

Freelib: A Self Sustainable Digital Library for Evolving Communities

Digital Library Group
Computer Science Dept., Old Dominion University
Contact: p2pdli@list.odu.edu

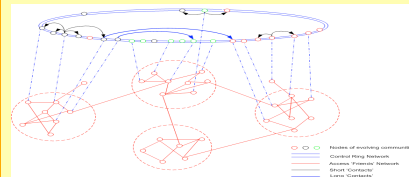
Approach

Sustainability. The underlying architecture of the proposed library is based on P2P, which is decentralized and does not rely on any centralized expensive hardware in sustaining the library.

Dynamic Evolution of Communities. Characterize communities based on users' access patterns and to build the network topology to reflect this structure. Freelib allows for communities to form, grow, mature, dwindle and disappear as the users' interests change.

Support of Diverse Communities. We want to architect our universal client in such a way that different requirements for different communities, typically in terms of the metadata and interfaces, can be integrated with the core client using plug-ins.

Network Architecture



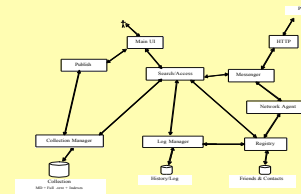
Motivation

- Considerable untapped content with individuals in diverse communities.
- Traditional digital libraries have sustainability problems as they are built and deployed under centralized framework
 - Who provides the hardware/software to support the digital library?
 - Who provides and maintain the content ?
- Building Communities
 - Discovering and bringing members of similar interest together for forming communities to improve discovery.
- Evolving Communities
 - Adapting processes and interfaces in presence of changing community interests.

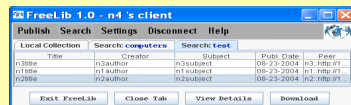
Objectives

- Develop an alternate model of building digital library that is sustainable and supports communities and domains with diverse interests.
- Research how a P2P network model can be utilized for building such a digital libraries, in particular investigate the effectiveness of user access driven P2P network topologies.
- Build a test bed (faculty, staff and students at four departments at ODU) that demonstrates the network of DLs and their interactions.
- Evaluate the effectiveness of the proposed digital library in terms of: end user services, evolving domains/communities support, scalability, and sustainability

Freelib Client Architecture



Freelib User Interfaces

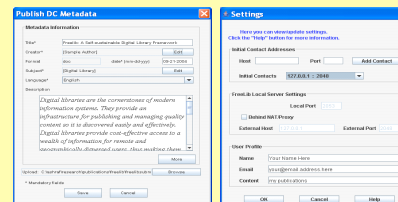


Main User Interface



Simple Search User Interface

Freelib User Interfaces



Freelib Publishing tool

Freelib Configuration tool