Open Hypermedia

Object-Oriented Analysis and Design

CSCI 6448 - Fall 1998

Kenneth M. Anderson

Open Hypermedia is...

- External relationship management
  - Anchors and Links stored separate from application content
- Support for hypermedia in all applications between all applications
  - Not just Web browsers, help systems, etc.
    - Which are typically monolithic or hardwired to work with only a specific set of applications

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Open Hypermedia Systems (OHSs)

- MicroCosm, MultiCosm, WebCosm
  - Southampton University
- Devise Hypermedia (DHM)
  - Århus University, Denmark
- Hyperform, HyperDISCO
  - Aalborg University Esbjerg

Open Hypermedia Systems

- SPx/HBx, HOSS
  - Texas A&M
- Sepia, Dolphin
  - GMD/IPSE in Darmstadt
- Sun Link Service
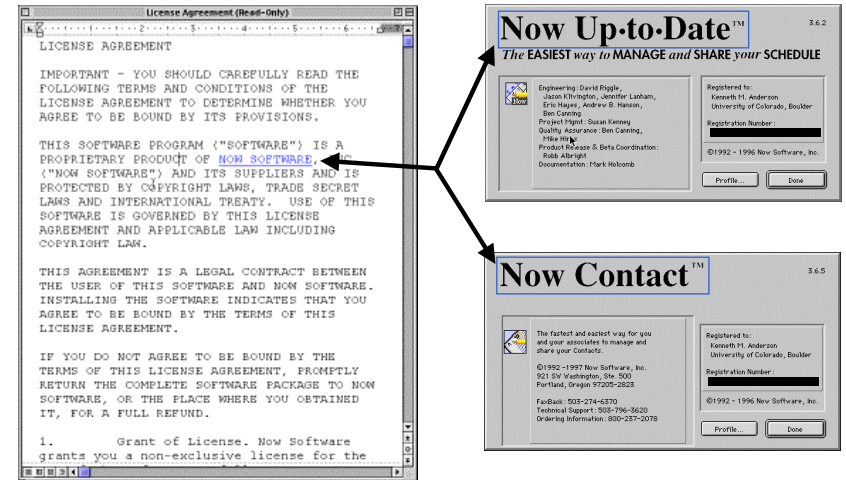 - Sun Microsystems (First link server, 1989)
- And...

Chimera & Chimera 2

- University of California, Irvine
  – Ken Anderson (me)
  – Richard N. Taylor (my advisor),
  – Jim Whitehead (WebDAV lead)
- Now at University of Colorado, Boulder
- Will be used as an example throughout this class

Basic Idea

Chimera OHS

- Open Hypermedia support for Software Engineering
- Applies multiple techniques to support heterogeneity
  – Information, processes, people, platforms
- Applies multiple integration techniques to provide services to wide range of clients

Chimera Clients

- FrameMaker
- XEmacs
- Netscape
- JPEG and GIF Viewer
- MPEG Viewer (needs to be upgraded)
- Sound Player
- B-2 Bomber Flight Simulator (!)

Chimera APIs

- Application Program Interface
  - The services provided by Chimera
  - Chimera 1
    - Ada, C, and Java
  - Chimera 2
    - C and Java
  - In the future,
    - HTTP/XML, Ada, C++

Chimera Concepts

- Viewers
  - Applications that display/edit information
- Objects
  - Information for a particular viewer
- Views
  - The representation of the object by the viewer to a user (user does not have to be human)

Chimera Concepts, continued

- Anchors
  - A specific region of interest within a view
  - Note: views act as an anchor for the entire view
  - Can be view-independent (anchor appears in all views of an object)
- Links
  - Sets of anchors (& views)

Chimera concepts, continued

- Attribute-Value Pairs
  - All previous concepts can have attributes associated with them
- Hyperwebs
  - A set of Anchors and Links
  - Can contain hyperwebs
  - Inherit anchors / links from parents
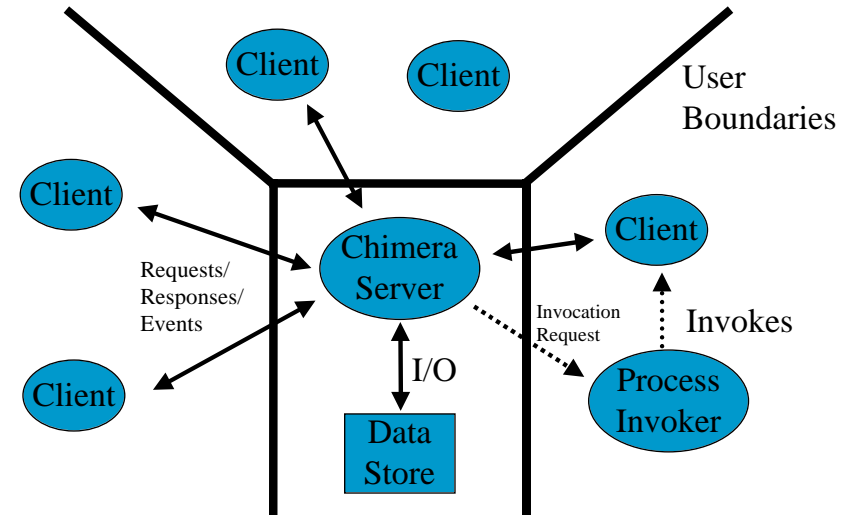 - Views, Objects, Views stored separate

