Title (en)

NATURAL LANGUAGE INTERFACE FOR DATABASE QUERIES

Title (de)

SCHNITTSTELLE FÜR DATENBANKABFRAGEN IN NATÜRLICHER SPRACHE

Title (fr)

INTERFACE POUR INTERROGATION DE BASE DE DONNEES EN LANGAGE NATUREL

Publication

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Application

EP 01937641 A 20010521

Priority

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Abstract (en)

[origin: WO0190953A2] An NLI is provided that provides truly natural query capability to end users of enterprise databases as defined by its abilities to interpret any style of articulation and to learn from the users in a way that improves both effectiveness and efficiency. The strategy uses a concept referred to herein as search and learn. This approach recognizes implicit enumeration-evaluation as a basic solution paradigm to the problem of natural language queries. Based on this analysis, a reference dictionary is used that integrates enterprise metadata (information models and contextual knowledge) with case-based reasoning. The new design affects two vital functions: (1) the generation of all possible interpretations of a natural query suitable for evaluation, and (2) the reduction of the complexity of keywords and the growth of keywords. According to one aspect of the invention, a reference dictionary is used to search for an optimal solution and the dictionary "learns" from experience, achieving maximum naturalness with minimum enumeration. Compared to conventional approaches, this new approach promises realistic performance and completeness of a solution because the new reference dictionary and learning capability allows for it. In a broader sense, the new approach identifies that the NLI problem is primarily a search problem and relates it to the vast tradition of constrained optimization (e.g., scheduling and traveling salesman). Therefore, the NLI problem can be solved using bounded algorithms, and the use of exponential keywords permutations is avoided.

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