Gedcom CGI Protocol and Web Services

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The Problem

- We need a way to inter-connect different genealogy systems
- GEDCOM provides a standard for encoding genealogy data, but we still lack a common communication protocol.
- Other industries have tapped into this potential by offering a variety of B2B and P2P services.
GEDCOM Communication Protocol

- Client-server system architecture.
- The client and server communicate over HTTP.
- Data is encoded in the GEDCOM 5.5 standard:
  - Lightweight specification
  - Ubiquitous among genealogy programs.
GEDCOM Communication Protocol

- Every client request must specify an “action” value.
  - The “action” determines what other variables also need to be sent by the client.
- The server will respond with data and/or a success code.

```
0 @I1@ INDI
1 NAME Joe /Tech/
1 SEX M
1 BIRT
2 DATE 4 OCT 1976
```
**GEDCOM Communication Protocol**

- **Initiating a Connection**
  - The client sends “connect” action.
    - Anonymous read-only session or an authenticated session by providing a username and password.
  - Client must include this session identifier with every future request.
  - The server responds with client’s unique session identifier.
  - Authenticated clients may receive greater access to private data or be allowed editing privileges.

**Diagram:**
- **Client**
  - Action: `action=connect`
  - Session ID: `SESSID abcdefg12345`
- **Server**
  - Success
GEDCOM Communication Protocol

- Query the server with the “search” or “soundex” actions
- Request Gedcom record through the “get” action.
- Authenticated clients can send an “update” action to update a gedcom record.
PhpGedView / GDBI Demonstration
Using the protocol to Link Gedcoms

- Link people in different Gedcoms such that individual A in Gedcom X links to individual B in Gedcom Y.
- Useful when trees are joined through marriages
- Gedcom X and Gedcom Y could reside on different computers.
Using the protocol to Link Gedcoms

Individual A
0 @I1@ INDI
1 NAME Individual /A/
1 SEX M
1 FAMS @F1@

Family F1
0 @F1@ FAM
1 HUSB @I1@
1 WIFE @gedcom://remote2.com/gedcomY/I1@
1 MARR
2 DATE 24 MAR 2005
2 PLAC Provo, Utah, Utah

Gedcom X on remote1.com
Gedcom Y on remote2.com

Individual B
0 @I1@ INDI
1 NAME Individual /B/
1 SEX F
1 FAMS @gedcom://remote1.com/gedcomX/F1@
1 FAMC @F1@
Using the protocol to Link Gedcoms

- With this protocol and the simple extension of the GEDCOM specification, you can see how it would be possible to truly create that elusive world tree.

- It allows people to maintain control and ownership over their own data, but still allow it to be shared and linked into other family trees.
Questions?