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*Institute for
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Living in a Distributed World

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KnowTips
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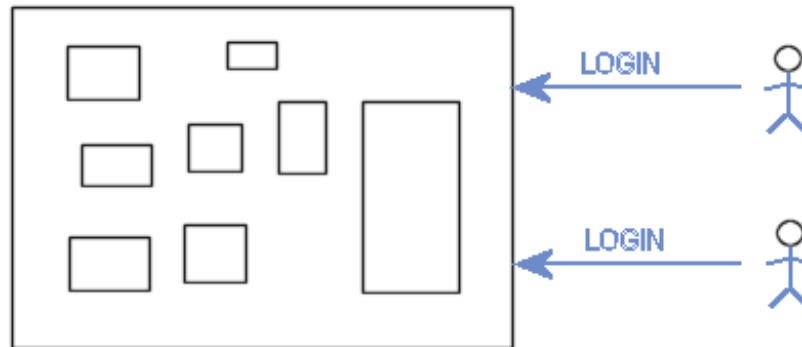
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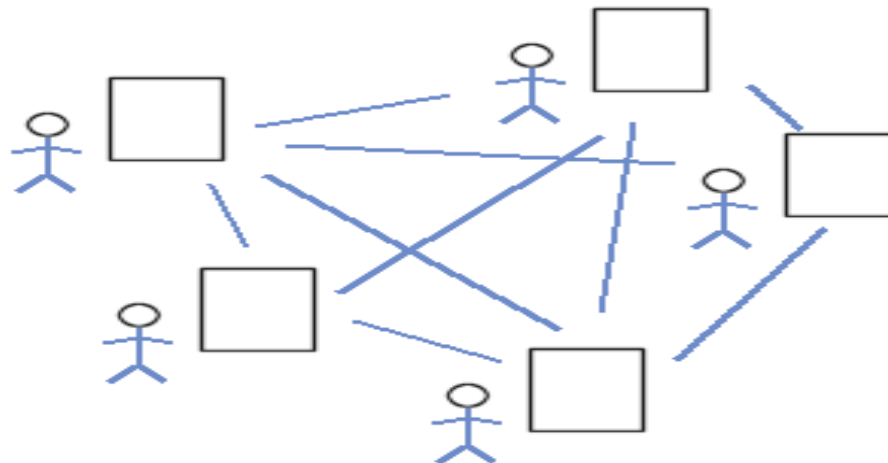
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Two Models of Online Environments

- **Centralized**



- **Distributed**



Centralized Environments

- Before the web, the centralized model was all we had (examples include CompuServe, Prodigy)
- On the web, centralized models include site-based services such as Yahoo!
- Most (all?) college and university services are offered using the centralized model
- But centralized environments are static, inflexible, expensive

Distributed Environments

- **The World Wide Web is an example of a distributed environment**
- **Resources, access are *not* centralized, but scattered around the world:**
 - Resources, in the form of a network of connected (via DNS) web servers
 - Access, in the form of a network of connected (via DNS) internet service providers
 - Users, in the form of individualized and connected (via HTTP) web browsers
- **The big issue – integration – that is, making different systems work together**

Integration

- Many ways to do integration – some are more centralized than others
- Scott Wilson – Service Oriented Frameworks for E-Learning http://standards.edna.edu.au/idea/summer2005/ppt/OTF20050209_scottwilson.ppt
- Two views of integration: <http://www.cetis.ac.uk/content2/20050124115817>
 - Service Oriented – ie., commonly defined services – use APIs (Application Program Interfaces)
 - Client Oriented – ie., distributed applications – use client applications (eg. Plugins)
- Gets complex in a hurry – which is why so many prefer the control of a centralized approach

