NetChat Communications System

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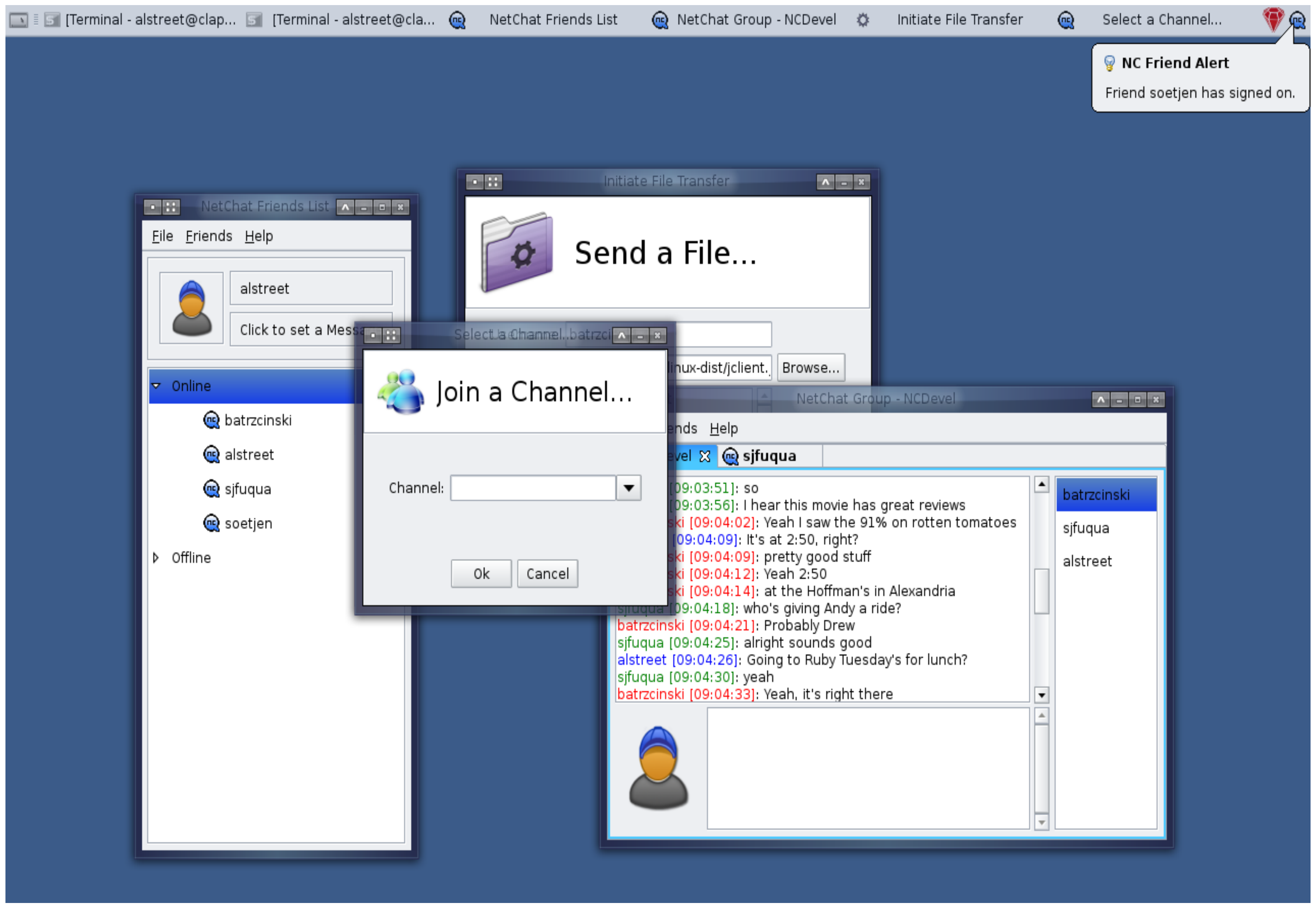
Abstract

NetChat reinvents and redefines the traditional system of communications of data over networks, be they simple chat messages and e-mail to the transfer of mission-critical data. A modular framework ensures that nearly every type of communication can be tunneled through the same network, the same systems, and the same software. Not only does this simplify the experience for the end-user, but it accelerates development of new methods of communication and enables innovators to deliver these methods to the public faster than prior methods. System administration and security is helped as only one encrypted tunnel must be tracked.



