System and Methods for Knowledge-Guided Information Integration

Tech ID: 20044 / UC Case 2001-037-0

TECHNOLOGY DESCRIPTION

UC San Diego researchers have developed a novel technique to perform information mediation across heterogeneous sources, even when the sources are difficult to integrate. This is accomplished by a novel mediator architecture that allows information sources to be converted into "knowledge sources." Such a knowledge source not only exports its logical structure and query capabilities to the mediator, but exports its ontology, domain constraints, and any relationships not apparently obvious from the data.

The mediator also allows a domain expert to provide additional domain knowledge in a declarative manner—this domain knowledge serves as the "glue" that the mediator uses to logically compute how two seemingly unconnected information sources are related. The "glue knowledge" is represented as a graph called the domain map. When a mediator answers a query against an integrated view, it places the results in the context of the domain map—thus the partial results searched out from different data sources are all represented in the domain map and connected through a commonly accepted domain knowledge framework. This architecture has been successfully applied to different application areas, including neuroscience.

INTELLECTUAL PROPERTY INFO

See patent 7,533,107.

PATENT STATUS

Patent Pending

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.

OTHER INFORMATION

CATEGORIZED AS

- **Computer**
  - Other

RELATED CASES

2001-037-0