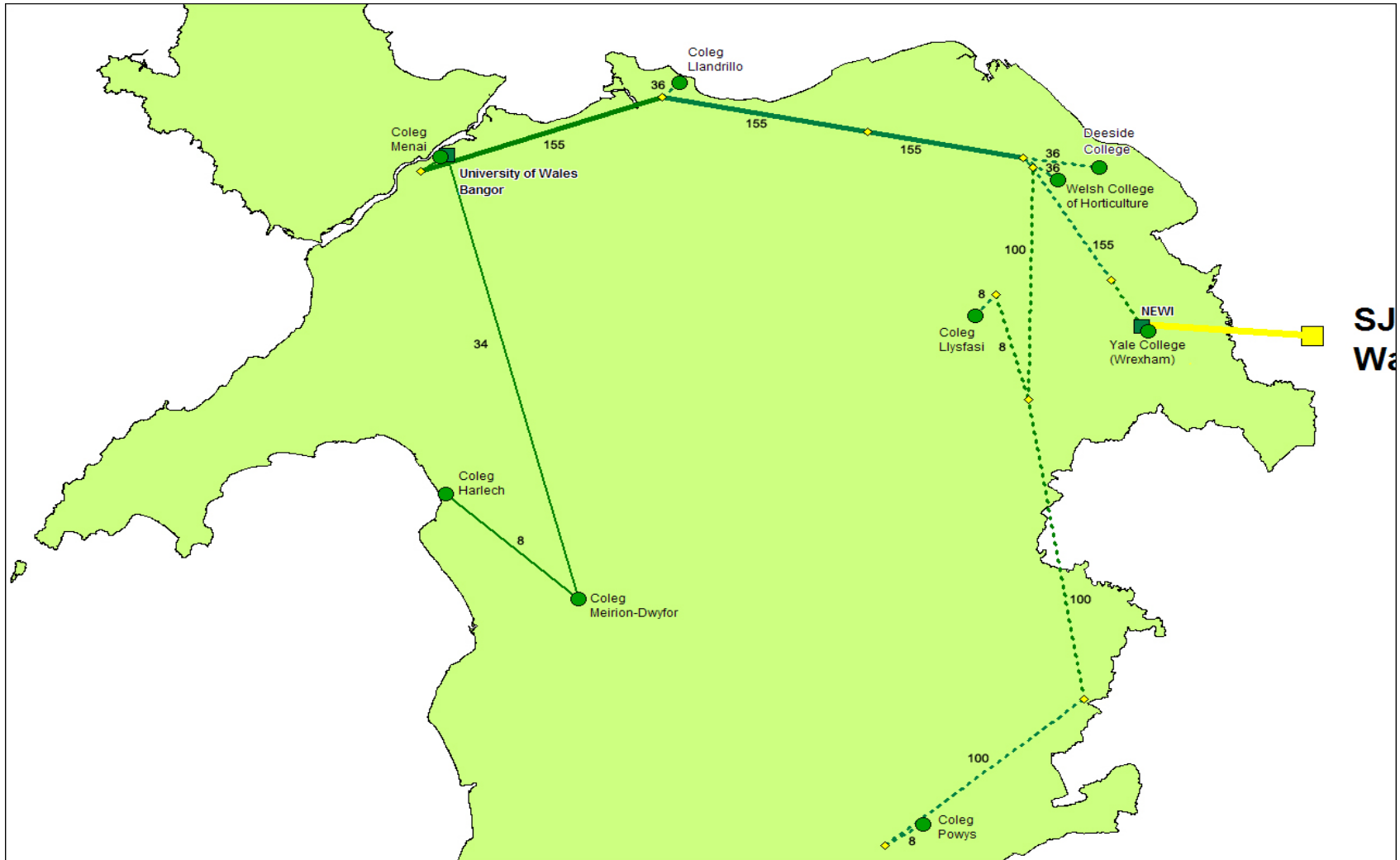
Overview

- All Wales Public Sector Network
- CITRIX
- Shibboleth
- Membership, Categorisation & Entitlements

Existing Welsh Infrastructure

- **South Wales MAN (SWMAN2)**
 - 10 HEIs & 14 FECs
- **North Wales MAN (NWMAN)**
 - 2 HEIs & 9 FECs
- **Lifelong Learning Network (LLNW)**
- **SuperJANET4/5**

