About the L3S Web Observatory

Observing, Understanding and Shaping the Web

Web science encompasses the study of the Web as a network comprising practically limitless quantities of information and nearly unlimited numbers of users, based on a highly decentralized, multifaceted and flexible communication and information infrastructure. Human communication and cooperation are reflected in the Web, alongside many aspects of production, business and economics, and leisure time in our society. Within the scope of the L3S Grand Challenge “Observing, understanding and Shaping the Web”, we examine the questions that help advance all aspects of the study of data, people, and interactions on the Web.

Within the Web Observatory we emphasize, first, as subject of inquiry, the living Web, in which people play a central role as actors, along with their interactions with each other and with the data available on the Web. Analyzing these aspects must take account of various factors, including the diversity of data over time, with regard to content, and cultural diversity, as well as the users and their interactions, for work, for research, for leisure, which are connected through a multitude of devices to the Web. The goal is to achieve a deeper understanding, from the standpoints of computer science and IT, social science, law, and business, of the content and structures of the living Web and how these change over time, along with how they affect social and economic processes.

Second, the Web Observatory also is a living observatory, with intelligent analytical tools and algorithms that go far beyond simply observing the Web. These require constant development, evolution and expansion due to the dynamic evolution of the Web and how it is used. Continuous updates are required with respect to both capturing and preparing the data needed for the analysis and the actual analysis and interpretation of the data, always considering security and privacy concerns for both data and human actors. These aspects highlight the Web's importance as a platform for experimental research in the field of Web science.

Shaping the Web requires the active development and improvement of the Web as well as the underlying infrastructure, the Internet. Supporting future work and research environments as well as enabling completely new applications relies on efficient and scalable access to data sources and networks, on the intelligent connection and aggregation of a multitude of distributed contributions by humans and intelligent algorithms, and on new interfaces and services for all kinds of stationary and mobile devices.

Finally, an important aspect of the L3S Web Observatory is the ability to explore not only the present, but also the past of the Web, as significant parts of our cultural heritage are produced and consumed online. In this context, traditional institutions keeping our cultural heritage need to be complemented with facilities for preservation and public access of online cultural assets, so that we can retrieve, explore and analyze all relevant content available through the Web now, in the past and in the future.