when the cursor is over the anchor marker, or when the mouse button is depressed.
Anchors each have an identifier and a value, but no individual presentation specifications, and in particular no duration for an anchor. Video and audio anchors are not supported.

Content is normally specified via a file, but text can be included directly in the document.

An atomic component is required to have associated content and a channel in order to be played.

A2.3 Composite components

The composite types in CMIFed are parallel, serial and choice. Parallel and serial are forms of temporal composition; choice is a form of atemporal composition. There is no presentation specification or semantic attributes applicable to a composite as a whole. Anchors and children can be specified.

A composite can have anchors, but these function only as the destination of a link. The anchors refer implicitly to the beginning of the complete composite. Composite anchors are not supported.

Children are contained within a composite and cannot be referred to from other composites. Children are atomic or composite components; they cannot be link components.

Synchronization arcs can be specified between any two atomic components that belong to the same multimedia presentation. The synchronization arc specifies the source and destination components, a BEGIN or END specifier, and a time delay. Anchor references and other scheduling information are not supported.

A2.4 Link component

Of all the parts that can be specified in a link in the model, a link in CMIFed has only source and destination component reference/anchor reference pairs and a direction. In other words, the link component has no presentation specification, no attributes, no anchors and only two specifiers.

The link source is an anchor in an atomic component (otherwise the reader cannot interact with it). The destination is an anchor in either an atomic or a composite component. The direction can be FROM, TO or BIDIRECT, the last only if the destination is an anchor within an atomic component. The direction applies to the link, rather than each specifier, which for the case of a single source/single destination link is equivalent.

Reference

[ROHB97b] L. Rutledge, J. van Ossenbruggen, L. Hardman, and D.C.A. Bulterman (1997). A Framework for Generating Adaptable Hypermedia Documents. In Proceedings: *ACM Multimedia '97*, Seattle WA, Nov.

A2 The AHM as Implemented in CMIFed

The hypermedia authoring environment CMIFed was originally based on the CMIF model but has since been updated to include the main elements of the Amsterdam hypermedia model. We state here how the model supported by the editor compares with the full AHM. A complete specification of the model encapsulated in the CMIF document format in terms of HyTime is given in [ROHB97b].

A2.1 Channel

CMIFed implements the channel as defined in the model, except that the semantic attributes are not recorded explicitly. Channels can be of two types: layout channels which contain other channels and media channels. Layout can thus be specified hierarchically. The highest-level channel is a window. Styles which can be assigned are media item and anchor styles. Transition styles are not supported.

A2.2 Atomic component

CMIFed implements the atomic component as defined in the model to a large extent. Presentation specifications, anchors and content are supported, although semantic attributes are not.

The presentation specification consists of a channel reference, duration, scaling and style information. A channel specifying spatial and style information has to be assigned to the component. The position of the content in relation to the channel cannot be specified—images and video are displayed in the centre of the channel, text is started at the top. The duration of the component is derived from the associated content (in the case of video or audio), can be derived from the composition structure surrounding the component (for text and images), and can be specified explicitly by the author (text and images). Content for image items can be scaled to fit the channel or given a scale factor in terms of the image's intrinsic size. Styles which can be assigned are media item style and anchor style and can override defaults associated with the channel. Anchor style does not include changing the style of the anchor marker depending on the interactive behaviour of the reader, for example by changing the anchor style