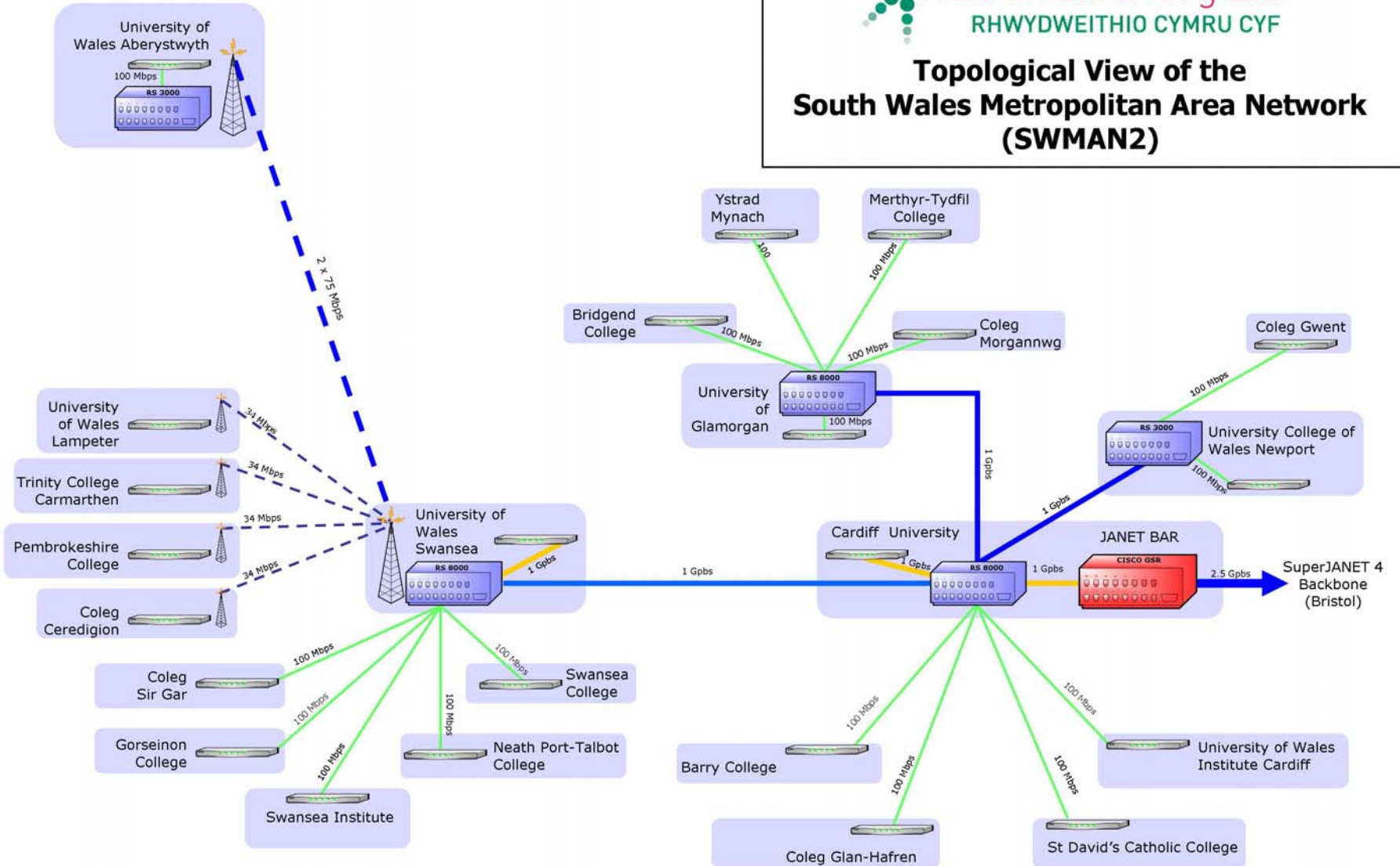
NWMAN

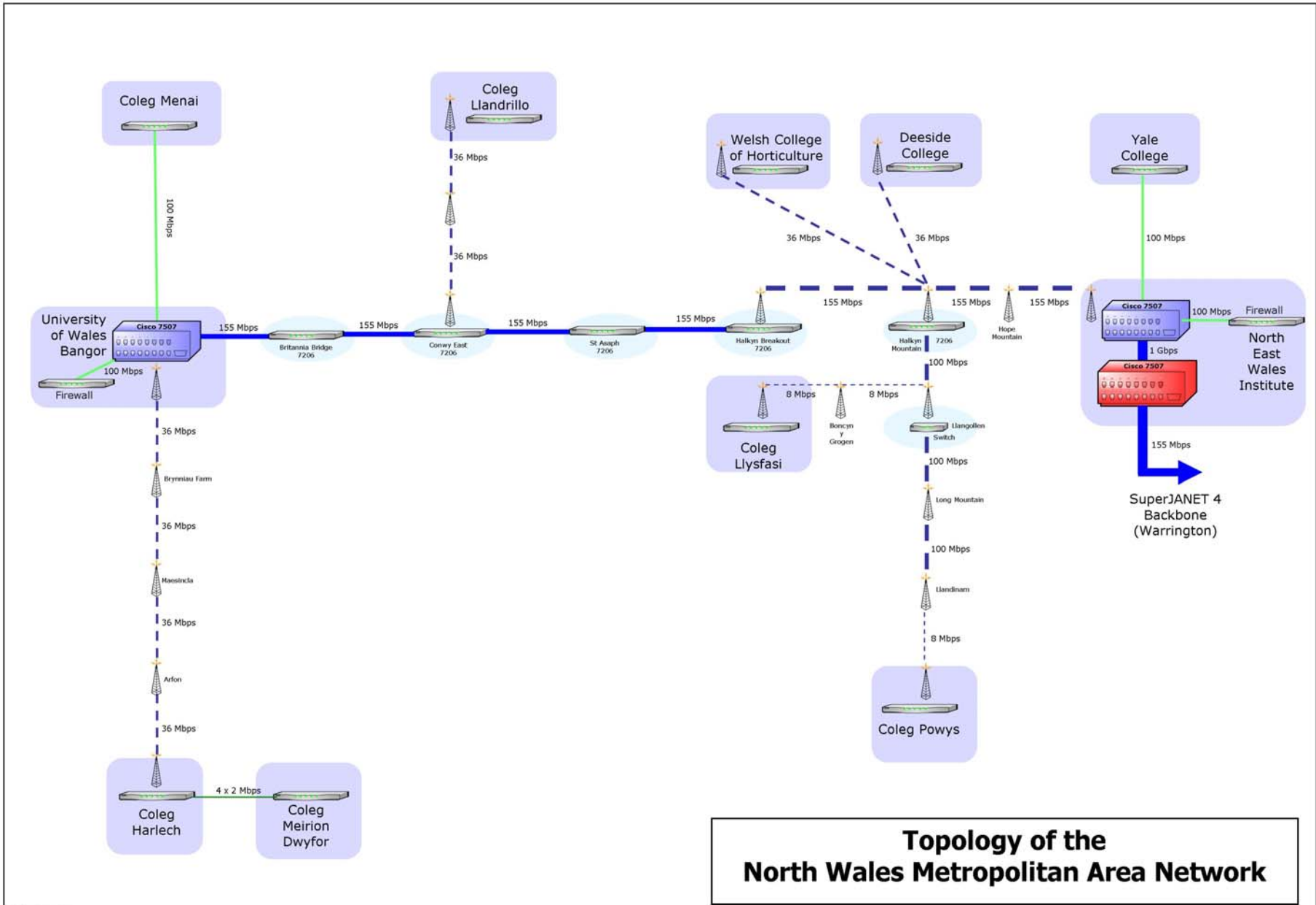




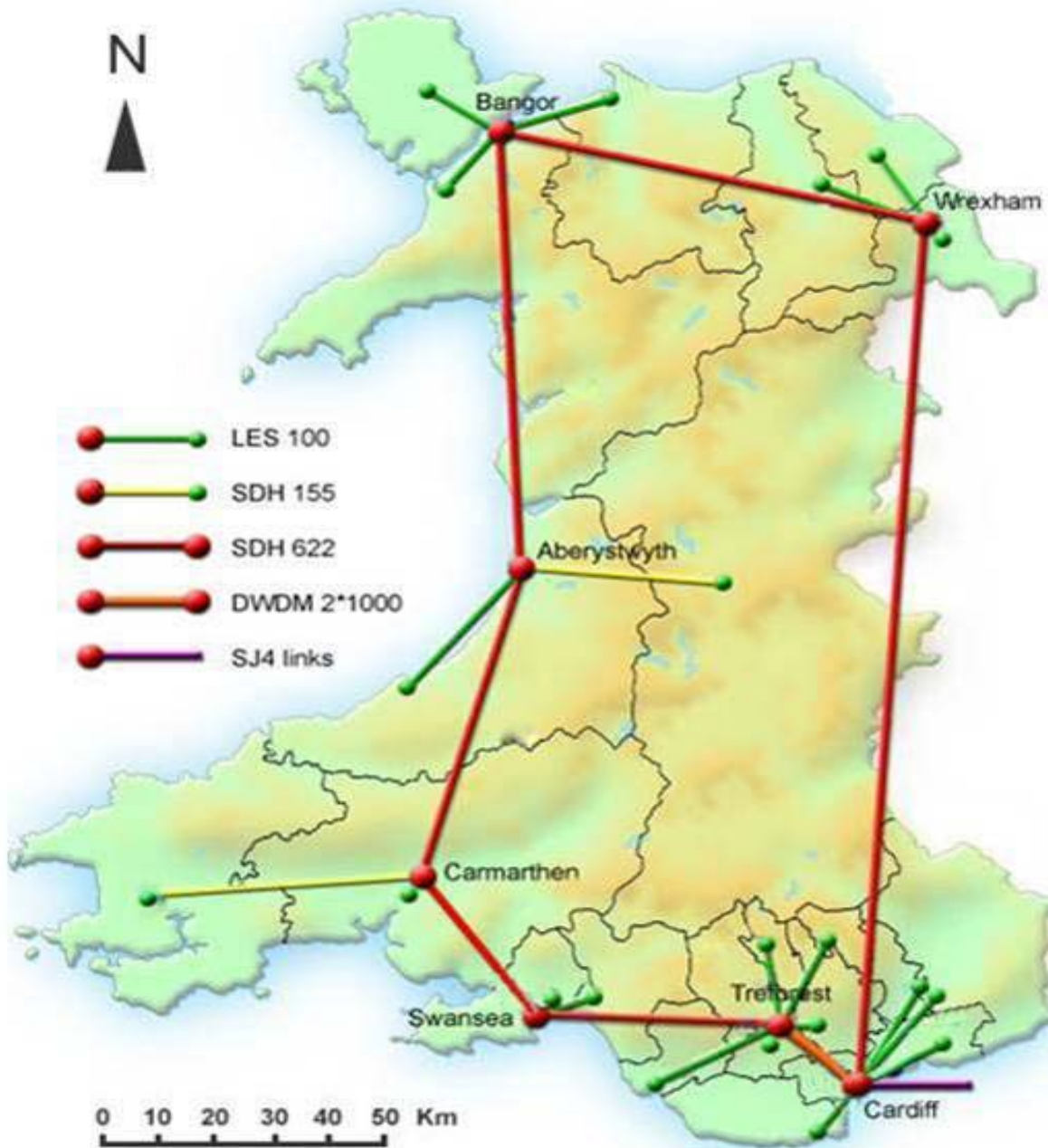
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Topological View of the South Wales Metropolitan Area Network (SWMAN2)





