

Press Presse Press Presse

Passau, April 2011

EU Framework Program “WebSand” launched to secure the Web

In cooperation with partners from research and industry, the Institute of IT-Security and Security Law of Passau University has launched the “WebSand” project, which is funded by the European Commission’s 7th Framework Program for Research and Technological Development. The joint project, which will run for three years, is aimed at facilitating the creation of secure Web applications and will thus protect both browsers and users from misuse. The University of Passau (Germany), the Katholieke Universiteit Leuven (Belgium) and the Chalmers University of Technology (Sweden) are partnered on the industrial side by Siemens and SAP. Initial project results are expected this year.

The World Wide Web has become a fundamental part of our everyday lives. It has evolved from a simple information-delivery mechanism, without particular security needs, to a software platform that influences most aspects of modern life in the private and public domain, as well as in the business world. Its applications range from entertainment, communication, e-commerce, and social networks, to the *Internet of Things* – the networked interconnection of everyday devices – and the *Internet of Services*.

Security becomes increasingly important in this context, but it is often only an afterthought in the process of developing applications. Besides SSL/TLS, which secures the communication between browsers and applications, one further major building block has been established to secure the interplay between them: the *same origin policy*, which intends to strictly separate the contents and methods of unrelated sites. This last security mechanism is insufficient and unreliable, as a large number of security breaches and incidents clearly demonstrate. With modern and future dynamic technologies and applications, the situation will become worse unless new security mechanisms are designed.

The participants in the WebSand project aim to implement an "outward sandbox" – a server-driven, client-side new security barrier. With this new technology, the research project will break with the

common practice of bolting security onto inherently insecure concepts and systems. The goal is to create the essential building blocks for future Web applications that enable developers to build applications that are secure from the very beginning. A special focus of the project is the security of modern multi-party Web applications, in particular so-called *mash-ups*, which combine data and software from different providers. Such systems require new ways to strictly control how information flows between the layers and components of different sites.

Dr. Angelika Niebler (Member of the European Parliament) explains why the WebSand project is important for Europe: “Last year, approximately 50 percent of all EU-citizens used the Internet every day. Almost 40 percent shopped online - at an increasing tendency. This numerical development and the growing scope of Internet service features demand new and better requirements concerning Internet security. This is where the research programme for the WebSand project takes its start. Those involved in the project are developing a new security prototype that will offer comprehensive protections, for the user as well as for the provider.”

The WebSand project is a joint effort of research and industry. The two industrial partners, Siemens AG and SAP AG (coordinator), are responsible for the requirements, use cases, integration and evaluation. The three European partners from academia, the University of Passau (Germany), the Katholieke Universiteit Leuven (Belgium), and Chalmers University of Technology (Sweden), will provide the basic technology required. The program for the WebSand project will run for three years, and the first project results are scheduled to be delivered within the next year.

Rankings regularly prove that Passau University with its Faculty of Informatics and Mathematics has been developing to one of the best academic addresses in Germany. The Faculties of Economics, Law and Informatics are amongst the top universities. Passau's outstanding characteristic is the interdisciplinary networking of research and studies .

The Institute of IT-Security and Security Law of Passau University is supported by the Law Faculty and the Faculty of Informatics and Mathematics and works in the context of Law and Technique interaction. The Chair of IT Security and the Chair of Public Law, Security Law and Internet Law participate in the WebSand project. During the past few year, numerous international and national third funded projects have been executed. For more information please see www.isl.uni-passau.de.