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HYPERCONTEXT: A FRAMEWORK FOR ADAPTIVE AND ADAPTABLE HYPERTEXT

SUMMARY

HyperContext is a new framework for adaptive and adaptable social hypertexts which actively support users while they browse and search for information. Our basic premise is that the same piece of information can have different, and even contradictory, subjective meanings which can be at least partially described. We call these descriptions *interpretations* of information.

In a hypertext, the same document may occur in many locations as the destination of many links. In HyperContext, we make the *context* in which a document exists explicit, and we capture the description of a document in context as an interpretation. As a user browses through hyperspace, context causes each document to be interpreted before it is displayed to the user. Links and their destinations are part of the interpretation, so different interpretations of the same document can present users with different views of the hyperspace.

We use context and the interpretations of documents to ascertain a user's *short-term interest* based on her individual path of traversal through hyperspace. A *salient interpretation* is derived from the different interpretations of each document the user accesses, using a modification to the Rocchio method of relevance feedback. The salient interpretations are then combined to form a model of the user's short-term interest from which a query is automatically extracted on behalf of the user.

We distinguish between *contextual relevance* and *superficial relevance* of information to a user query. A HyperContext hypertext can guide a user along a path to contextually relevant information, and recommends superficially relevant information through dynamic "See Also" links.

We evaluate different methods of deriving a salient interpretation, one of which is incorporated into a prototype implementation of the HyperContext framework. Aspects of the prototype are empirically tested to establish that the model of the user's short-term interest can identify relevant information.