Special Issue on the Semantic Web: Editorial

The Semantic Web envisions the World Wide Web as a universal meaning space. This implies that Web authors will coordinate their activities to create Web resources that can be interrogated, comprehended and utilized locally. Arranging information resources for local utility is not a new ambition. Librarians have traditionally collected information objects, determined their meaning and arranged them for local use. The Web, however, represents a new, and rapidly changing, technological platform for this effort. The Web also introduces an unprecedented level of democracy to information sharing. Web authors include many different languages, cultures and points of view. The four papers of this special issue were selected to discuss these issues and delineate some of the major challenges facing the Semantic Web.

Lu, Dong and Fotouhi begin our examination of the Semantic Web by surveying the current technologies involved. The Extensible Markup Language (XML) is the gateway technology of the Semantic Web with its distinguishing characteristic of semantic markup. Consequently, the authors concentrate on the mechanics of specifying concepts, or ontologies. There are challenges to both the management and standardization of ontologies. The authors consider both agent-based harvesting of Web resources as well as the use of Web services.

Warner considers ontologies from the point of view of "discursive coherence," that is, the Semantic Web will work because people can speak and understand each other. Warner's concern is the labor economics of encoding universally consistent semantics in Web pages, where he suggests there is a trade-off between the labor spent describing information resources and the labor required to find information resources. The Semantic Web's success will be the willingness of authors to invest their labor in an unselfish way to promote a common good.

Brooks is concerned about the construction of information. He suggests that the success of the Semantic Web would rely on the same three factors that have made large bibliographic databases successful: (1) The development of a standard container for the information, (2) Formalization of the construction of the information itself, and (3) Development of user tools to help searchers find information. Brooks concludes that authority control will emerge as an important factor in the Semantic Web.

Newby concludes our survey of the Semantic Web by focusing on the search for information in the Semantic Web. He crystallizes a central theme of the preceding three papers that successful communication results from not only a sharing of messages, but also of meaning. He suggests that successful searching will match the searcher's cognitive space to the search space, which will require more than legacy information retrieval word-matching approaches.

How to cite this paper:

Brooks, Terrence A. (2002) "Special issue on the semantic web: editorial" *Information Research*, **7**(4) [Available at: http://InformationR.net/ir/7-4/semwebed..html]

Last updated: 29th July 2002