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March 27 – 30 , 2007, Dagstuhl Seminar 07132

Towards Interoperability of Biomedical Ontologies

Organizers

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For support, please contact

Dagstuhl Service Team

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Press Release

"Wissenschaftler ordnen biomedizinische Datenbanken"
13.03.07(German only)

Summary

The meeting focused on uses of ontologies, with a special focus on spatial ontologies, in addressing the ever increasing needs faced by biology and medicine to cope with ever expanding quantities of data. To provide effective solutions computers need to integrate data deriving from myriad heterogeneous sources by bringing the data together within a single framework. The meeting brought together leaders in the field of what are called 'top-level ontologies' to address this issue, and to establish strategies among leaders in the field of biomedical ontology for the creation of interoperable biomedical ontologies which will serve the goal of useful data integration.

One result of the meeting was to bring together representatives of different communities involved, especially the OWL/Semantic Web community, the qualitative spatial reasoning community, and the OBO Foundry and model organism database communities who have been associated with the Gene Ontology. The latter is, after 10 years, the most successful biomedical ontology when measured in terms of users, of associated tools, and of literature citations. Another result of the meeting was that, by contributing

Book exhibition

Books from the participants of the current Seminar

Book exhibition in the library, ground floor, during the seminar week.

Documentation

In the series Dagstuhl Reports each Dagstuhl Seminar and Dagstuhl Perspectives Workshop is documented. The seminar organizers, in cooperation with the collector, prepare a report that includes contributions from the participants' talks together with a summary of the seminar.

Download overview leaflet (PDF).

Publications

Furthermore, a comprehensive peer-reviewed collection of research papers can be published in the series Dagstuhl Follow-Ups.

Dagstuhl's Impact

Please inform us when a publication was published as a result from your seminar. These publications are listed in the category Dagstuhl's Impact and are presented on a special shelf on the ground floor of the library.

NSF young researcher support

More details about the NSF young researcher support.

to the breaking down of barriers between these various communities, it gave significant impetus to the development and acceptance of new software tools which allow conversion of the OBO and OWL ontology formats. All OBO ontology content, including several hundreds of thousands of Gene Ontology Annotations, are now, as a result of this work, available on the Semantic Web in OWL format. The resulting potential for new kinds of exploitation of this data was outlined at the meeting by Alan Ruttenberg on behalf of the Semantic Web Health Care and Life Sciences Interest Group, who described new ways of integrating bio-ontology data, spatial data (for example pertaining to brain regions) with clinical data in neurology. Abstracts of talks presented at the meeting are appended below. They give some idea of the scope of the work presented.

Classification

- Semantics / Formal Methods
- Interdisciplinary: Bioinformatics
- Medical Informatics

Keywords

- Formal ontology
- Biomedical ontology
- Standardization
- Data integration
- Information retrieval
- Reasoning with information at different levels of granularity