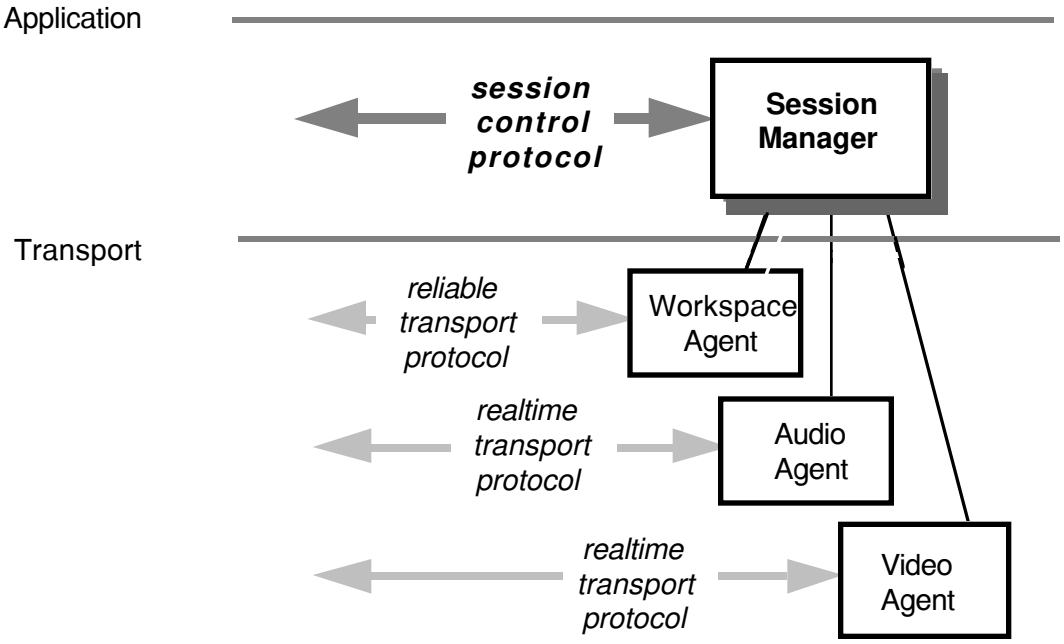
Interoperability

Eve M. Schooler
USC/Information Sciences Institute
Marina del Rey, CA 90292

July 27, 1994

A Modular Control Architecture



Session Control: Distributed Messaging

- ***Horizontal*** **protocol:**
  - Peer-to-peer between session managers
- ***Vertical*** **protocol:**
  - Communication among media agents

→ *Similar or different approaches?*

1. Session Orchestration

- **Session directory service:**
  - multicast-based sd
- **Explicit invitations:**
  - mmcc, maven, ivs?, dvc?
- **World Wide Web (WWW):**
  - comet, sd entries, media-on-demand
- **E-mail and active mail:**
  - mmphone

→ *Unified way to specify sessions?*

2. Media Agents

- **Existing media agents:**
  - *Audio:* vat, nevot, maven, ivs
  - *Video:* dvc, nv, CUSeeMe, ivs, vic
  - *Shared workspace:* wb
- **Cross app communication:**
  - Multicast with ttl 0
  - Tk/Tcl hooks
  - Other ipc

Coordinated Agents

- **On/Off interface:**
  - Multi-agent muting
  - Channel surfing
  - Channel selection
  - Floor moderation
- **Up/Down links:**
  - Video-to-follow-{audio, workspace}
  - Adaptive QoS: trade-offs btwn agents
  - Inter-agent synchronization
- **Other attributes**

Assessment: Plug-and-Play?

→ ***Suite of functions needed externally?***

→ ***Uniform ipc to support them?***

→ ***Documented interfaces/protocols?!***

3. Session Control Protocols

- **RTCP**
- **UCL's CCCP**
- **Maven's control messages**
- **ivs' session control**
- **flow synchronization protocol**
- **mmcc's CCP**
- **BBN's sticky protocol**
- **General agreement service**

→ *Similarities to extract?*

Open Access to Additional Services

- **Multicast address management**
- **Session announcements**
- **User locator service**
- **RSVP handles**