

Supporting Lifelong Personal Development with P2P ePortfolios

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Current state-of-the-art

- Mostly Web-based
- Centralized data repositories
- Driven by product self-interest



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Examples (all Web based)

- Elgg
- Nuventive iWebfolio
- PebblePad
- OSP (Sakai)
- dotFolio (dotLRN)



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What happens when we move from or leave an institution?



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Interoperability

Take our data with us to our new system

- Need standards for portfolio data storage
- Requires standards for data and metadata
- But who is responsible for the migration of data?



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Aggregation

Bring together distributed artefacts

- All of an individual's data *is not* always tied to a single service
- A presentation aggregating data *is* tied to a single service
- But Web-aggregation is unscalable (though this is being addressed)



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Portfolio Management

Typical tasks might include:

- Data harvesting and management
- Creating presentations
- Publishing to a community



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Decouple Portfolio Activities

Two distinct modes:

- Media harvesting, knowledge management and presentation authoring (local interactions)
- Publishing, searching, and connecting (remote interactions)



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“More household items, such as wine corks and even socks, would soon be connected to the Internet and improving our daily lives – for example, an online refrigerator would know what food it contains and be able to search the Web for suitable recipes.”

Vint Cerf, one of the founding fathers of the Internet, on living in an increasingly connected world, 2004



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P2P Networks

Peer-to-peer networks are infamous for...

- Piracy
- Pornography

I believe peer-to-peer networks can be used for...

- Personal development
- Portfolio sharing

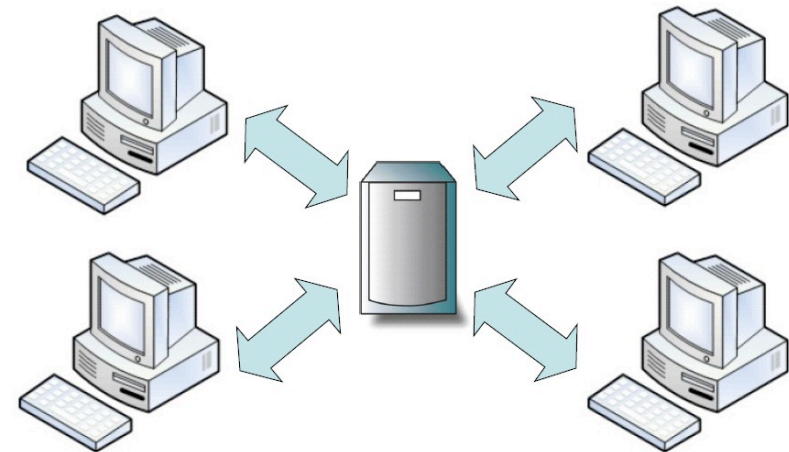
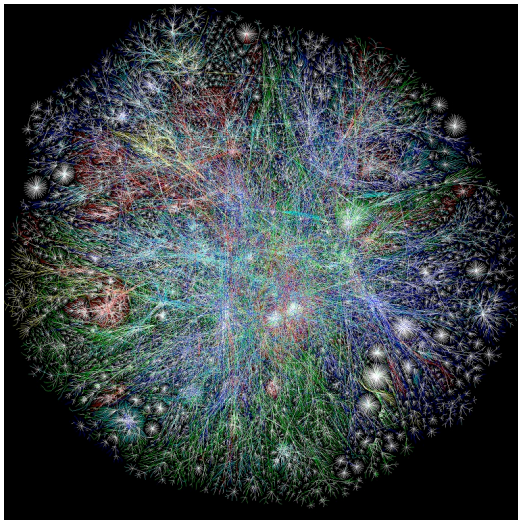


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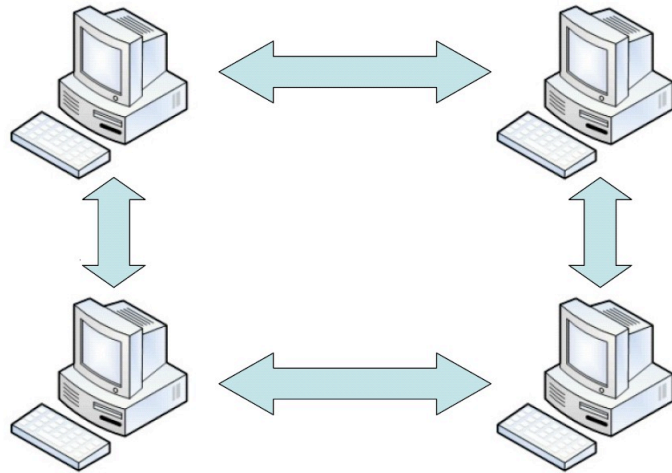
Moving to the Edge of the Internet

Source: Opte Project (<http://www.opte.org>)



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P2P Portfolio Networks

Possible benefits of decentralization include:

- Full control and responsibility of data repository
- Economic efficiency
- Closer integration with multiple personal devices
- No need to trust a 'middleman' between individuals

An ePortfolio is no longer tied to education or work, and is ultimately a **personal** tool for **personal development**

“Consumer computing, with its focus on media, video, graphics, has thrived, and that's why we see people connecting up in new ways around social type networks.”

