Service Interoperability

Jörg Ott - Carsten Bormann - Ute Bormann

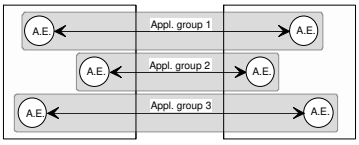
Technische Universität Berlin - Universität Bremen
jo@cs.tu-berlin.de - {cabo,ute}@informatik.uni-bremen.de

MMUSIC working group

Conference Services

- *communication services*
- *cooperation services*

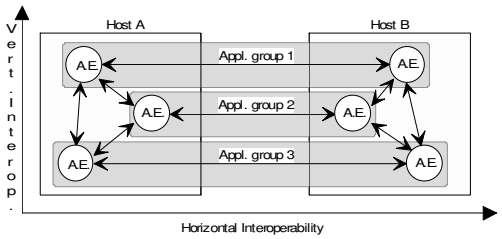
- **Services are provided by an application group**
  - *one or more applications per user*
  - *any number of users in the conference*
  - *many of such groups to model the interactions*



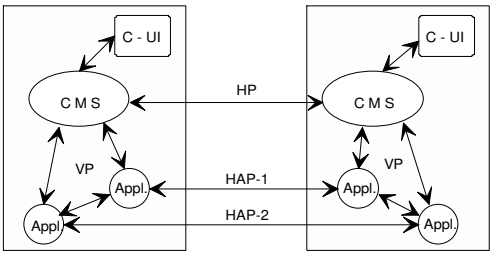
Service Coordination

- **Coordination needed**
  - *inter-system, intra-application*
    - application-specific state + functionality
      - horizontal application protocol
  - *inter-system, inter-application*
    - conference state: membership, applications, ...
    - conference resource usage
      - horizontal protocol
  - *intra-system*
    - local conference state consistency
    - local resource management
      - vertical protocol

Dimensions of Coordination



Architecture



Horizontal Protocol

- **Conference state management**
  - *membership, floor, policy, ...*
  - *resource utilization*
  - *decide on state changes and distribute state information*
  - *Application groups*
    - subgroups
    - application type, media type, encoding format, ...
    - context (document being edited)
    - HAP support: addressing, encapsulation?

Vertical Protocol

- **Global conference state management**
  - *conference state information to applications*
  - *state change requests by applications*
  - *HAP support*
- **Local conference state management**
  - *local resource usage, device management*
  - *support application-specific interactions*
    - **addressing, encapsulation?**

Horizontal vs. Vertical

- **Same vs. different transport mechanism**
  - *complex reliable protocol for inter-site operation*
  - *vs. implicit fate sharing by local applications (easy diagnosis)*
  - *simple mechanisms like TTL0 UDP multicast for local comms*
- **Same vs. different semantics**
  - *scope*
  - *negotiation policies*