



Semantics

Client Overview

The client is a renowned company at the forefront of semantic technology wave providing software for data integration and knowledge applications for scientists in pharmaceutical and biotechnology research, besides offering business solutions, such as data mining and integration, business analysis, and general business solutions.

Challenge

The client had developed a software application for knowledge management and representation. But the output was complex and overlapping. The data generated during the use of the application by researchers was difficult to manage and was not very user friendly. So there was a need to develop a solution that would provide neat and user friendly representation of a complex data. There was also a problem with exporting of data in other applications developed by client and configuration settings of exported data.

Solution

Optra Systems provided the client with a solution that made viewing of knowledge representation neat, easy to read and understand.

- Application allows user to search, integrate and browse formal pathway networks from trusted third parties (IntAct, BioGrid, GO, KEGG, Reactome, etc).
- It also brings diverse data into a semantically-structured environment to explore and integrate it, constructing a powerful knowledge base. All of these functions come with sharing capabilities as well as the ability to apply them to future data streams.

- Application includes query tools which can be integrated. It supports semantic web ontologies and allows users to both fit their data into existing ontologies as well as extend them to fit their own needs.
- This provides a semantic data framework that supports modeling and analysis of properties and relationships across previously incompatible data from multiple data sources.
- To present the complex data effectively different layouts for the application were suggested to the client. The new radial layout that was incorporated made the application more user friendly.
- A new wizard was developed to track the configuration settings of exported data. Third party component (Nevron chart) was used for the graphs.
- The other wizard was also developed to export the data in format of rdfXML , N3, Nt file or triple stores.

Benefits

- The application provides a user-friendly solution that simplifies the creation of models that display and connect elements relevant to a knowledgebase.
- It presents goal-driven visualization and filtering of complex data and relationships, improving data driven decision-making. The result is more efficient and well-informed research.
- Application can be used to browse the information integrated from public knowledge sources, including functional information such as pathways or other interactions.
- The developed wizards allow customizing the queries to fit each user's individual needs and then saving them for later viewing.
- Queries can be exported in a variety of data formats. Queries can also be exported for use in other applications.

Technologies

- Semantics
- C# and .Net.

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About Optra Systems

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Contact Optra Systems Today

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