

# Directory Usage at Higher Educational Institutions

Stanford University  
Quannah Gibson-Mount

# Directory History at Stanford University

- First LDAP Directory – Netscape v1.0, 1995
- “Directory” i.e., whitepages information via StanfordWho (<http://stanfordwho.stanford.edu>)
- Allowed users to restrict web pages to “stanford:stanford” ‘Privilege Group’ with Webauth V1 (<http://webauth.stanford.edu>)


Stanford Who directory search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <https://stanfordwho.stanford.edu/lookup> Go Links

Google Search Web Search Site 290 blocked Options



# stanford.who ?

Directory Information about Stanford faculty, students & staff

**Public View** [Stanford Who for Stanford community members only](#)

## Stanford Who QuickSearch

Person you want to find:

**Tips:**

- \* Enter the person's name (including at least the last name), email address, phone or SUnet ID.
- \* [More search options \(below\)](#) and [more help](#) are available.

## More Stanford Who Search Options

**Find the Stanford person...**

whose first name (optional)  begins with

and whose last name (required) is

Use phonetic search  
[Works with last name "is" only. Spell the last name the way it sounds. Do not specify a first name.]

who is affiliated with Stanford as:

within this Stanford organization:

Done Internet


Stanford Who search result - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address: https://stanfordwho.stanford.edu/lookup

Google Search Web Search Site



Directory Information about Stanford faculty, students & staff

**Public View** [Stanford Who for Stanford community members only](#)

**1 record matched your search for quanah.**

If you are a Stanford student, faculty or staff member, [click here to retry your search in the Stanford-restricted view](#).

For a new search, go to the [QuickSearch box below](#).

**Name:** Quanah Gibson-Mount

**Email:** [quanah@stanford.edu](mailto:quanah@stanford.edu)

**Web Page:** <http://www.stanford.edu/people/quanah>

**Organization:** University

**Relationship:** Staff

**Position:** Principal Sys Admin, QA, Programmer, Webmaster

**Department:** Information Technology Systems and Services

**Work Phone:** (650) 723-4897

**Fax:** (650) 723-3253

[Copy/paste version of this information](#)

**Stanford Who QuickSearch**

Person you want to find:

**Tips:**

\* Enter the person's name (including at least the last name), email address, phone or SUNet ID.

Done Internet

Stanford Who search result - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

Address <https://stanfordwho.stanford.edu/auth/lookup?search=quanah;submit=Search> Go Links

Google Search Web Search Site 290 blocked Options



# stanford.who ?

Directory Information about Stanford faculty, students & staff



**Stanford View** [Stanford Who for the public](#)

**1 record matched your search for quanah.**

For a new search, go to the [QuickSearch box](#) below.

Please note: Directory information shown in the Stanford view may not be available to the public. If you want to share information with people outside of Stanford, choose the public view.

**Name:** **Quanah Gibson-Mount**

**Email:** [quanah@stanford.edu](mailto:quanah@stanford.edu)

**Web Page:** <http://www.stanford.edu/people/quanah>

**Organization:** **University**

**Relationship:** **Staff**

**Position:** **Principal Sys Admin, QA, Programmer, Webmaster**

**Department:** **Information Technology Systems and Services**

**Work Phone:** **(650) 723-4897**

**Fax:** **(650) 723-3253**

**Mail Code:** **4136**

**Work Address:** **Office 211, Polya Hall, 255 Panama Street  
Stanford, California, 94305-4136**

**Profile:** **Principal Software Developer**

**Mobile Phone:** **(650) 387-6559**

**SUNet IDs:** **Quanah.Gibson-Mount  
q.gibson-mount  
quanah**

[Copy/paste version of this information](#)


Done Internet

# Directory History at Stanford University

- Second Generation LDAP Directory – Netscape Directory Server 3.14b99, rolled out in 1999.
- E-Mail routing (<http://email.stanford.edu>)
- “Workgroup” (<http://workgroup.stanford.edu>) and Webauth V2 (<http://webauth.stanford.edu>) integration.
- First version to allow access to various Stanford Departments and Organizations via K4 Bind.
- Student printing accounting system (<http://rescomp.stanford.edu>) integrated with directory.