Topology of the North Wales Metropolitan Area Network

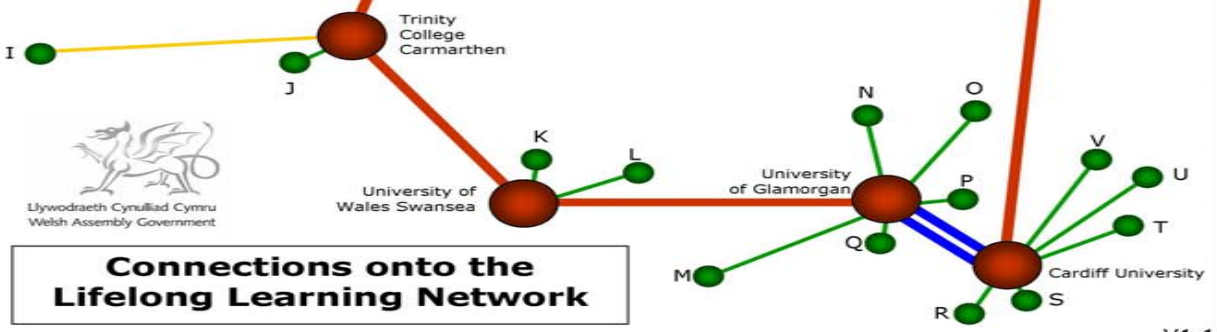


LLNW and Unitary Authorities

Key

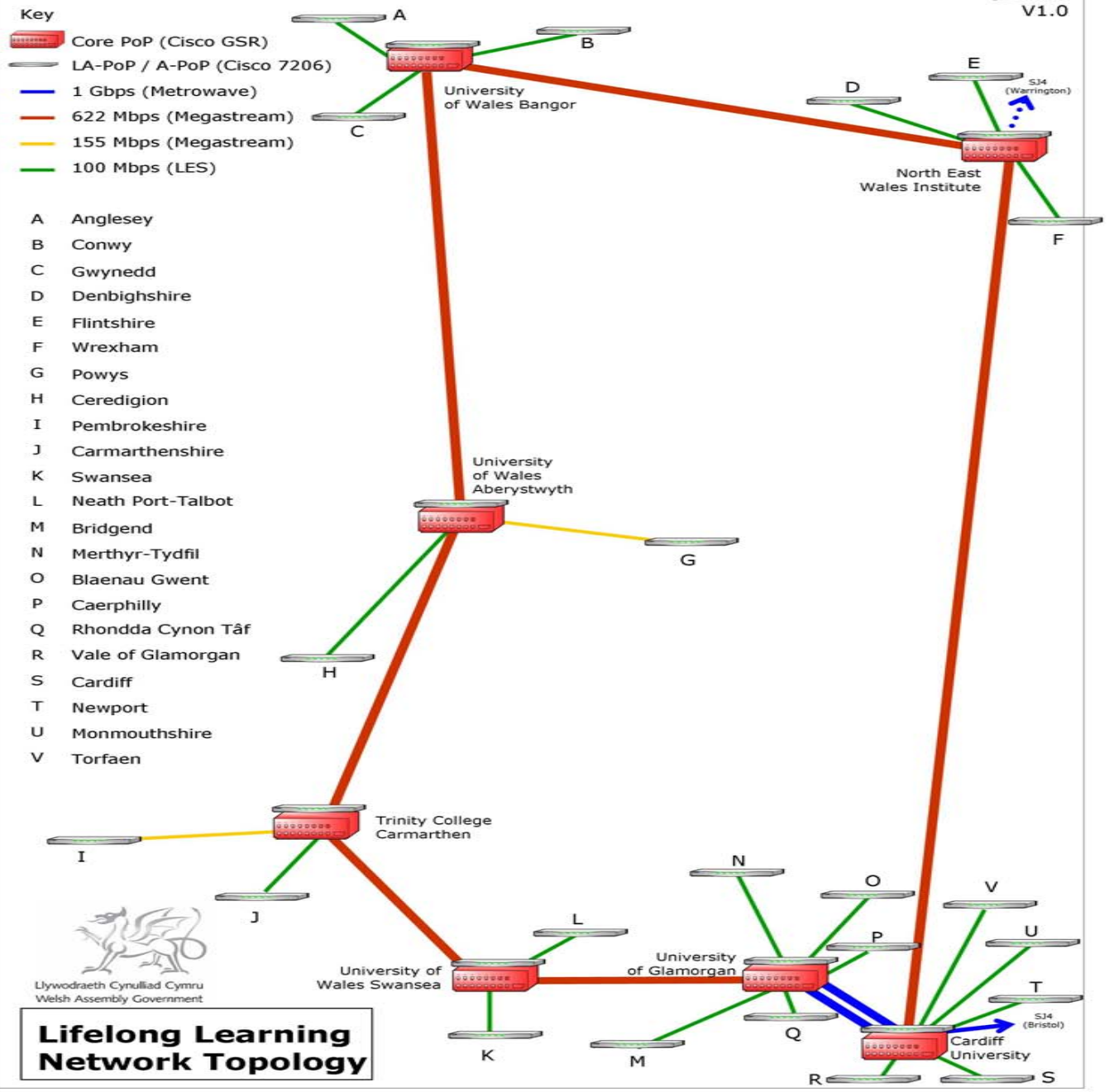
- Core PoP
- Unitary Authority PoP
- 1 Gbps (Metrowave)
- 622 Mbps (Megastream)
- 155 Mbps (Megastream)
- 100 Mbps (LES)

- A Anglesey
- B Conwy
- C Gwynedd
- D Denbighshire
- E Flintshire
- F Wrexham
- G Powys
- H Ceredigion
- I Pembrokeshire
- J Carmarthenshire
- K Swansea
- L Neath Port-Talbot
- M Bridgend
- N Merthyr-Tydfil
- O Blaenau Gwent
- P Caerphilly
- Q Rhondda Cynon Tâf
- R Vale of Glamorgan
- S Cardiff
- T Newport
- U Monmouthshire
- V Torfaen



