

Multicasting in the Internet

- For Interactive Multimedia Applications -

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KAIST

International Workshop on New Video Media Technology

Casting

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Broadcast

one-to-all

Multicast

one-to-many

many-to-many

Unicast

one-to-one

Internet: Network of Networks

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10 million computers

50 million users

Over 100 countries

Growing 50-100% per year

Two Models

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You Go to the Information Model

WWW

News

ftp (file transfer)

Information Source Come to You Model

MBone

CU-SeeMe

email

MBone (Multicast Backbone)

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Many-to-Many

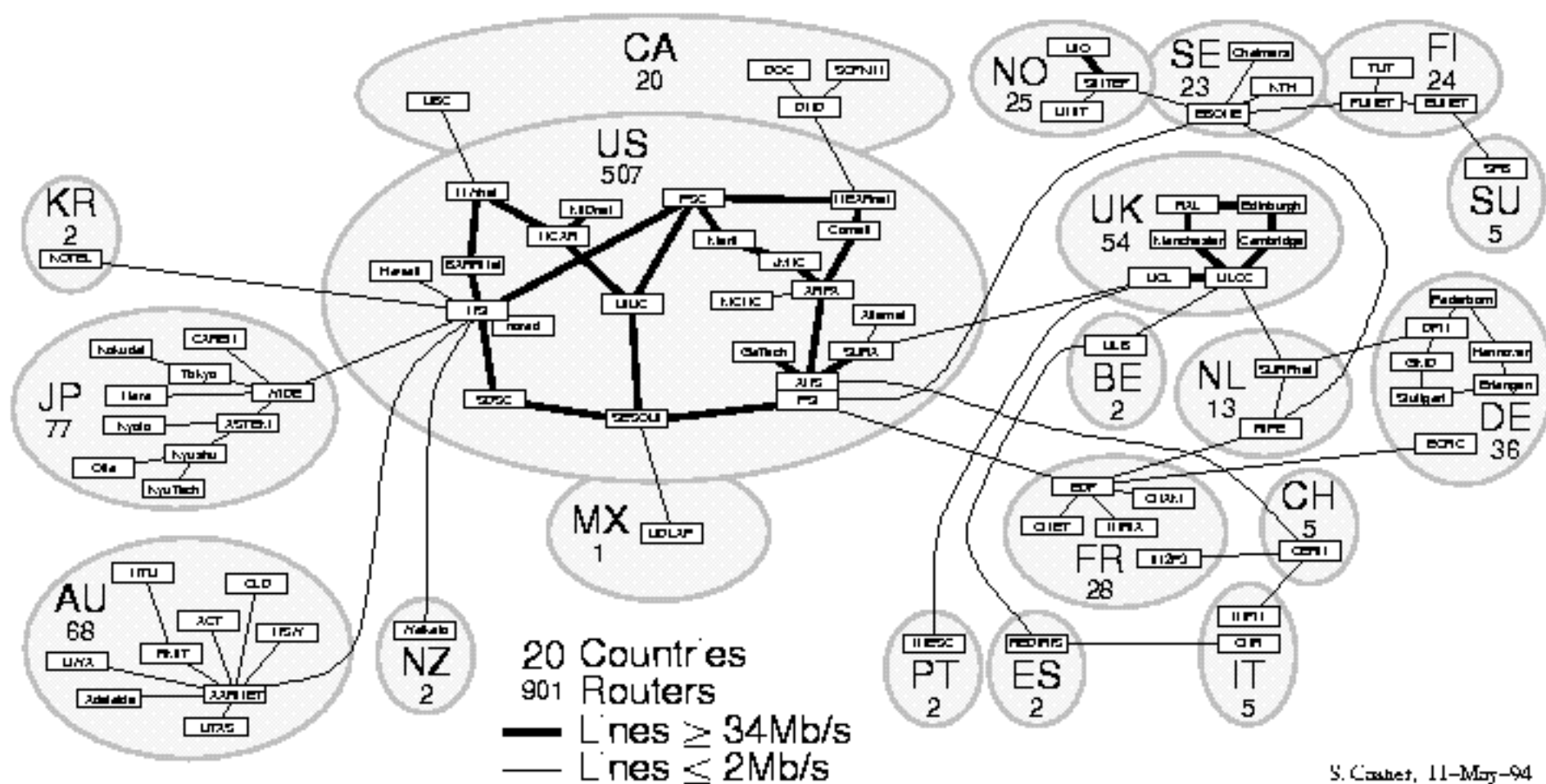
Spanning Tree and Mesh Topologies

Experimental

500Kbps per channel

3 Levels of Coverage(Global, Region, Organization)

Major MBONE Routers and Links



MBone: Notable Applications

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Conference

Seminar

Class

Space Shuttle

Undersea Exploration

(See <http://www.cilea.it/MBone/agenda.html>
for program)