NC Friend Alert
Friend soetjen has signed on.

09:03:51]: so
09:03:56]: I hear this movie has great reviews
ki [09:04:02]: Yeah I saw the 91% on rotten tomatoes
[09:04:09]: It's at 2:50, right?
ki [09:04:09]: pretty good stuff
ki [09:04:12]: Yeah 2:50
ki [09:04:14]: at the Hoffman's in Alexandria
sjfuqua [09:04:18]: who's giving Andy a ride?
batrzcinski [09:04:21]: Probably Drew
sjfuqua [09:04:25]: alright sounds good
alstreet [09:04:26]: Going to Ruby Tuesday's for lunch?
sjfuqua [09:04:30]: yeah
batrzcinski [09:04:33]: Yeah, it's right there

General Module XML Message

```
<message>
  <header>
    <global>
      <properties type="modulemessage"/>
    </global>
    <modulemessage>
      <properties name="modulename"
              type="module_command"/>
    </modulemessage>
  </header>

  <content>
    <!-- Module specific data -->
  </content>
</message>
```

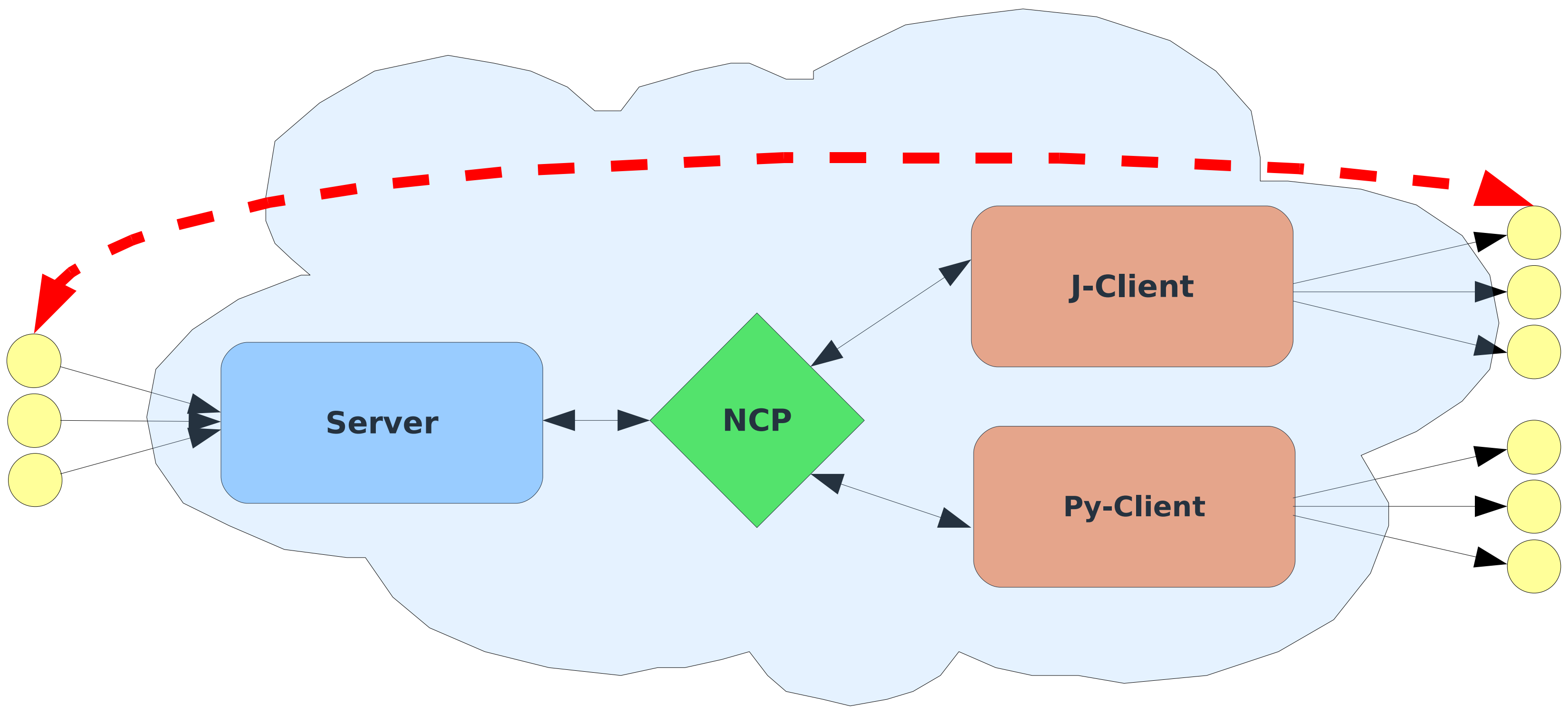
Individual Assignments

- **Server** – Barnett Trzcinski
  - Scripted in Ruby, uses OpenSSL and XML communication (through the NetChat Protocol)
- **Py-Client** – Steven Fuqua
  - Primary console client in-development written in Python 2.5 with Twisted and curses libraries
- **J-Client** – Andy Street
  - Production GUI client – developed with the Eclipse Foundation's Standard Widget Toolkit (SWT) which allows high portability via the use of native widgets