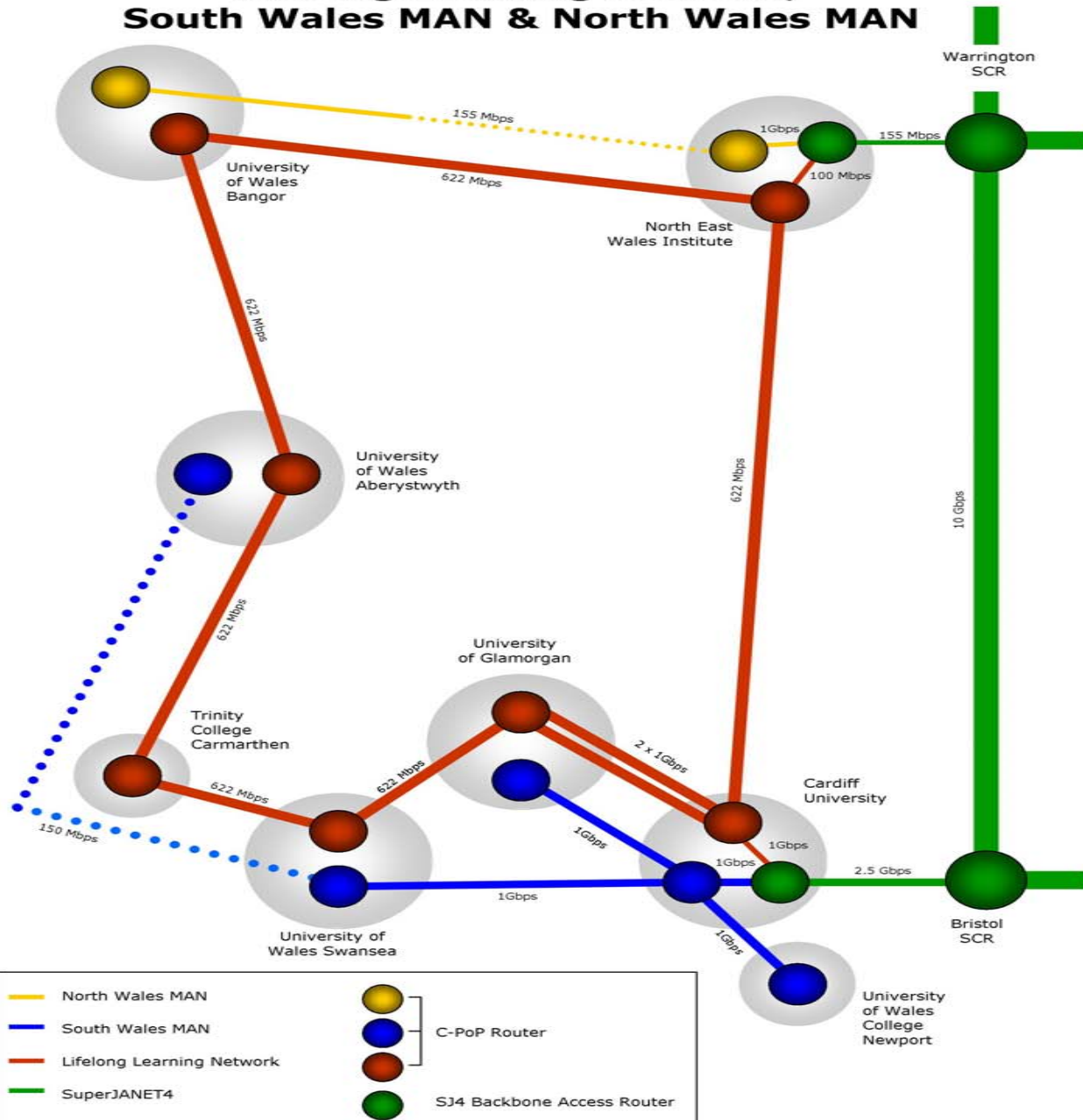
Connections onto the Lifelong Learning Network