# Directory History at Stanford University

- Third Generation – OpenLDAP 2.1/2.2 (<http://www.stanford.edu/services/directory/>), rolled out April, 2003
- Access via Kerberos 5 for clients and the general population
- Webauth V3
- posixAccount replacement for Hesiod service
- Account services integration (AFS Quota, E-Mail quota, vacation messages)
- Anonymous “White pages” lookup for public information from Email clients, etc.
- Radius Authorization via PrivilegeGroups
- Other “service” authorizations



### WebLogin

**SUNet ID:**

**Password:**

[What is this?](#) [I don't want to login](#)

**Caution:** Never enter your SUNet ID and password on a Web page unless that page's URL (location) points to the weblogin.stanford.edu computer or unless you are establishing network connectivity.

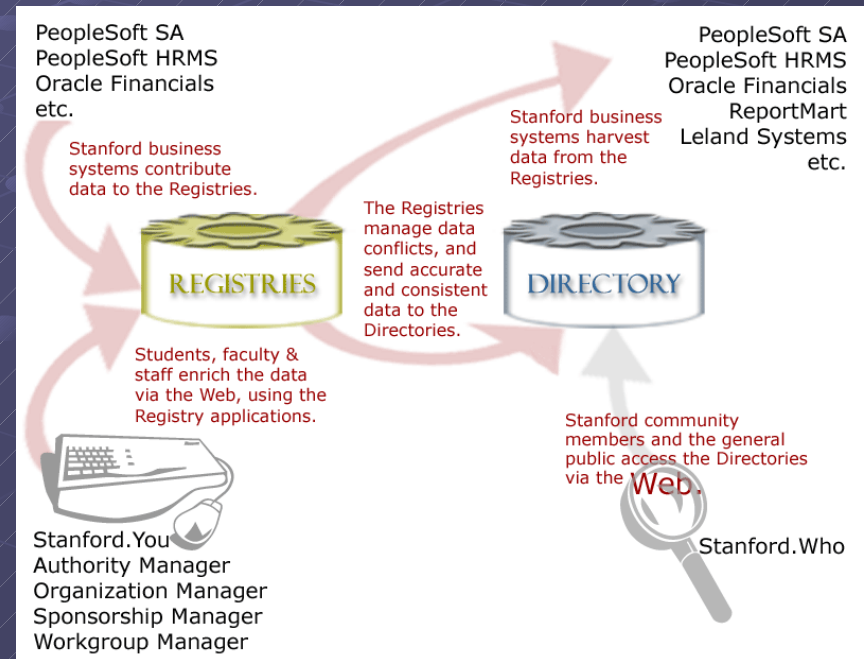
Macintosh users of Internet Explorer: WebLogin will fail and you will not get to the requested website unless you use version 5.1 or later of IE or use a different browser. Get an IE update at [ESS](#).

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Last modified 10/20/03 by ITSS/jnk.



# Directory Data –How it works

- Stanford has implemented a “registry” as the central store of information from a variety of applications ([www.stanford.edu/services/registry](http://www.stanford.edu/services/registry))
- Registry information is published to clients via an XML document service (<http://registry.stanford.edu>)
- Clients are notified of data changes via a custom event system.
- The registry is also a client in the event system for some clients (bi-directional data flow).
- All person related data (Account or People tree) is fed to the directory from the registry via a program named SLOG - Stanford OpenDirectory LDAP Gateway (no, we cannot abbreviate correctly).



https://registry.stanford.edu/view/person/1.1/quanah?WEBAUTHR=QRMgwB0cb1IBPCld8PG6BmJhanb00jRMwypfhm17gphUBI2g9S/zT7pro6Oz59kn5RPlr3RKJClgLvDH6Z - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media Options 290 blocked

Address: https://registry.stanford.edu/view/person/1.1/quanah?WEBAUTHR=QRMgwB0cb1IBPCld8PG6BmJhanb00jRMwypfhm17gphUBI2g9S/zT7pro6Oz59kn5RPlr3RKJClgLvDH6Z Go Links

