Towards a Semantic Web for Bioinformatics

Patrick Lambrix
Linköpings universitet, SE-581 83 Linköping, Sweden
patla@ida.liu.se

Nowadays, biologists use biological data sources and tools to find relevant information for their research. However, with the explosion of the amount of online accessible data and tools, finding the relevant information is not an easy task and systems integration has become important for further progress.

The vision of a Semantic Web facilitates the integration of data sources and tools. It is an extension of the current Web in which information is given a well-defined meaning by annotating web content, by standardizing terminology and by providing adequate reasoning languages. It enables computers and people to work better in cooperation and supports discovery, automation, integration and reuse across applications.

In this talk we discuss the Semantic Web vision (as proposed in the EU Network of Excellence REWERSE - work group on bioinformatics) and focus on two important and related technologies - ontologies and knowledge representation languages, that are needed to make this vision happen.

Further reading

P. Lambrix. Ontologies in Bioinformatics and Systems Biology. Chapter 8 in W. Dubitzky and F. Azuaje (eds) *Artificial Intelligence Methods and Tools for Systems Biology*, pp 129-146, Springer, 2004. ISBN: 1-4020-2859-8.

The home page of the EU Network of Excellence REWERSE. http://www.rewerse.net