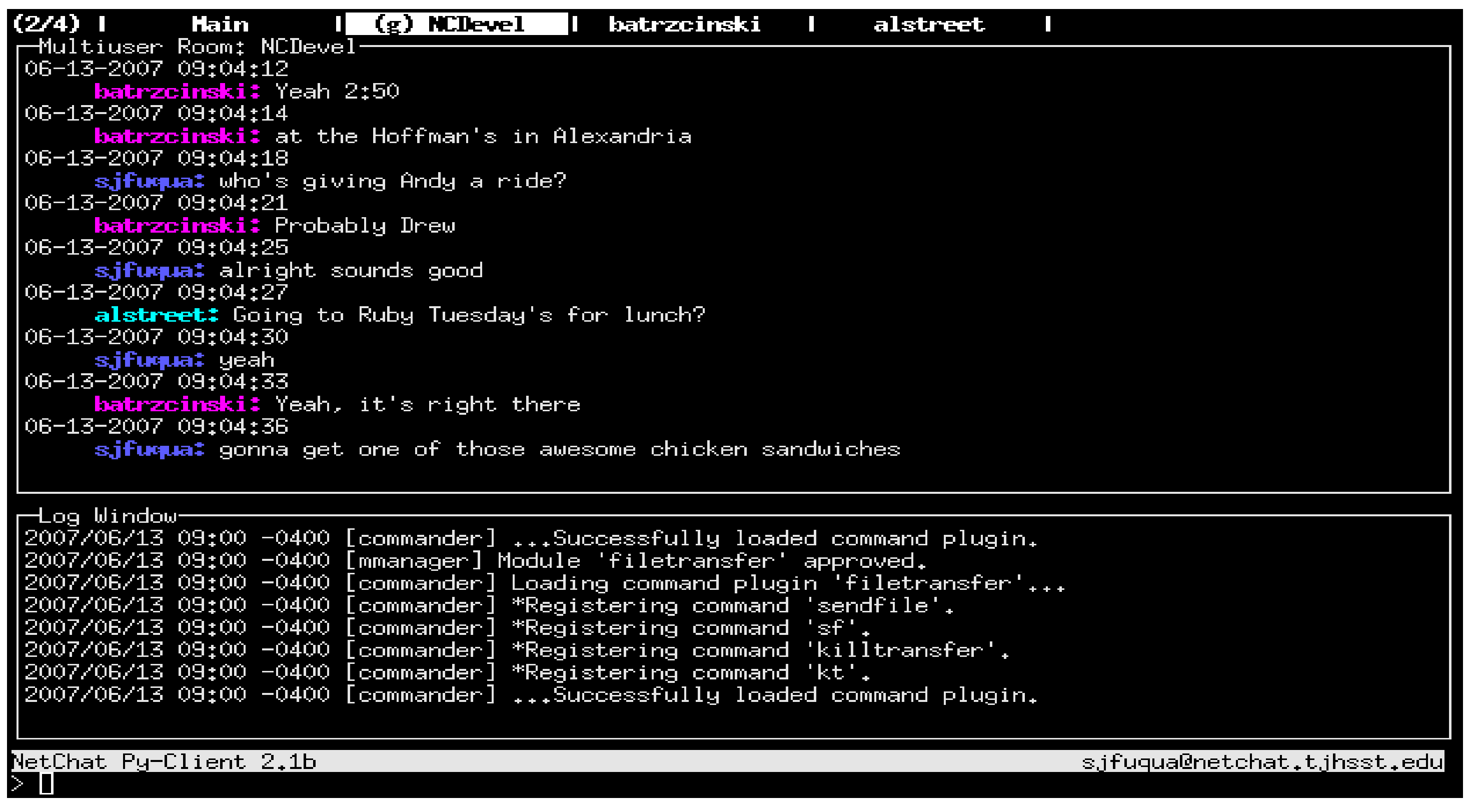
Overarching Goals

- **NCP/XML Portable Protocol** to enable anyone to write communications agents for it
- **Open Standards** to simplify community code sharing.
- **Modular Design** separating out tasks such as chat and mail into distinct loadable and unloadable modules authenticated by the server

Communications Architecture Diagram



○ Communications Module (login, chat, etc.)
⇠ ⇢ Complete Path of Module Communication
☁ Intermediate Data Transport



```
(2/4) |     Main     | (g) NCDevel | batrzcinski  |   alstreet   |
-Multiuser Room: NCDevel-
06-13-2007 09:04:12
     batrzcinski: Yeah 2:50
06-13-2007 09:04:14
     batrzcinski: at the Hoffman's in Alexandria
06-13-2007 09:04:18
     sjfuqua: who's giving Andy a ride?
06-13-2007 09:04:21
     batrzcinski: Probably Drew
06-13-2007 09:04:25
     sjfuqua: alright sounds good
06-13-2007 09:04:27
     alstreet: Going to Ruby Tuesday's for lunch?
06-13-2007 09:04:30
     sjfuqua: yeah
06-13-2007 09:04:33
     batrzcinski: Yeah, it's right there
06-13-2007 09:04:36
     sjfuqua: gonna get one of those awesome chicken sandwiches

-Log Window-
2007/06/13 09:00 -0400 [commander] ...Successfully loaded command plugin.
2007/06/13 09:00 -0400 [mmanager] Module 'filetransfer' approved.
2007/06/13 09:00 -0400 [commander] Loading command plugin 'filetransfer'...
2007/06/13 09:00 -0400 [commander] *Registering command 'sendfile'.
2007/06/13 09:00 -0400 [commander] *Registering command 'sf'.
2007/06/13 09:00 -0400 [commander] *Registering command 'killtransfer'.
2007/06/13 09:00 -0400 [commander] *Registering command 'kt'.
2007/06/13 09:00 -0400 [commander] ...Successfully loaded command plugin.

NetChat Py-Client 2.1b                                  sjfuqua@netchat.tjhsst.edu
>
```