Google Search Web Search Site

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE Person (View Source for full doctype...)>
- <Person name="Gibson-Mount, Quanah" regid="85e49978f61311d2ae662436000baa77" sunetid="quanah" univid="09787508"
  card="806092000002504" relationship="staff" source="registry" listing="world">
  Information Technology Systems and Services, Principal Sys Admin, QA, Programmer, Webmaster
  - <name type="registered" visibility="world">
    Gibson-Mount, Quanah
    <first nval="quanah">Quanah</first>
    <last nval="gibson mount">Gibson-Mount</last>
  </name>
  - <name type="display" visibility="world">
    Gibson-Mount, Quanah
    <first nval="quanah">Quanah</first>
    <last nval="gibson mount">Gibson-Mount</last>
  </name>
  - <biobio>
    <gender>male</gender>
  </biobio>
  - <address type="permanent" visibility="private">
    <line>[REDACTED]</line>
    <city>Palo Alto</city>
    <state code="CA">California</state>
    <postalcode>[REDACTED]</postalcode>
    <country alpha2="US" alpha3="USA" numeric="840">United States</country>
  </address>
  - <address type="mail" visibility="private">
    <line>[REDACTED]</line>
    <city>[REDACTED]</city>
    <state code="CA">California</state>
    <postalcode>[REDACTED]</postalcode>
    <country alpha2="US" alpha3="USA" numeric="840">United States</country>
  </address>
  - <telephone type="permanent" visibility="private">
    <icc>1</icc>
```

Done Internet

https://registry.stanford.edu/view/person/1.1/quanah?WEBAUTHR=QRMgwB0cb1IBPCld8PG6BmJhanb00jRMw - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

Address https://registry.stanford.edu/view/person/1.1/quanah?WEBAUTHR=QRMgwB0cb1IBPCld8PG6BmJhanb00jRMwypfhm17gphUBI2g9S/zT7pro6Oz59kn5RPlr3RKJClgLvHDH6Z Go Links

Google Search Web Search Site 290 blocked Options

