Link-Independent Navigation Support in Web-Based Adaptive Hypermedia

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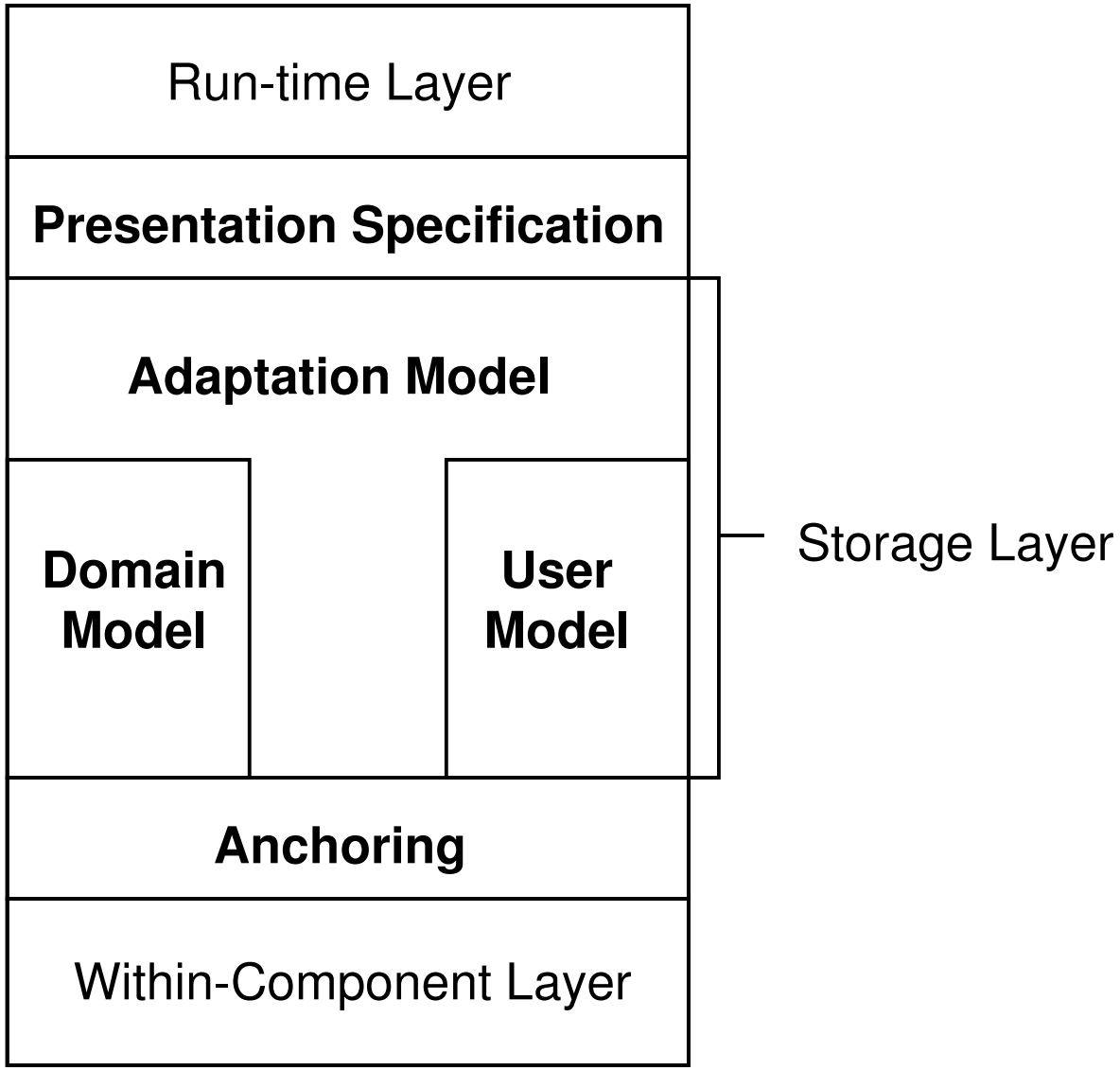
Topics

- AHAM reference model for AHSs
- Navigation support in AHSs
- Abstract views
- Link-independent navigation support (LINS)
- Generating LINS by AHAM
- Navigation by LINS
- Conclusions and future work

AHAM


Run-time Layer
Presentation Specification
Adaptation Model
Domain Model
User Model
Storage Layer
Anchoring
Within-Component Layer