V1.1



Lifelong Learning Network Topology

Lifelong Learning Network, South Wales MAN & North Wales MAN

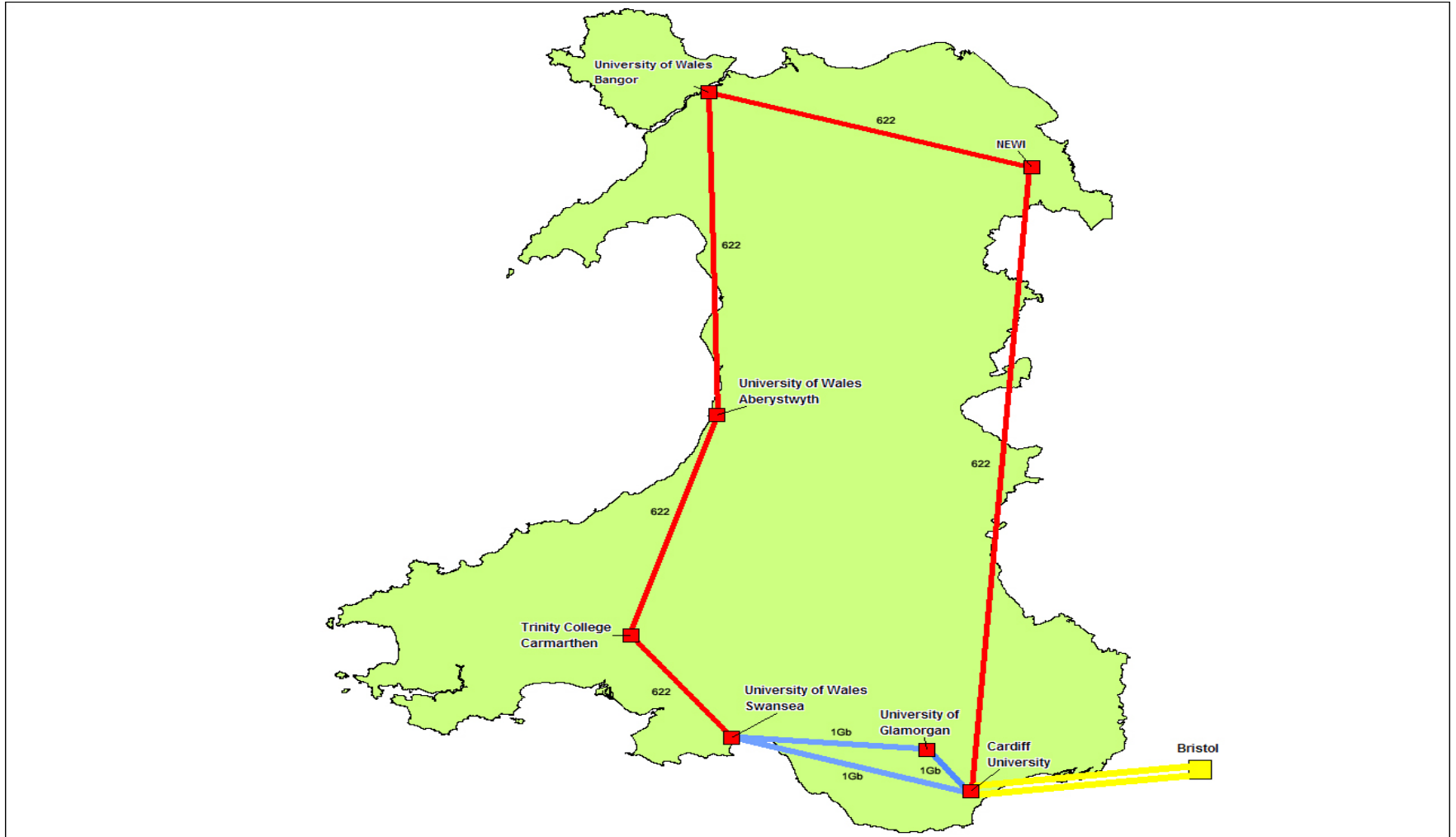


Meeting Future Networking Across Wales

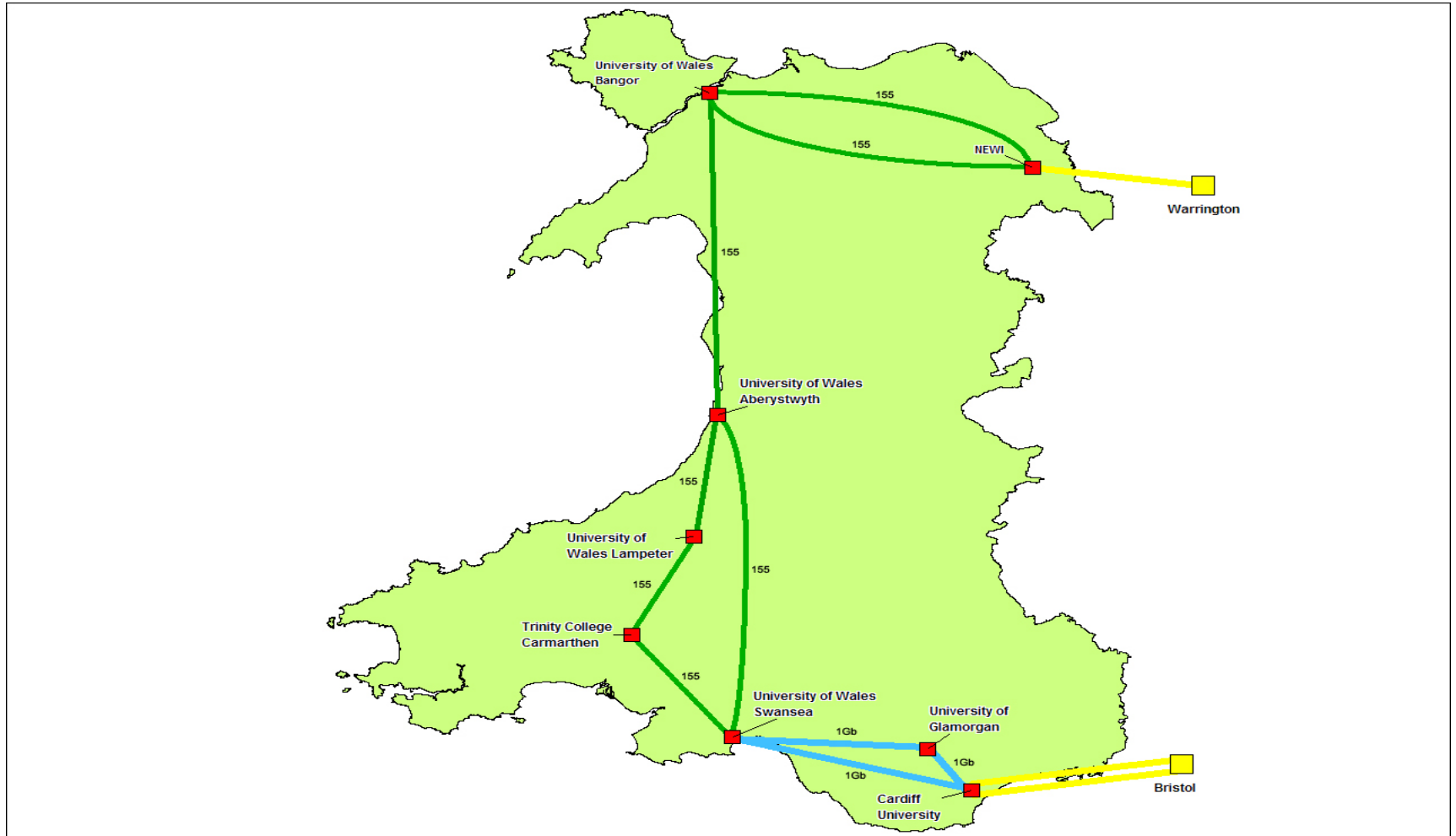
- **All Wales Public Sector Network (WPSBA)**
 - ▶ Alignment of contracts?
 - ▶ Single HE & FE educational network?
 - ▶ Sample options

- **Welsh Assembly Government (WAG)**
 - ▶ Broadband Wales Unit (BWU)
 - ▶ Public Sector Aggregation Board (PSA)

