

research directions – *computational models*

Today, hypermedia functionality is to some extent embedded in almost all applications. However, to realize the full potential of hypermedia, and in effect the networked multimedia computer, there are still many (research) issues to be resolved. To get an impression of the issues involved, have a look at the famous seven hypermedia research issues formulated by Halasz.

research issues

- *search and query* – for better access
- *composition* – for imposing structure
- *virtual structures* – on top of existing structures
- *computation* – for flexibility and interaction
- *versioning* – to store modification histories
- *collaborative work* – sharing objects with multiple users
- *extensibility and tailorability* – to adapt to individual preferences

See [Hypermedia], section 2.3 for a more extensive description. Although the research issues listed above were formulated quite early in the history of hypermedia, as a reflection on the requirements for second-generation hypermedia systems, they remain valid even today. Without going into any detail with respect to the individual research issues, I rather wish to pose the grand encompassing research issue for the networked multimedia computer: *What is the proper computational model underlying hypermedia or, more generally, for applications that exploit the networked multimedia computer in its full potential?* Some directions that are relevant to this issue will be given in section ?? which deals with the multimedia semantic web.