



Using Jabber XMPP-based Messaging in the AG

Deb Agarwal & Ivan Judson

Collaborators – Jason Lee, Dan Gunter, Madhan Premkumar, and Michael Tobias

Jabber - Presence and Messaging



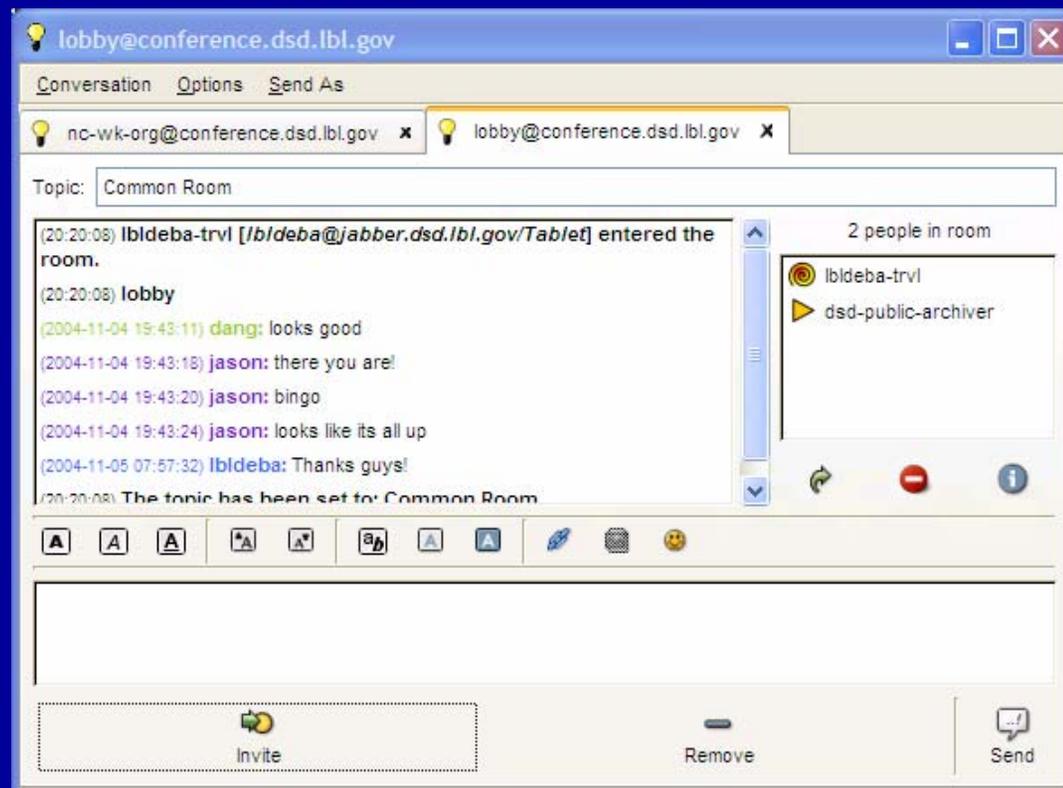
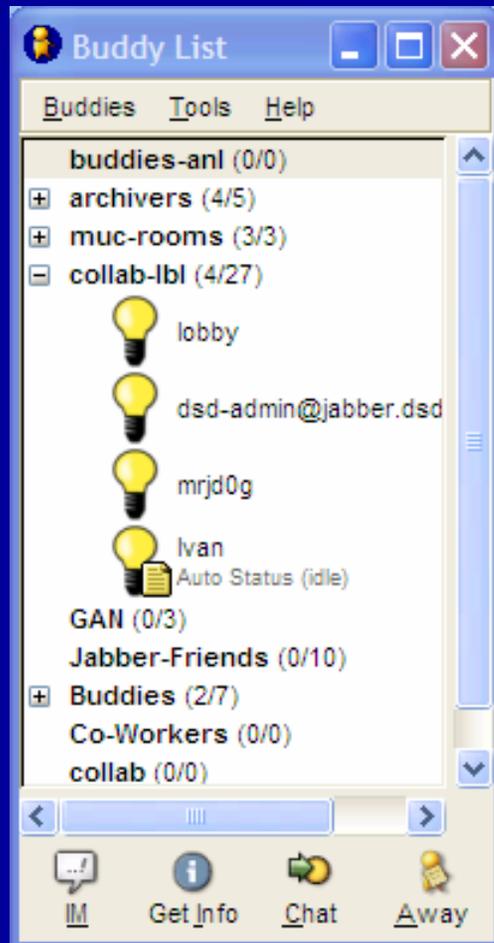
- “Jabber” is a set of standard protocols for streaming XML elements between any two points on a network
- Provides presence, messaging, and multi-user chats
- Open and extensible protocols
- Stable and widely used (on the order of millions of users)
- Large and active developer community, organized by the “Jabber Software Foundation”
- Client/server architecture - unicast

