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Collaboration Aspects

• Critical to Effective Research
• Coordinate Individual Interests
• Contribute to Share Insights
• Self Organized and Autonomous
Collaboration Truth

Collaborations are most successful when they reflect the skills, interests, and resources of the Collaborators.
Virtual Organization Aspects

- Virtual Organizations are Collaborations Manifest
- Virtual Organizations Cross Institutional Boundaries
- Virtual Organizations are Autonomous
- Virtual Organizations are Collections of Attributes
Virtual Organization Realities

• Lighten their load and use federated attributes
• Resist complications of inconsistent policies
• Influence poor so little hope for attribute sponsors
• They are a lot like real organizations
Motivation

Build a system environment that enables collaborations by supporting virtual organizations that span institutional boundaries.
Guiding Principles

- Web Applications are Leading Collaboration Solutions
- Avoid Recreating Existing Tools
- Leverage Existing Infrastructure
- Stick to Standards and Openness
- Lower Collaboration Barriers
- Leave the User in Control
Leverage Existing Infrastructure

- Shibboleth for Identity Management and Attribute Distribution
- Wealth of Open Source Web Applications for VO Collaboration Interfaces
- Globus for Distributed Computation
- GridShib to Bind Shibboleth and Globus
myVocs Goal

Extend access to emerging Internet collaboration tools and build a system environment that respects VO defined roles and attributes while preserving valuable institutional identity assertions.
myVocs Supports VOs

myVocs is a collaboration environment that lets you create and manage VOs and supplies key collaboration tools to the members of the VO.
Solving the Attribute Puzzle

\[ U_1, U_2, \ldots, U_n \]
Solving the Attribute Puzzle

Identity Providers

U1
U2
... 
Un
Solving the Attribute Puzzle

Identity Providers
Solving the Attribute Puzzle

Identity Providers

U1

U2

... 

Un

Univ Attributes
Solving the Attribute Puzzle

Identity Providers

U1

U2

Un

Univ Attributes

VO Attributes
Solving the Attribute Puzzle

Identity Providers

Univ Attributes

VO Attributes
Solving the Attribute Puzzle

Identity Providers

Univ Attributes

VO Attributes

Applications
Solving the Attribute Puzzle

Identity Providers

Univ Attributes

VO Attributes

Applications
Solving the Attribute Puzzle

Identity Providers

Univ Attributes

VO Attributes

Applications

myVocs®
Surprisingly Useful Combination

- Trusted (University) Identity
- User Asserted email
- VO Asserted membership
- VO Asserted role
Useful Collaboration Toolset

- Email List
- Wiki
- CMS
- Blog
- File Sharing
- Document Tracking
Useful Collaboration Toolset

- Email List -> Sympa
- Wiki -> PHPwiki
- CMS -> Drupal
- Blog -> Drupal
- File Sharing -> WebInstaFM
- Document Tracking -> Trac
Benefits

- Allows us to preserve the power of federation for applications
- Allows us to define policy points for application federations
- Attributes exist outside context of Univ attribute systems
- Provides autonomy to Virtual Organizations
User Identity

- myVocs defines a consistent identity for users across applications
- Web applications often overload email address for user identity and contact information
- Applications need to be willing to inherit user identity from containing system environment
Authorization

• Each tool interprets attributes in a way meaningful to itself
• Determine influence role information will have on application
  • Member controls default access rights
  • Moderator may control content
  • Admin may control tool itself
Visual and Data Integration

- Tend to be tricky problems
- Visual integration possible but labor intensive, even when tools have templates
- Data exchange standards exist but may not be available to certain applications
  - a Wiki which exports ODF
  - RFC822 can be powerful
myVocs + GridShib

- GridShib extends attributes to Globus compute resources using Shibboleth trust fabric
- Collaboration with GridShib project added GridShib components to myVocs
- VO attributes now flow to Globus compute resources
- Grid VOs now have VO managed attributes plus institutional identities
myVocs + GridShib

- Extend myVocs VOs to Grid resources
- Add computational applications to VO collaboration tool suites
- myVocs + GridShib offer a complete system infrastructure foundation for distributed collaboration environment
Using myVocs + GridShib

- UABgrid
  - A campus grid initiative between UAB's Central IT, Computer Science and Engineering Departments
  - Combines authoritative user identities with campus computational resources and supports autonomous collaborations across institutional boundaries

- TeraGrid
  - Rumors of interest in myVocs/proxy IdP model

- YourGrid
Future Systems

We'll be able to combine off the shelf web applications installed locally or commercial web services into a consistent collaboration framework that leaves the end user in control in ways analogous to today's desktop systems.
Ad Hoc collections of researchers will build collaboration environments with a combination of institutionally, commercially, and VO supplied applications which share a common understanding of identity, relationships and roles. A new desktop paradigm. Different applications can lead to different results. Consult your IT professional for correct dosage. Too much can induce nausea.
Work In Progress

- Creating a download image that can be used to implement distinct proxies
- Building a development project website
- Leveraging more existing tools to simplify creation and management of Vos
  - Grouper
  - Sharpe
- Continue collaborations
From Yesterday...

• Would you develop your own blog service if it was deemed critical?

• **Real question:** do you develop your own word processor because it is critical?

• We value our data

• We *trust* our applications
Questions?