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Associating multiple documents through Agent technology

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Document preparation has been one of the major application areas in computing. There are also numerous facilities available for smart text processing. These include checking spelling, grammar, rephrasing, find and replace of text within a document. However, it has not been addressed yet how to incorporate related materials from different files into a document being prepared. This is an important requirement not only in document preparation areas such as academic report writing, preparing legal documents, compiling minuets of meetings, etc. but also in writing software programs with the reuse of already written code. Although some text editors running on Unix operating system support linking of many documents at the same time, these approaches are highly technical and not user-friendlily. In this project, we have developed a Text Search Agent, which supports text preparation in association with multiple related files.

The agent has been designed to operate in a proactive manner without much intervention by the user. The agent follows a user profile and categorizes documents prepared on the basis of keywords within documents. These keywords are saved in a database. This process runs on the background at all the time. Once a user starts preparing a document, the agent keeps a track on database entries depending on the user profiles. When a user wants to find a set of files containing a particular word, the agent can be reactively operated to search database. The agent carries out an intelligent search process based on various heuristics such as check for most recent files, commonly used files, specific files, category of the files, etc. In the early stages of use, the agent may need help from the user to construct the database. However, as time goes on, the agent improves itself. Once the agent locates the related files, the user can use the material with the standard text editing facilities such as copy, paste, cut, etc. By default, the agent facilitates the read-only use of documents in the system. At present the agent has been developed to run on Windows platform. It has been integrated with well-known MS-Word just for testing purposes. However, the agent can be used with any editor such as Notepad, WordPad, Adobe PageMaker, and programming languages etc. It has been planned to deliver the agent as a feature of an Operating system rather than that of word-processing packages. As further work, we propose to embed the agent with Artificial Intelligent techniques to enable smart searching including files available on a local area network.

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