William Henry Gates III, a very rich man, on how end-users constantly take advantage of media and technology in new ways, 2005

P2P Portfolio Networks

Socialization can still occur in a P2P network:

- Commenting on shared/published portfolios
- Collaborative annotation of data and metadata
- Direct communication within user groups
- Collaborative authoring of group portfolios

P2P Portfolios @ ACET

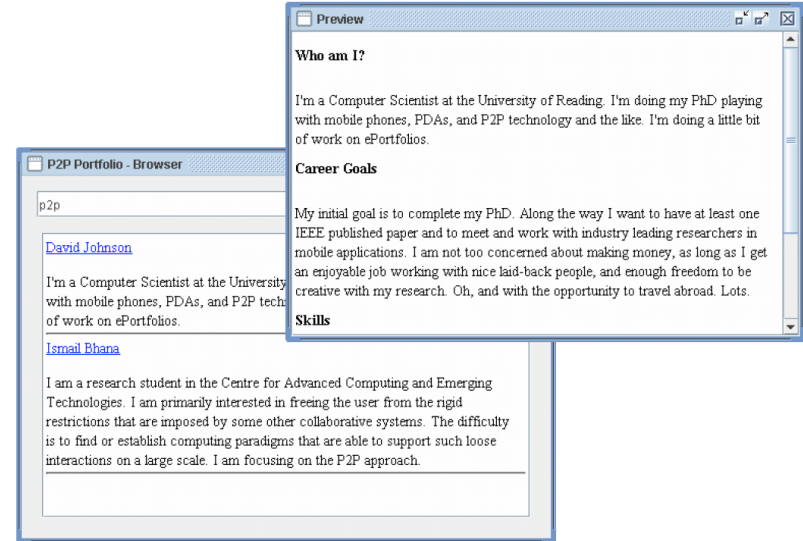
Carrying out experiments with different P2P technologies including:

- JXTA (Sun Microsystems)
- Private Gnutella (Open source) networks

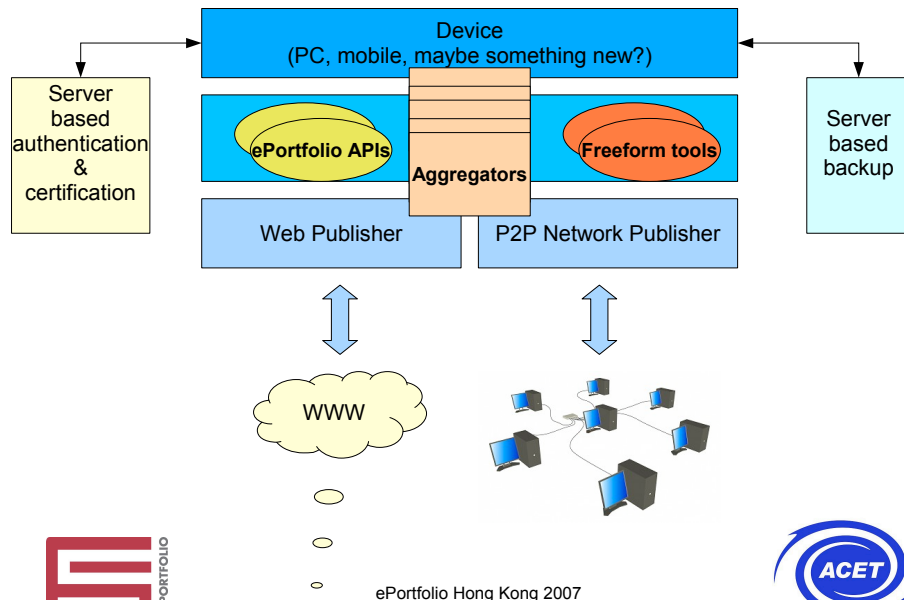
At this point in time, we are not worrying about the authoring of portfolios, just looking at the delivery and search system.



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A Lifelong System

If we consider every key stage in a person's learning and work life it may require institutional change:

- Primary to secondary school
- School to Higher Education
- Higher Education to employment
- Employment to employment
- Employment to retirement



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A Lifelong System

- Architecting an information system based around the individual users removes institutional dependencies
- P2P puts users in control
- Decoupling the data/media harvesting from presentation and publishing also allows us to consider portfolios in a longer-term view



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How long is life-long?



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“When we predict what will happen in the future, most people use the last 50 years as a model of the next 50 years. A linear prediction creates over-pessimistic expectations.”

Ray Kurzweil, technologist and futurist, on the pace of technological development, 2006



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