Return to Chimera API

- API contains operations to manipulate concepts
  - i.e., Create_Viewer, Add_Anchor_To_Link
- It also contains operations to register interest in events as well as event handlers
  - i.e., Handle_Link_Traversal

Chimera 1 Architecture

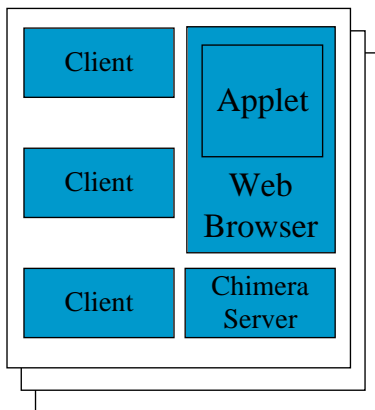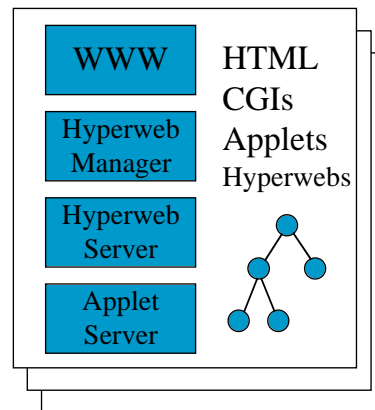# Chimera 2 Architecture

Supporting Clients...

Supporting Applets...

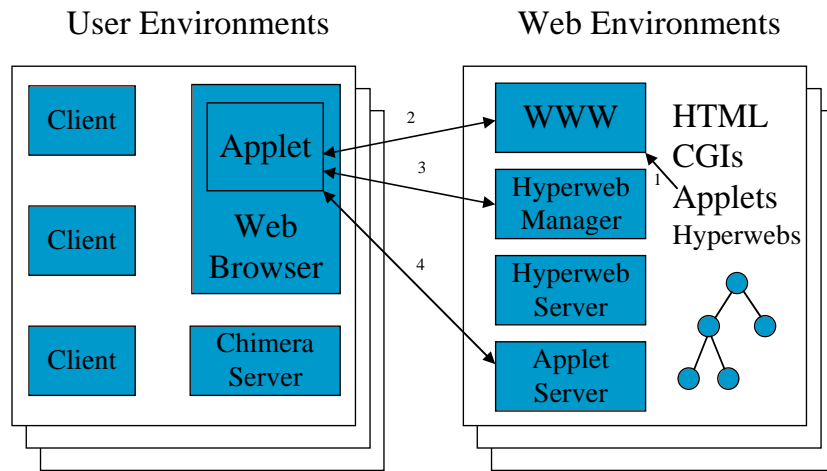User Environments   Web Environments
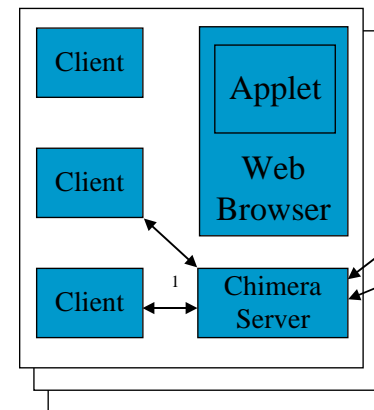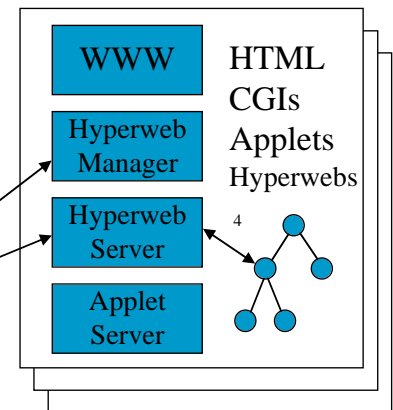
5. Applet Server then functions like Chimera
Server on previous slide.