Using Continuous Metadata to aid Navigation of Ontological and Temporal Information Spaces

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DYNAMIC CV

The Dynamic CV application [4] generates a dynamic *Curriculum Vitae* for people with credentials held within the *SoFAR* (Southampton Framework for Agent Research) [3] framework. The SoFAR framework contains a suite of Distributed Information Management agents, each holding credentials of people in the IAM research group at the University of Southampton. The Dynamic CV application is implemented with a WWW server interface that responds to web-based queries. The resultant documents include further queries, e.g. publications and seminars.

By using the Open Hypermedia model as an interface to the ontological information space within the SoFAR framework, users can interact with this system using familiar browsing and navigation techniques, which are translated into queries over the underlying information.

HYSTREAM

Figure 1 shows the *HyStream* [1] application displaying a seminar presentation. On left hand side, the temporal media is shown with continuous metadata, in the form of temporal links. The right hand side is used for displaying content from the ontological information space. Our example screenshot shows a seminar video and the CV of the presenter from the Dynamic CV agent.

The Fundamental Open Hypertext Model (FOHM) [2] is used by both the Dynamic CV and the HyStream agents as a persistent storage mechanism The knowledge base fragments are represented and communicated as ontological fragments within the SoFAR framework.

Figure 1: HyStream and the Dynamic CV.

NAVIGATION AND AUTHORING

Two rules are applied to navigation by link traversal, which apply to all links in the HyStream application: (1) endpoints which represent temporal media objects are loaded into the media player component. (2) endpoints which do not represent temporal media objects are loaded into the right hand side of the window. These rules allow us to perform navigation on the temporal and ontological information spaces independently or in cooperation with each other.

In addition to navigating information spaces, the HyStream system also allows the user to author temporal events by clicking on events as they occur. This is achieved by the use of a *recording sheet* web page, which can be requested from the HyStream server. The recording sheet shows all the possible events that might occur during the video, and is derived from the known resources present in the video.

The specially prepared links inform the HyStream web server of events, and when they occur in the video. The HyStream server stores the event data, and is able to immediately use the new event data to enrich existing HyStream presentations. This model supports live and near-live scenarios in addition to presenting archived material.

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