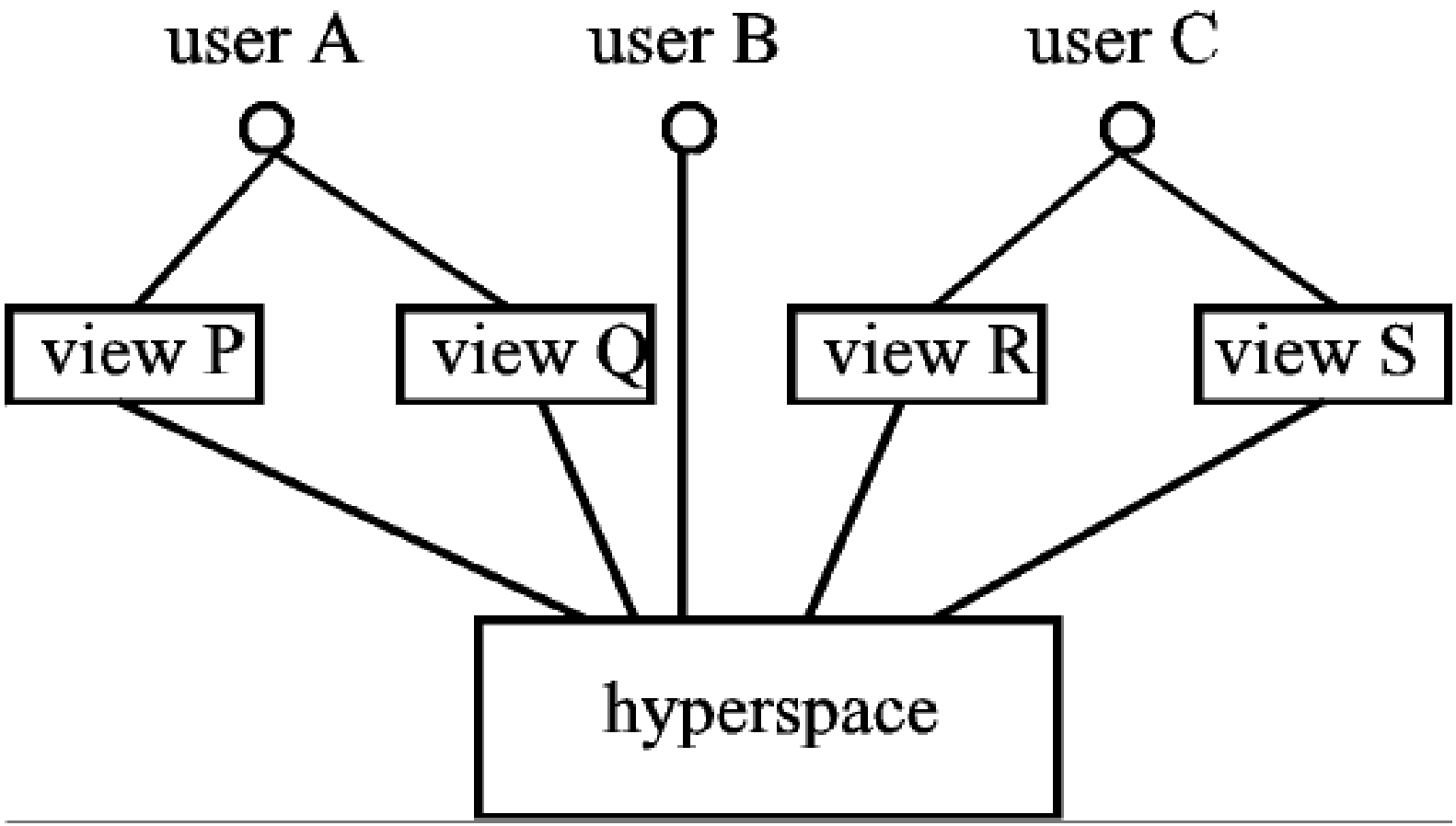
Navigation support in AHSs

- Global guidance
- Local guidance
- Global orientation support
- Local orientation support

Link-dependent navigation support

- No connection for an interesting page
- Too many steps to an interesting page
- Not user preferred reading order