Core Network– Option A



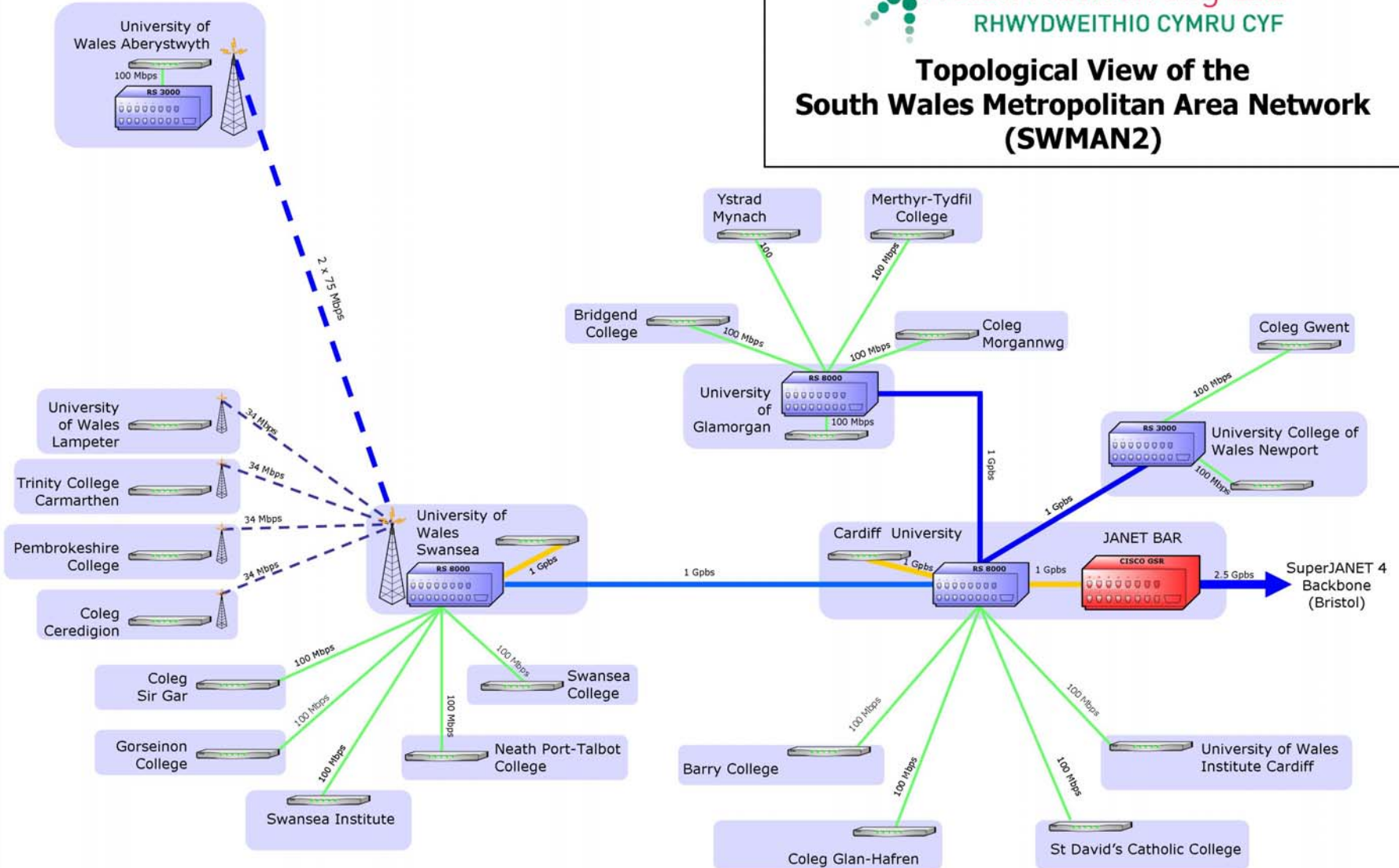
Core Network– Option B

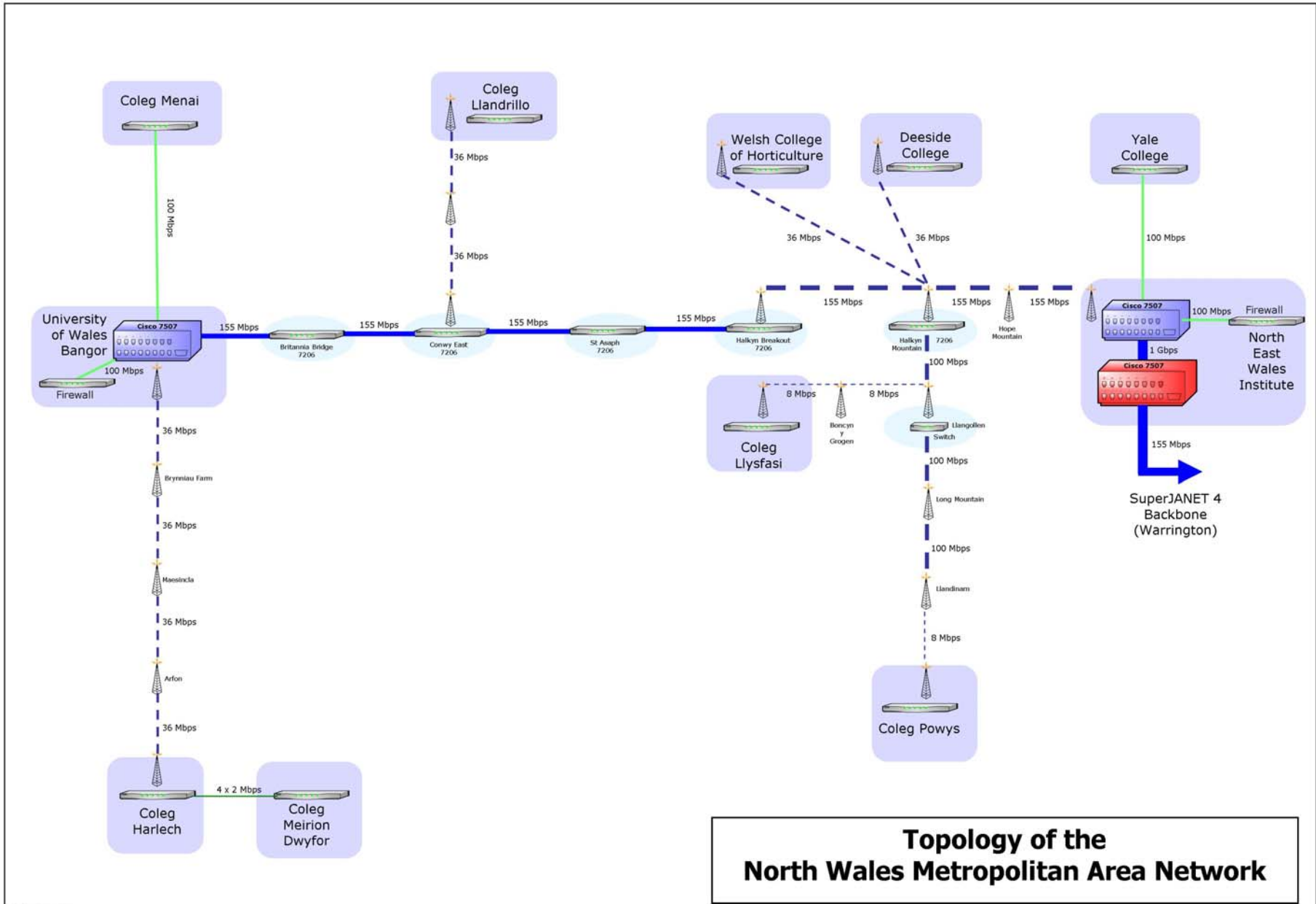




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Topological View of the South Wales Metropolitan Area Network (SWMAN2)





Topology of the North Wales Metropolitan Area Network

ALL WALES CITRIX SOLUTION

Providing Access to
Information Resources for
Cardiff University Students on
Placement



Infrastructure

- **Health Solutions Wales (HSW)**
 - ▶ Funded by Wales Assembly Government
- **Digital All Wales Network (DAWN2)**
 - ▶ NHS Wales managed network
- **Health of Wales Information Service (HOWIS)**
 - ▶ District General Hospitals & NHS sites

Background Info....

■ UWCM

- ▶ Established 1931
- ▶ 4000 students & 1400 staff
- ▶ Internationally recognised for research excellence
- ▶ Close links with NHS throughout Wales

■ Cardiff University

- ▶ Merged 2004
- ▶ 25000 students & 5000 staff
- ▶ World Class Mission

Project Overview

■ Project Board

- ▶ UWCM & Cardiff University
- ▶ Cardiff & Vale NHS Trust
- ▶ Health Solutions Wales (HSW)

■ Feb 2003

- ▶ HEFCW & SRIF funding

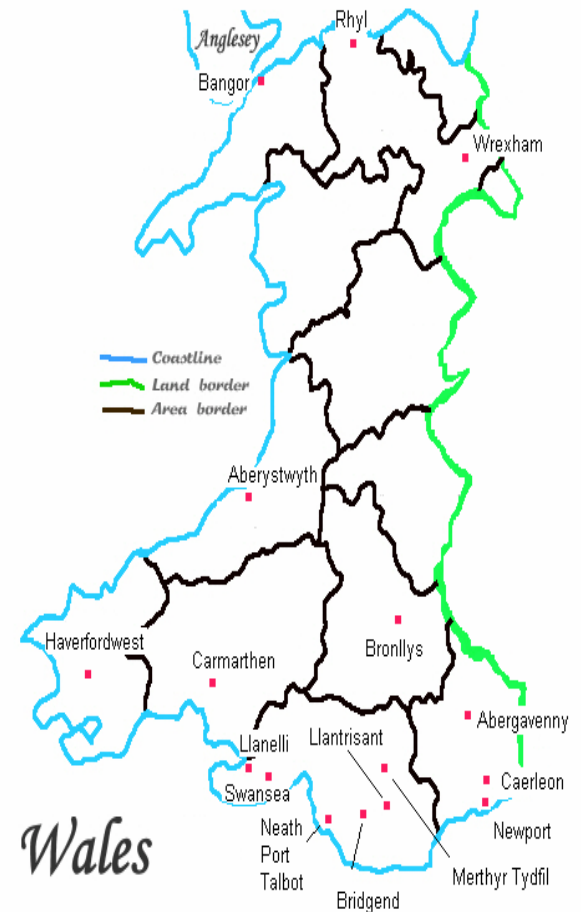
■ May 2003

- ▶ NHS Information Authority Approval
- ▶ First ever fixed dedicated link between a JANET connected institution & NHS network (DAWN2)
- ▶ 1st UK permission granted