```
- <affiliation organization="stanford" type="staff" visibility="world" affnum="1">
Staff
- <department>
  Information Technology Systems and Services
  <organization regid="41480b56986611d3acf6ab400b0baa77" adminid="CHYR">Communication and Networking
  Services Operations</organization>
</department>
<description>Principal Sys Admin, QA, Programmer, Webmaster</description>
<affdata type="refid" code="0" />
<affdata type="idmail" code="4136" />
<affdata type="code" code="5119">System Software Developer</affdata>
<affdata type="jobtitle" code="Senior Sys Admin, QA, Programmer, Webmaster" />
- <place type="office">
  <location type="officeidmail" code="4136" affnum="1">Polya Hall</location>
- <address type="officeaddress" visibility="stanford" affnum="1" instance="1">
  Office 211, Polya Hall, 255 Panama Street, Stanford, California 94305-4136
  <line>Office 211</line>
  <line>Polya Hall</line>
  <line>255 Panama Street</line>
  <city>Stanford</city>
  <state code="CA">California</state>
  <postalcode>94305-4136</postalcode>
  <country alpha2="US" alpha3="USA" numeric="840">United States</country>
</address>
- <telephone type="officefax" visibility="world" affnum="1" instance="1">
  (650) 723-3253
  <icc>1</icc>
  <area>650</area>
  <number>723-3253</number>
  <itu>+1 650 723 3253</itu>
</telephone>
- <telephone type="officephone" visibility="world" affnum="1" instance="1">
  (650) 723-4897
  <icc>1</icc>
  <area>650</area>
  <number>723-4897</number>
  <itu>+1 650 723 4897</itu>
```

Done Internet

# Directory Data – Security Concerns

- Stanford has multiple categories of data stored in the directory
  - Student (FERPA protected) data
  - Staff data
  - Faculty data
  - Affiliate data
  - Hospital staff data (may be affected by HIPPA)
  - SLAC staff data (<http://slac.stanford.edu>)

# Directory Data – Security Concerns

- Access limited by “visibility” settings
- 4 visibility settings are allowed: public, stanford, private, and none
- Faculty and Staff are allowed to change visibility via Stanford.You (<http://stanfordyou.stanford.edu>)
- Students are allowed to have their data either be public or private. All data is private by default, and may be released using Axxess (<http://axess.stanford.edu>)

Microsoft Internet Explorer window: "Your Stanford.You home page - Microsoft Internet Explorer".  
Address bar: "https://stanfordyou.stanford.edu/main/home".  
Page content:  
- Header: "stanford.you" logo, "Help" (question mark icon), "Logout" (Stanford seal icon), "..... Quanah Gibson-Mount".  
- Three main sections, each with a classical column icon:  
 1. "your Directory listing":  
 - Text: "View and change the information published in Stanford directories, including:"  
 - List:  
 - your name  
 - personal phones & addresses  
 - email address & Web page  
 - Stanford affiliation  
 - work phones & addresses  
 - profile  
 - directory & privacy choices  
 2. "your University Identification record":  
 - Text: "View your essential identification information, which includes:"  
 - List:  
 - full legal name  
 - University ID & PIN  
 - Social Security Number  
 - birth date  
 - gender  
 3. "your SUNetID and Email account settings":  
 - Text: "View and change service settings for your SUNet and email accounts."  
 - Text: "SUNet ID: change aliases, password"  
 - List:  
 - **quanah**  
 - Text: "Email: service status, autoreply, forwarding"  
 - List:  
 - **quanah@stanford.edu**  
- Footer:  
 - Links: "Help | End Session", "Stanford.Who | Stanford University home page".  
 - Copyright: "© 2002 Stanford University. All Rights Reserved."  
 - Logo: "STANFORD REGISTRIES".  
- Browser status bar: "Done", "Internet".

Stanford.You: Your directory information - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Mail Print


Address <https://stanfordyou.stanford.edu/main/DirList?sid=50ca0c:fe2e0f71b7:-7c5e> Go Links


Google Search Web Search Site 290 blocked Options

visible to anyone in the world with Internet access, by searching [Stanford Who](#).

Printed distributed to Stanford departments and sold at the Stanford Bookstore



### Published Email/Web Addresses [change ▶](#)


 Email address: **quanah@stanford.edu**


 Web page: **http://www.stanford.edu/people/quanah**


SUNet ID URL forwards to: **your Stanford web page**



### Stanford Affiliation [change ▶](#)



  Affiliation: **University Staff - System Software Developer**



 In department: **Communication and Networking Services Operations**



 Listed as: **Information Technology Systems and Services**

 Preferred title: **Principal Sys Admin, QA, Programmer, Webmaster**


  Phone: **(650) 723-4897**

  Fax: **(650) 723-3253**

  ID Mail Code: **4136**

  Work address: **Office 211  
Polya Hall  
255 Panama Street  
Stanford, California, 94305-4136**


### Profile [change ▶](#)

 Profile: **Principal Software Developer**

### Your Privacy Choices

Some or all of the information on this page may appear in Stanford's online and printed directories.

Online directory ( [Stanford Who](#) and whois ) [change ▶](#)

Information marked...  will be included in the public view. [preview ▶](#)

Information

Contains commands for working with the selected items.

Stanford.You: Change work address & phones - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Mail Print

Address: https://stanfordyou.stanford.edu/main/DIChangeAffil?sid=50ca0c:fe2e0f71b7:-7c5e8.affil\_num=0