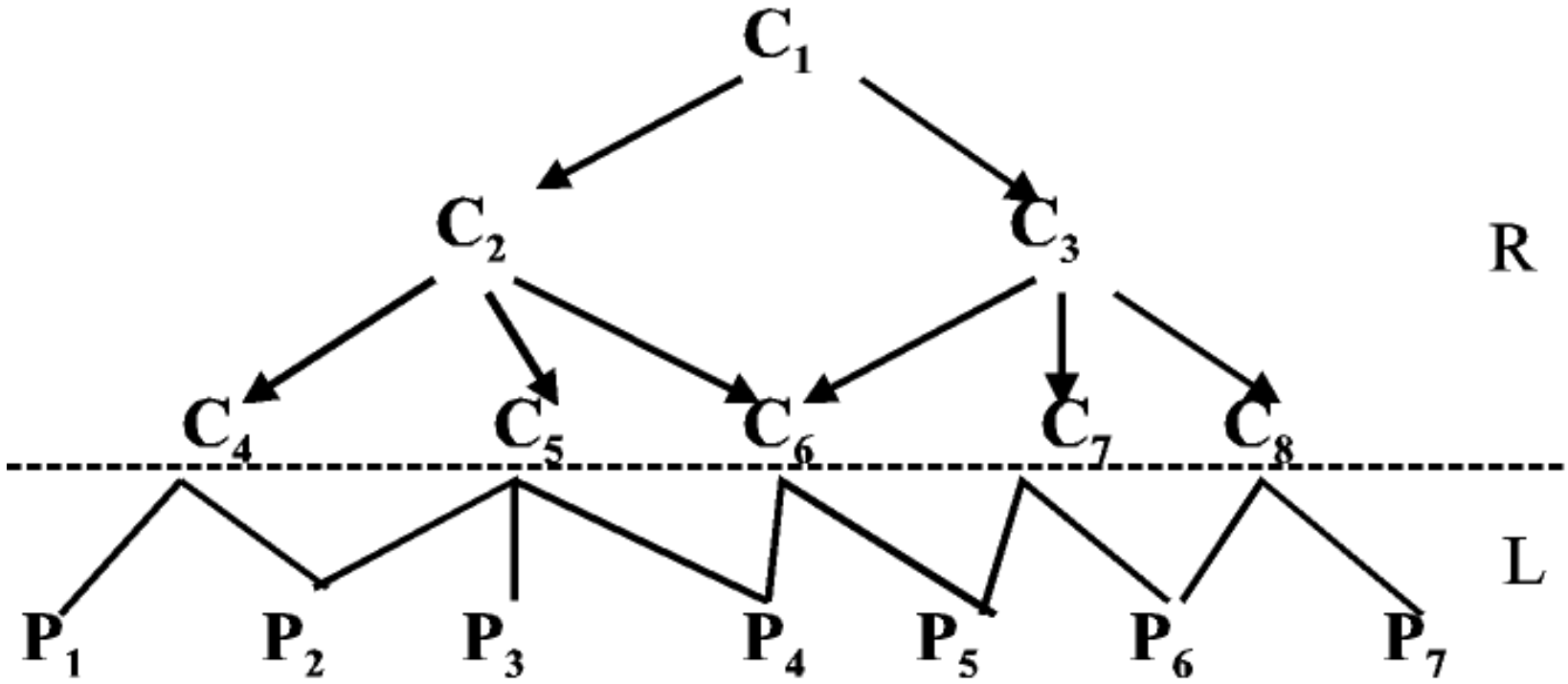
Abstract views



Link-independent navigation support (LINS)

- Based on an abstract view
- Independent from basic link structure
- User preferred abstract view
- Well linked
- LINS itself is adaptive

Defining abstract view by AHAM



Updating User Model

- Knowledge update

  If *access P* ***and*** *P.ready-to-read*

  Then *P.knowledge := "known"*

- Relevance update

  If $\forall$ *P, P is prerequisite for C* ***and***

  P.knowledge ="known"

  Then *C.relevance := "recommended"*

Generating LINS

- Global guidance based on an abstract view
- Local guidance based on an abstract view
- Global orientation support based on an abstract view
- Local orientation support based on an abstract view

Adding link adaptation

- Techniques: Color annotating
  - Green for recommended
  - Red for not-recommended
  - Yellow for not-interesting
  - Black for current page

Navigation by LINS

- Select an LINS
- Go to other related concepts (until pages)
- Get suggestion by annotated link presentation

Conclusions and future work

- Conclusions
  - Need LINS in AHS
  - AHAM can describe LINS
- Future work

  Create authoring tools to build abstract views.