Jabber Protocol Architecture

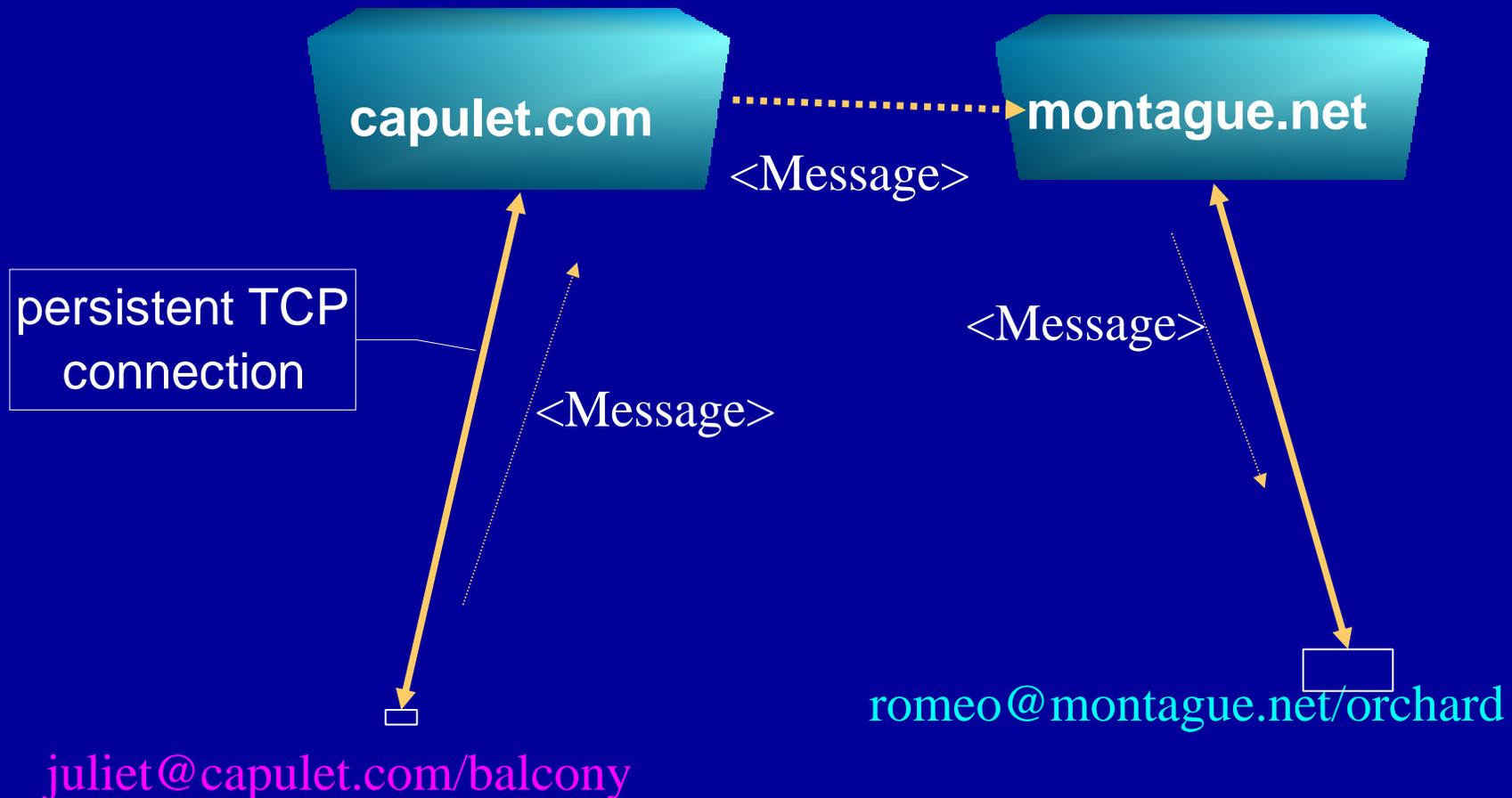


- “Streaming” XML messages over a (duplex) TCP/SSL/TLS connection
- Self-registration at servers by users
- User Jabber IDs are *user@server*
- Messages are addressed to a unique “Jabber ID” (JID), which is *user@server/resource*
- Resource designation provides a unique identifier allowing multiple logins of same JID
- Multi-user chats are addressed by *room@conferenceserver*
- Each client connects to a “home” server
- Servers route messages to other servers to reach destination