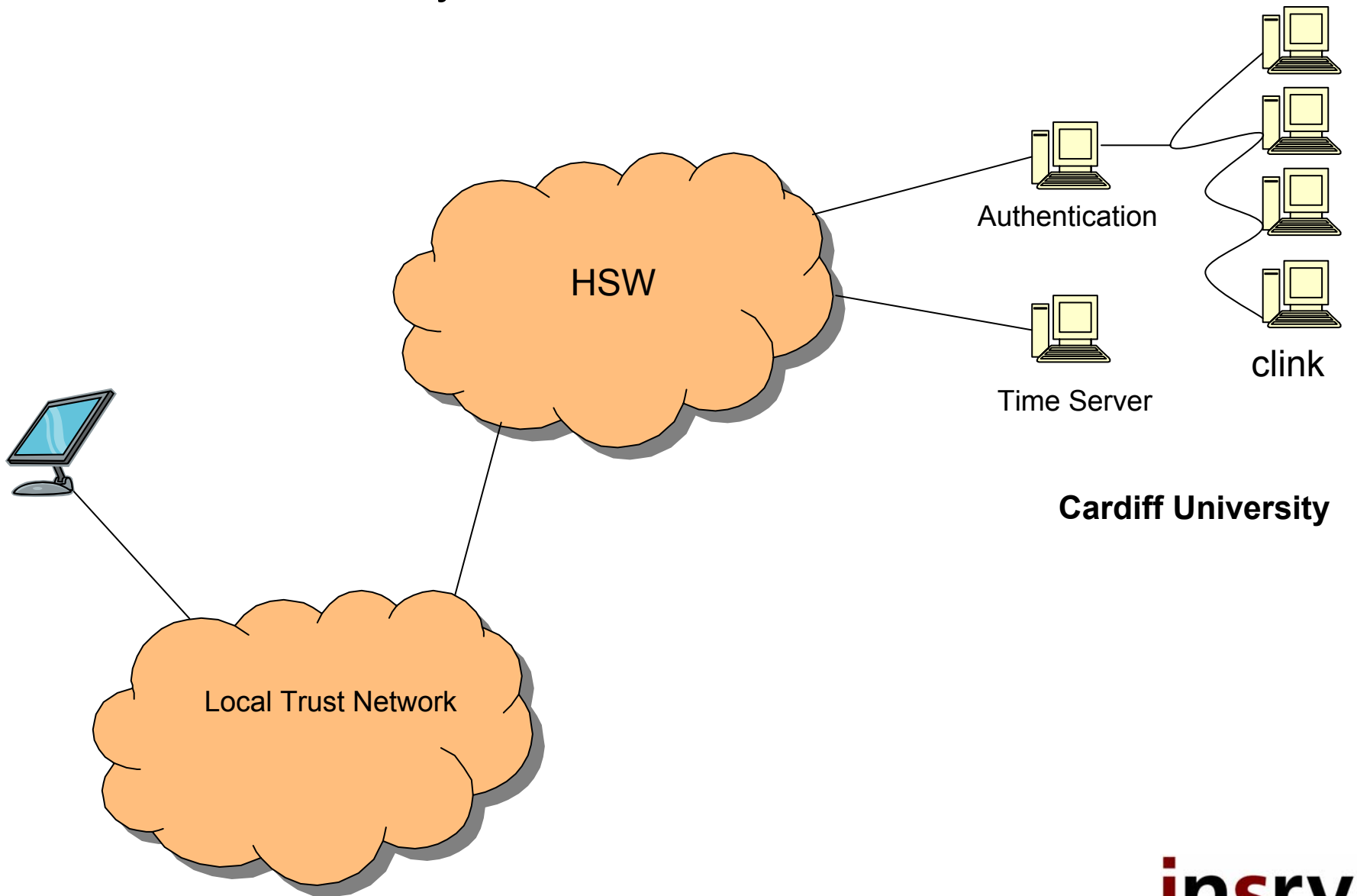
■ UCISA Award for Excellence 2004

Wyse Terminal Roll-Out

- 20+ DGH Libraries
- 40+ 'Wyse' terminals
- Web access - certain NHS PCs
- 28 Citrix servers
- 2 farms
- clink & rlink2



Wyse Terminal Connection



Cardiff University

Login....

CARDIFF UNIVERSITY
PRIFYSGOL CARDIFF

Remote Access System to IT Facilities at Cardiff University

Login ?

- Username
- Password
- Connection Type
Broadband / Network ▾

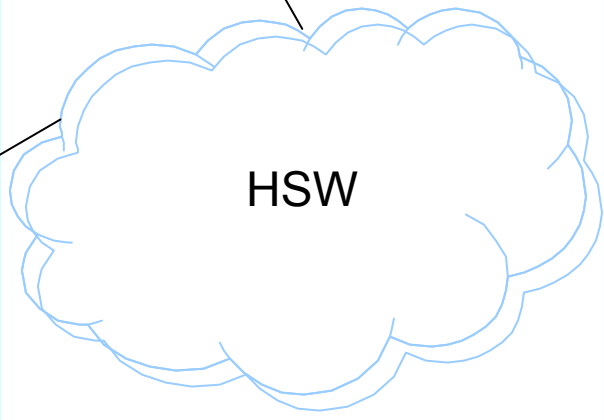
Log In

Authentication

clink



Local Trust Network



HSW

Implementing Shibboleth at Cardiff University

An Athens Replacement



Shibboleth Is Not.....

- **An identity management solution**
 - it is in fact a component of one
- **An authentication or SSO system**
 - we need to plug into one (e.g. pubcookie)
- **An attribute store**
 - we need to plug into one (e.g. LDAP/eDirectory)
- **A fixed specification**
 - ongoing evolution
- **Easy to set-up!**

Shibboleth Is.....

■ An architecture - a model

- ▶ That allows users access to multiple web-based resources using a single login
- ▶ Which defines a way of exchanging information
- ▶ Where the organisation (**Identity Provider**) is responsible for user authentication – checking credentials
- ▶ And for providing information about the user - attributes
- ▶ Resource owners (**Service Provider**) authorises access to information
- ▶ Organisations must join a federation (circle of trust)

Federations

- Are a group of organisations
- Share policies & rules for access
- Establish trust & understanding
- Provide a common frameworks
- Enable authentication & authorisation
- Provide standard naming formats
- Keep information secure
- Distribute certificates between its members

Concepts

- Reference Software
- Single Sign-On
- Standards
- Attributes
- Individual Privacy
- Federation
- Service Provider

Why Shibboleth?