Google Search Web Search Site 290 blocked Options

## listing ... Change work address & phones

Affiliation ... visible to **Public**

Affiliation: **University Staff - System Software Developer**  
In department: **Communication and Networking Services Operations**  
Listed as: **Information Technology Systems and Services**  
Preferred work title:

If the non-editable affiliation information shown here is incorrect, see [Help](#) for instructions to have it changed for you.

Your preferred work title will display in place of your official position title in Stanford Who, whois and printed listings (and in addition to faculty appointment title, if you are faculty).

Work phones ... visible to **Public**

Work phone 1:  ext.   
Work phone 2:  ext.   
Work fax:  ext.

Your work phones can be made visible to the general public, or restricted to the Stanford community, but staff phones cannot be made private.

Work address ... visible to **Stanford**

ID Mail Code:   
Address:   
  
  
City:   
State/Province:  ZIP/Postal Code:   
Country:

Your work address can be made visible to the general public, or restricted to the Stanford community, but staff work addresses cannot be made private.

Done Internet



Stanford.You: Your Email Account Settings - Microsoft Internet Explorer

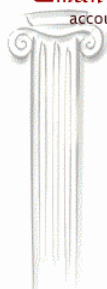
File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Mail Print

Address <https://stanfordyou.stanford.edu/main/EmailList?sid=50ca0c:fe2e0f71b7:-7c5a&uid=quanah> Go Links

Google Search Web Search Site 290 blocked Options

**your Email**  
account settings



### Service status

Account name: **quanah**  
Email address(es): **quanah@stanford.edu**  
**Quanah.Gibson-Mount@stanford.edu**  
**q.gibson-mount@stanford.edu**  
Quota: **200 MB**

### Autoreply

Status: **off** [Change/schedule](#) ▶

Scheduled to be ON: **[not scheduled]**

**Turn autoreply ON**

**From:** "Quanah Gibson-Mount [via an autoresponder]"  
**Subject:** Away from my mail [Re: \$SUBJECT]

I will be on vacation until June 1, 2004.  
Your mail regarding  
\$SUBJECT  
will be read when I return.

Reply for these user names: **q.gibson-mount**  
**Quanah.Gibson-Mount**  
**quanah**

### Email Forwarding

[Change forwarding](#) ▶

Email sent to: **quanah@stanford.edu**  
**Quanah.Gibson-Mount@stanford.edu**  
**q.gibson-mount@stanford.edu**  
.. will be: delivered to the account's **@stanford mailbox**

Done Internet

# Directory Data – Security Concerns

- How does one handle multiple affiliate data?  
For example, some people are both staff and student, or faculty and staff.
- Data access request – We have multiple “Data owners” that must give permission to people who want access to the particular pieces of data they own if they lie outside a fixed set. (  
<http://www.stanford.edu/services/directory/access>  
)

# Stanford University – Directory Directions

- Course Data Tree
- Organizational Data Tree
- True Dynamic and Static Group instantiation via Workgroup Manager
- Change AD to be a true mirror of OpenLDAP (same schema)

# Directory Usage at Higher Educational Institutions

A survey of other institutions

# Survey Questions

- What software do you use for your directory services?
- What functions are your directory services used for?
- Are there any particular functions and/or improvements at a directory technology level that would make directories more useful for you?

# Directory Usage at Higher Educational Institutions

- Brandeis
- Columbia University
- Stanford
- University of Michigan
- University of Texas – Arlington
- University of Washington

# Brandeis

- Running OpenLDAP (version unspecified)
- Active Directory slave
- E-Mail routing
- User login to ERP
- Some web application user/password authentication
- White Pages
- Active Directory only used for Windows

# Columbia University

- Running OpenLDAP v1, moving to OpenLDAP 2.2
- E-Mail routing
- User Login
- White Pages
- Course Information



# Stanford

- Running OpenLDAP 2.2 as central Campus directory service
- Active Directory used primarily for Windows domain. Contains a subset of data from OpenLDAP
- Usage discussed previously. ;)

# University of Michigan

- Running OpenLDAP 2.1.x for core campus LDAP service
- Feeds AD and Novel eDirectory
- E-mail routing
- posixAccount
- Group membership
- Web ACLs via Groups
- Kerberos Authentication pass through

# University of Texas – Arlington

- Running OpenLDAP 2.2
- Central Authorization and Identity Management System
- Static and Dynamic Groups (Organizational as well as Functional and User created)
- E-Mail Routing
- E-Mail Aliases
- Personal Identification Questions & Answers

# University of Washington

- Running Netscape (Legacy)
- E-Mail routing
- White Pages
- Web ACL via Groups

# Feature requests

- Dynamic Groups (Implemented in OpenLDAP 2.2, this knowledge does not seem to be widely dispursed).
- Weighted Attributes – Ability to have the values assigned to attributes returned in a particular order, I.E., Structured data!
- Meta-Directory support – Unfortunately, not well elaborated on, and this is a rather over-used term. Stanford is also interested in a “Meta-Directory”.

# Feature requests (Cont.)

- Existence of an attribute/value pair implies creation/existence of another attribute/value pair. Example: affiliation=student implies WeeklyPageQuota=100
- Automagical “memberOf” attribute generation (AD does this).
- Multi-Master replication