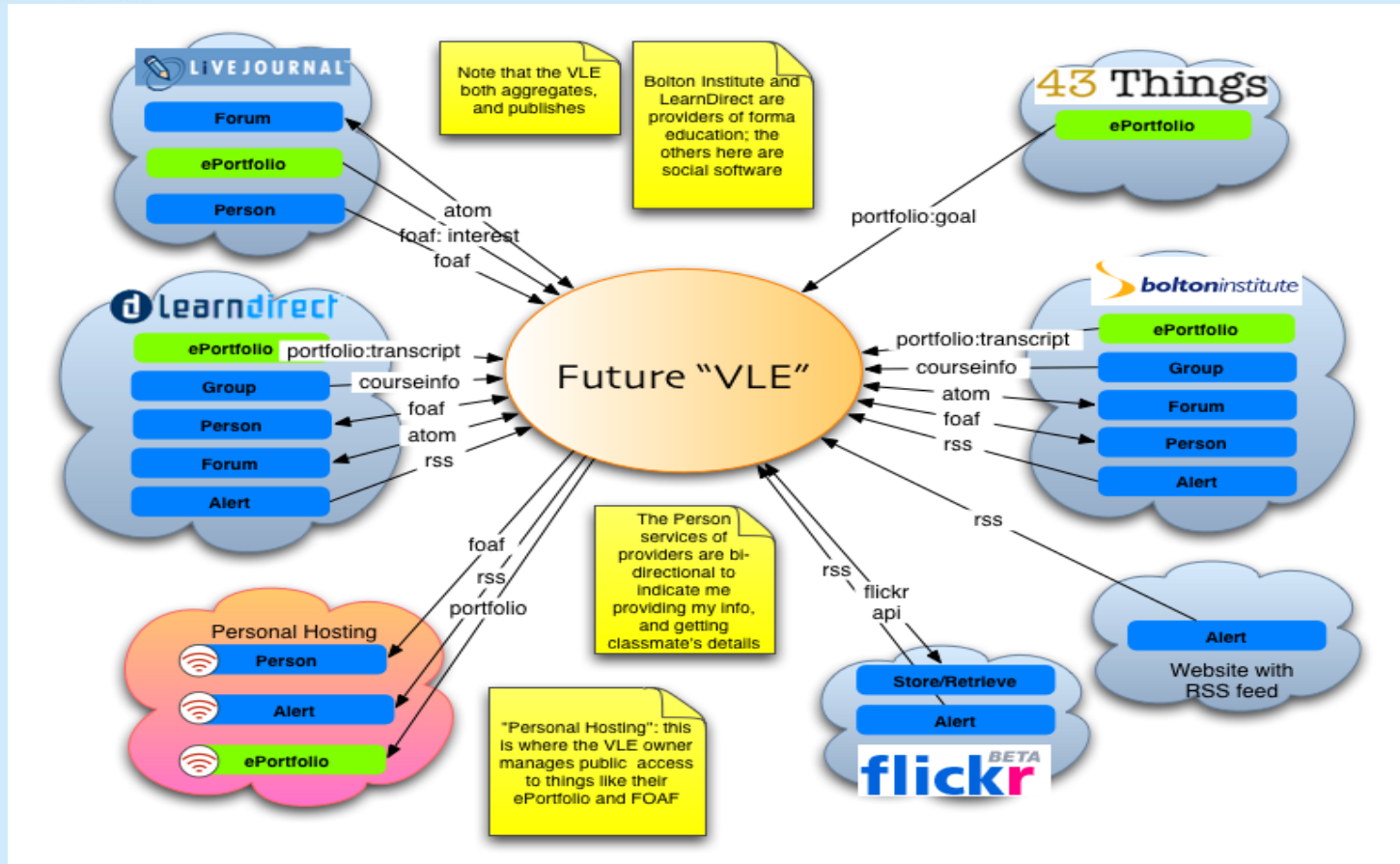
Sensible Design Principles

- The analysis of customer needs has to concentrate on practical uses that are likely to become everyday routines
- The development of a new technology must be based on well-defined, carefully selected core principles
- Real experiences in real networks must be continuously taken into account.

http://www.firstmonday.org/issues/issue10_1/kilkki/

- Or, as the author concludes: "As to the list of core principles, simplicity and realism are essential."

The Distributed Design Model



Scott Wilson..