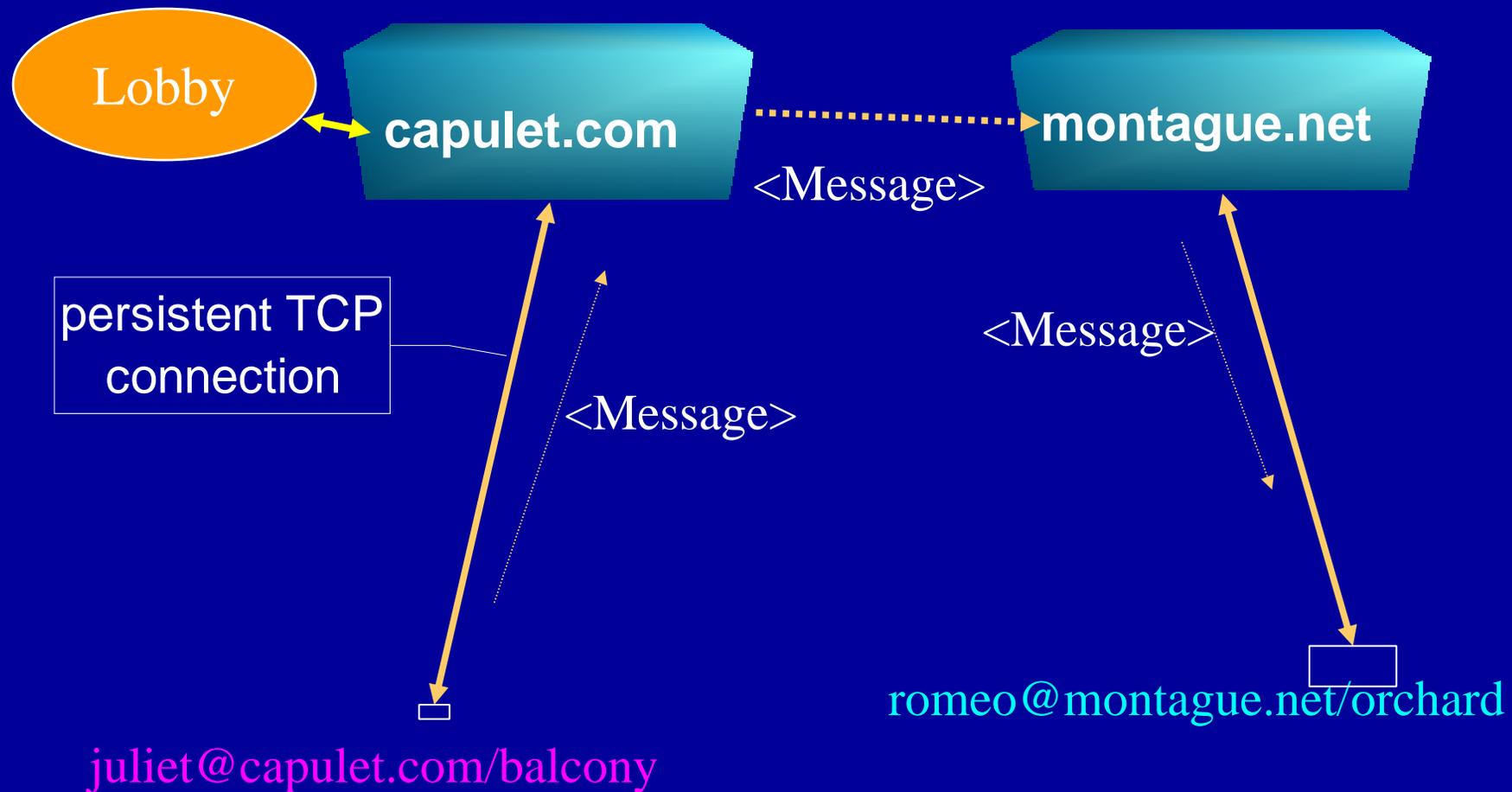
Gaim Client



Jabber Message Delivery



Jabber Multi-User Chat



Jabber Features



- Variety – many different clients available
- Presence information - list of people in chat –by subscription
- Buddy list – quick dial
- Context - when enter multi-user chat get scrollbars buffer worth of conversation
- Status - ability to set an away/status message
- Familiarity – set preferences
- Private conversations – one-to-one chat and whisper
- Fun - emoticons
- Multi-location – can be in many conversations at once
- Multi-platform - several clients support multiple protocols (AIM, IRC, ICQ, etc)

Jabber Existing Software



- Servers
 - “jabberd” from jabber.com
 - GPL
 - Stable version is 1.4; beta 2.0 supports IETF protocol extensions (security)
- Clients
 - Gaim (popular universal IM client, works on Windows and Linux using Qt library, Mac?)
 - PSI (Jabber-only client, Win/Lin/Mac)
 - Many more: Exodus, RhymBox, Yabber, Adium,...
 - Web interfaces

Jabber in the AG



- Replace existing chat in the AG interface
- Run a Jabber server at each venue server
- Define a multi-user chat to correlate to each venue
- Provides a persistent space that includes areas not tied to the AG venues (e.g. Meadow and AG Tech Support)
- Provide access to AG chat without running the AG interface
- Allow private chats including across servers

LBNL Jabber Archiver



- Personal Archiver
 - Already have Python agent that archives chats and web page to search archives
 - Runs with its own JID
 - Visible entity in the space
 - Invite archiver to chatroom to archive a conversation
- Archive controlled by individual running archive
- Anyone can run an archiver
- Multiple archives can be in a chat
- Responds to commands like “arch url”, “arch help”, “arch leave”, etc

LBLN Jabber Development for the AG



- Build a python Jabber library
- Prototype integration of Jabber client capabilities into the AG interface
- Improvements to archiver and archive storage and search

Prototype AG Integration