One-to-One, Many-to-Many, One-to-Many
Reflector for Multicasting
Can be Combined with MBone for Broader
Converge

CU-SeeMe: Notable Applications

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Global Schoolhouse Project

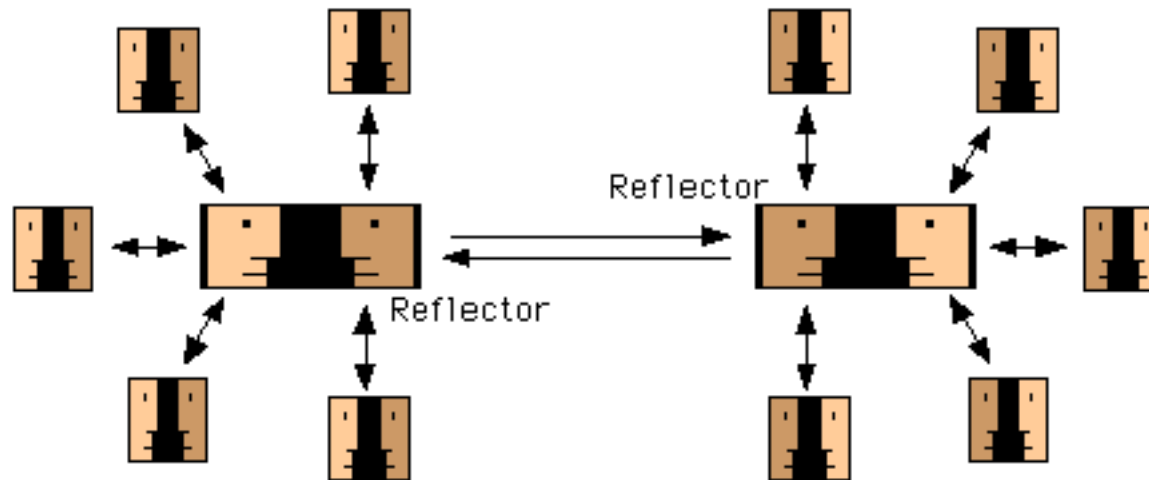
Telepresence Art

Virtual Summer School

Information Science Exhibitry

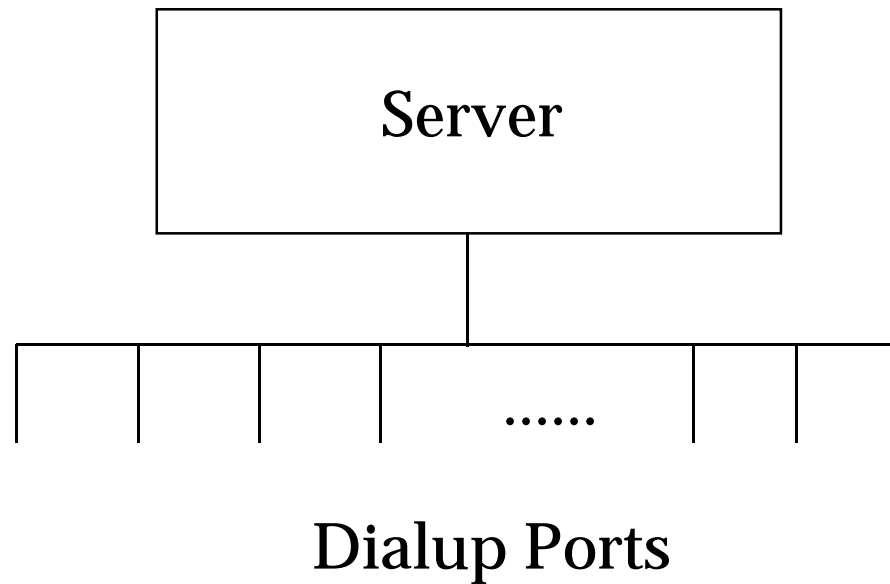
Reflector

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Stream for Video Distribution (Online Service Providers)

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Higher Resolution and Speed

3 Dimention/Virtual Reality

Global

Scalability

Conference Control

Quality of Service

Internet Engineering Task Force (IETF)

WWW Conference

Interop

INET

IEEE and ACM Periodicals and Conferences