Providing Websites with forecasting skills: personalized prevention of high risk events

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Abstract
A formidable synergy can be obtained by putting expert systems technology into Websites. Websites should be able to infer hypotheses about the present and the future. Websites, endowed with inference capabilities are able to provide users with advanced services that enhance their competitiveness. A method for endowing Websites with forecasting skills addressing the theme of the personalized prevention of high risk events, was presented at the 9th WSEAS Int. Conf. on Computers held in Vouliagmeni (Athens) last July.

Keywords: Telematica, Embedded expert system, Probabilistic reasoning, Adaptive Website

In recent years, great emphasis has been given to collaborative Websites (for short, in the following, sites), sites able to effectively help their users and to create personalized relations with their users [1] [2]. The basic problem underlying this feature is that sites must be equipped with adequate general knowledge and able to infer specific knowledge about each specific user. In other words, sites must behave like knowledge-based inferential machines ("... only then can computers become truly concerned with our human affairs."

[3]). Given that, the following questions arise: what kind of knowledge should be put into a site? What kind of reasoning should a site do? Of course the answers depend on the kind problem a site should solve in order to be collaborative. However in a great variety of real cases, the problem that a site has to cope with in order to be collaborative, can be classified as a diagnostic problem [6].

Since, in general, real world situations change, sites, in order to be actually collaborative, should be able to reason not only about the real world in the present time but also about a hypothetical world in a future time. In other words, they should be able to hypothesize possible future situations.

Finally, since the world is affected by uncertainty and uncertainty is pervasive, a site should be able to reason under uncertainty.

A method for endowing Websites with inferential capabilities about the future [4] [5] was presented at the 9th WSEAS International Conference held in Vouliagmeni (Athens) last July. Besides the theoretical model, an experimental prototype site (developed by the author) was also presented.

References