Current Athens

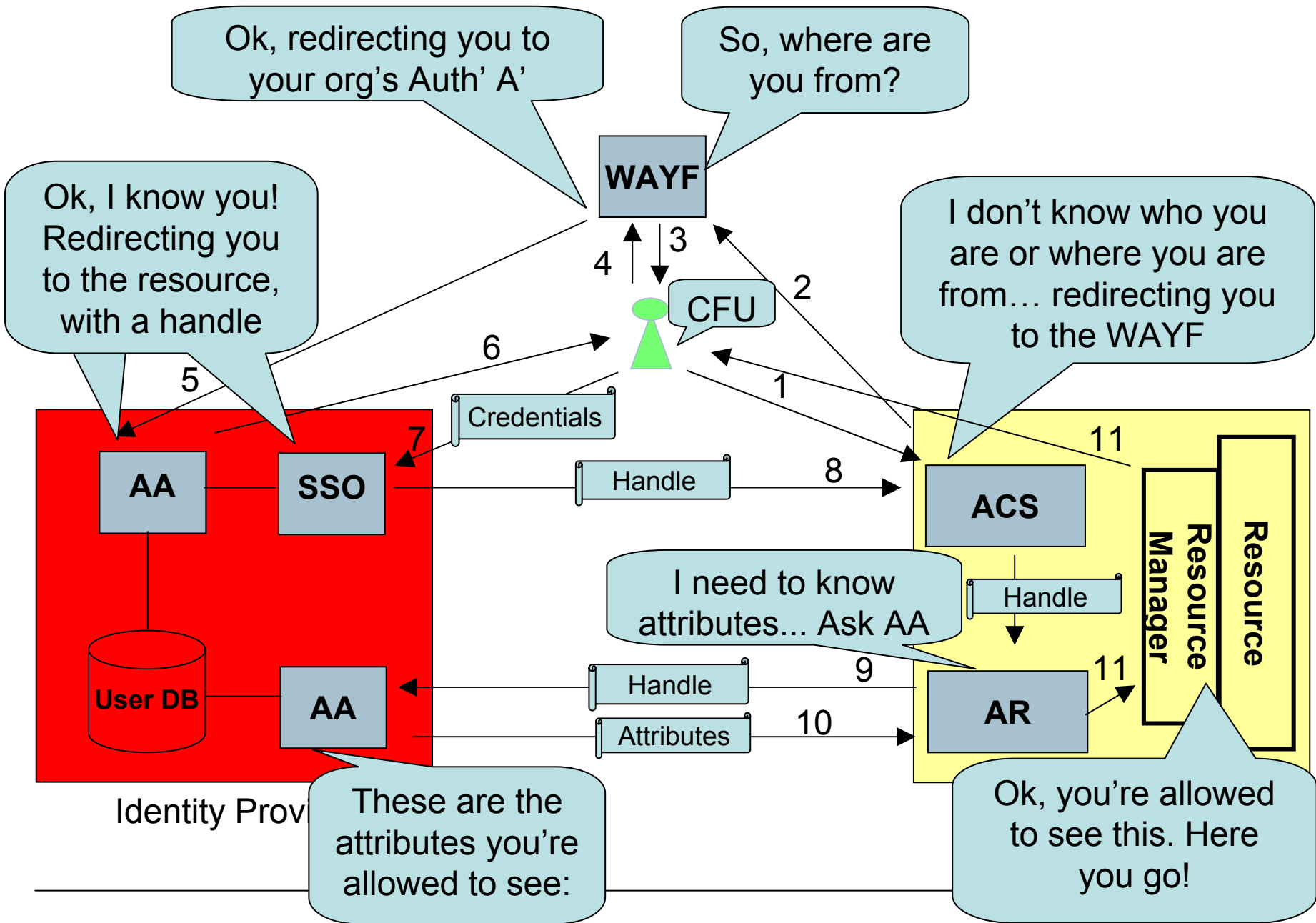
- Account proliferation
- Account creation and administration overhead
- Forgotten passwords
- Security & Integrity compromised (e.g. “password”)
- Proprietary authentication systems

Future Shibboleth

- One username & password to remember
- Easier accessibility - especially off-campus
- More awareness of the electronic resources available
- No longer necessary to create and manage classic Athens accounts

How Shibboleth Works

- Facilitates the exchange of authorisation and authentication information between organisations and resource providers
- In conjunction with an organisation's authentication system and user information databases
- Allows a resource provider to make authorisation decisions based on that information



Key Terms

- User
 - ▶ e.g. Leonard (xxxxxx)
- User attributes
 - ▶ e.g.
 - xxxxxx' Affiliation = Cardiff University
 - xxxxxx' Dept = INSRV
- Authentication vs Authorisation
 - ▶ Authentication: Proving who you are
 - ▶ Authorisation: What you are allowed to access

ASMIMA

- **JISC funded project**

- ▶ ASMIMA (Adoption of Shibboleth for Multiple Identity Management Applications)
- ▶ Information and expertise acquired to be made available to JISC for the benefit of all.

- **3 components**

- ▶ An e-Science Application Target
- ▶ Access to secure NHS resources from overlapping user communities
- ▶ Single login to validate access to online data

Key Enablement Phases

- **Phase 1** – ASMIMA - Autumn 05 - Summer 2006
 - ▶ Enable everyone to use Shibboleth (not publicised)
 - ▶ No further issue of ATHENS accounts
- **Phase 2** – Summer 2006
 - ▶ Shibboleth enable new staff and students
- **Phase 3** – Easter 2007
 - ▶ Migrate current Athens users to Shibboleth
- **Phase 4** – Early Summer 2008
 - ▶ Turn off Athens

To Use Shib-Athens

- You must have a Cardiff account
- You must be a member of Cardiff University
- You must be Shib-Athens enabled
- Membership & entitlement issues arising!

Shib-Athens Enabling

- **Driven by Identity Management System**
- **Automated procedures**
 - ▶ SIMS – student
 - ▶ Compel – staff
- **Exceptions handled manually**
 - ▶ By a small group of privileged users

Membership, Categorisation & Entitlements



MCE Working Group

- Who is a member of the university?
- How should they be categorised?
- What is their entitlement?
- What are the licensing issues?

Shibboleth & MCE

- What are the funding issues?
- Do the Regulations need revising?
- eDir/idMan feeds from diverse communities?
- Systems/procedures needed to enable all of this to happen?

Areas For Collaboration

■ **Shibboleth also raised policy questions**

- ▶ Joint NHS & HE status
- ▶ The many other 'exceptions'

■ **And access issues**

- ▶ Equity of access – achievable?
- ▶ Anytime, anywhere, any device?

■ **Building upon collaboration**

- ▶ NHS Co-ordination
- ▶ Informing HealthCare
- ▶ Health Solution Wales
- ▶ NHS-HE Forum

Where are we now?

- Exceptions identified
- Categorised into groups
- Level of entitlement agreed
- Methodology for Award of Honorary Titles
- Discussions on funding issues underway
- Collaboration between NHS and HE
- Regular meetings local Trust

THE END!

- For.....
 - ▶ More info
 - ▶ A copy of any slides
 - ▶ Clarification of any points
 - ▶ Meaningful discussion
 - ▶ Email: LeonardCL@cardiff.ac.uk

Cardiff University Contacts

- WPSN – HarrisonDI@cardiff.ac.uk
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- Membership – membership@cardiff.ac.uk