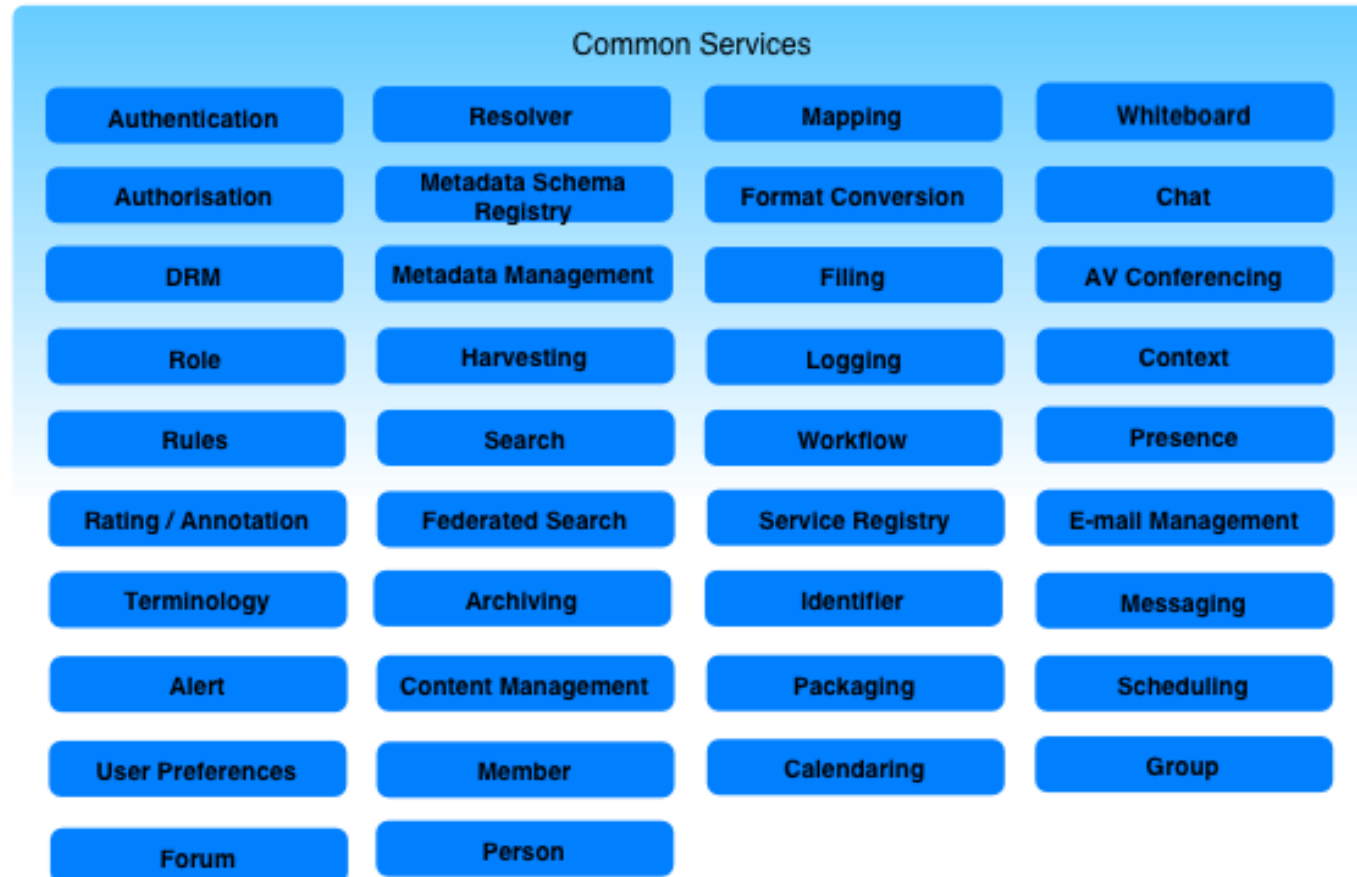
The E-Learning Framework (ELF)

Learning and Teaching

Sequencing**Assessment****Course Mgt****Course Validation****Activity Mgt****Marking****Resource List****Quality****Learning Flow****Grading****Personal Dev.****Reporting****Tracking****Competency****ePortfolio****Curriculum****Activity Authoring**

- The idea is that these common services support e-learning...

The E-Learning Framework (2)



- And these...

My Main Issue With ELF...

- Education (once again) is exhibiting the NIH syndrome...
- (NIH = 'Not Invented Here')
- The fact is, most of these services *already exist* in the wider World Wide Web
- And the rest are in development
- A secondary issue: it's not clear the list of common services has been *thought through*...
- It's as though the functions of a centralized system have simply been transferred to the distributed environment

Content Authoring and Delivery

- Numerous content authoring systems on the web...
- Weblogs – blogger.com wordpress.org
- Content Management Systems – Drupal, PostNuke, Plone, Scoop, and many more...
- Audio – Audacity – and audioblogs.com – and Podcasting
- Digital imagery and video – and let's not forget Flickr

Organize, Syndicate Sequence, Deliver

- **Aggregation of content metadata – RSS and Atom, OPML, FOAF, even DC and LOM**
- **Aggregators – NewsGator, Bloglines**
- **Aggregation services – Technorati, Blogdex, PubSub**
- **More coming – the Semantic Social Network**

Identity and Authorization

- A raft of centralized (or Federated) approaches – from Microsoft Passport to Liberty to Shibboleth
- Also various locking and encryption systems
- But *nobody wants these*
- Distributed DRM – Creative Commons, ODRL...
- Distributed Identification management – Sxip, LID...

Chatting, Phoning, Conferencing

- Numerous open source bulletin board systems and chat rooms exist, usually attached to the aforementioned content management systems such as Drupal
- Your students use this, even if you don't: ICQ, AIM, YIM, and some even use MSN Messenger
- Audioconferencing? Try Skype... <http://www.skype.com/>
- Or NetworkEducationWare... <http://netlab.gmu.edu/NEW/>
- Videoconferencing? Built into AIM...

Collaboration...

- One word: wiki
- Others, of course:
- Hula: http://hula-project.org/Hula_Server
- Much more info: <http://sohodojo.com/techsig/>

The Upshot...

- E-Learning has been grounded in centralized systems
- But these centralized systems, such as the LMS, are like a dysfunctional crutch...
- There's *so much* going on out there... you have to leave the cocoon and *experience* the web..
- Stop trying to do online what you do in the clarroom... it's a *different* world online...
- ... and you are no longer in control...
- ... and that's a *good* thing.



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