

B211 Internet Computing

## Usenet News and Text Conferencing

B211 Week 9 Lecture 2

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## Lecture Outline

- Usenet News and the Network News Transfer Protocol (NNTP)
- Text Conferencing and Internet Relay Chat (IRC)

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## Usenet News

- A global distributed system to allow users to have discussions in a public forum, called *newsgroups*.
- Each newsgroup consists of messages called *articles*.
- Articles posted to a newsgroup are sent to all machines and users who subscribe to the newsgroup – called getting the *news-feed*.

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## Usenet News (cont'd)

- There are Usenet newsgroups covering almost any area there are online communities for.
  - Eg see links at <http://www.w3.org/History/19921103-hypertext/hypertext/DataSources/News/Groups/Overview.html>
  - Have decreased in popularity with more and more web-based discussion forums.
- Like email, you need to connect to a news server to receive and post articles.
  - Major browsers have configurations to allow you to connect to a news service as a *subscriber*.
  - Murdoch's Usenet news service instructions is available at <http://www.its.murdoch.edu.au/services/news/?sidemenu=show>

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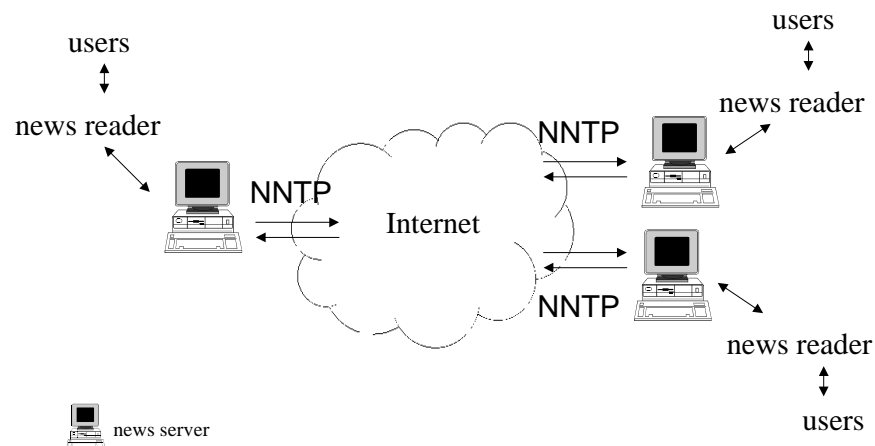
## Usenet News (cont'd)

- Messages are distributed in normal text e-mail message format (RFC 822).
- The term *Usenet* refers to the loosely coupled network of machines that exchange these messages.
- The *Network News Transfer Protocol* (NNTP) defines how articles are to be exchanged between machines.

## How Usenet Works

- News distribution is not centrally administered.
  - Various *news servers* around the world store the news feeds
    - any machine connected to the Internet can have a news server running.
  - Users can read and post articles by connecting to a local news server using a *news reader* client program.
  - Articles posted by a user using a news reader is passed on to the local news servers.
  - News servers distributed the local articles to all other news servers around the world using NNTP.

## How Usenet Works (cont'd)



## Public Access Usenet Sites

- Like everything else, there are now web sites that allow users public access to Usenet news servers.
  - Eg see a list of them at Yahoo  
[http://dir.yahoo.com/Computers\\_and\\_Internet/Internet/Chats\\_and\\_Forums/Usenet/Public\\_Access\\_Usenet\\_Sites/](http://dir.yahoo.com/Computers_and_Internet/Internet/Chats_and_Forums/Usenet/Public_Access_Usenet_Sites/)

## The Network News Transfer Protocol (NNTP)

- NNTP defines standards for:
  1. Clients to post articles to news servers
  2. Clients to retrieve articles from servers
  3. News servers to exchange articles
- Most operations of NNTP are similar to SMTP when clients connect to news servers
  - work on a request-response between clients and servers
  - use text commands.

## Text Conferencing

- Unlike e-mail and Usenet news, text conferencing is a method of *real-time, interactive* communication.
- With the current common bandwidth and input/output devices, conferencing beyond using text is still not very high quality
  - eg. using voice and video.

## Internet Relay Chat (IRC)

- IRC is a text conferencing method that allows multiple users to communicate in real-time interactively
  - each user's text appears in separate *windows* on a particular client display.
- Each IRC server hosts multiple *channels* of conversation, each channel covering different topics, with their own participants.
- It is possible for a user on a single machine to be on two channels at once.

## IRC Client Software

- Users usually use IRC client software for interface.
  - eg. ICQ <http://www.icq.com/>
- An *IRC bot* (or robot) is an IRC client which is computer generated rather than human operated
  - the IRC bot responds in different ways based on the text of other users in the channel.

# IRC Protocol

- IRC is really a client-server protocol which uses TCP/IP over ports 6660-6669.
- It defines 3 different communication methods:
  1. client-to-client (one-to-one)
  2. one-to-many
  3. broadcast

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