



webinos

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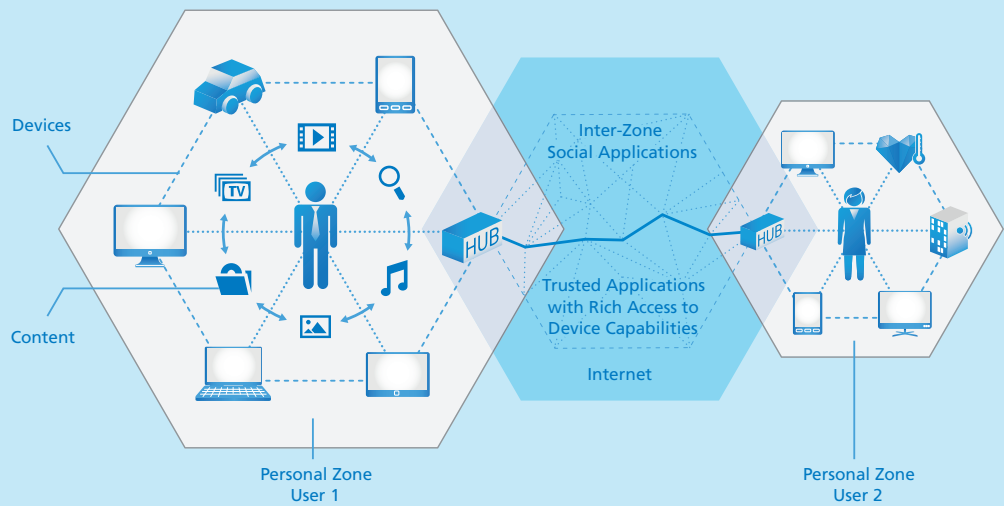
About webinos

webinos is an EU funded research project with 30 key players from the academic and business community led by Fraunhofer FOKUS. webinos is an open source application platform that allows different devices to work together. These devices range from TV sets, phones, tablets, in-vehicle entertainment systems, desktops and network attached storage units to home automation systems and more. Any network-connected device can be integrated through an abstraction model and become part of the webinos platform.

As a key feature, webinos provides: the simple discovery and secure usage of services on remote devices. A device that does not host services on its own can leverage remote services. Moreover, the communication channels between devices and personal zones are secure from end to end at all times. Utilizing a policy system, users retain full control at all times and may revoke any permission given.

Cross-platform web runtime

Porting software is costly and porting multiple application parts even more so. Adding the coverage of multiple domains with different usage patterns, interfaces and APIs makes cost-effectiveness even more difficult. The webinos platform provides a web-based environment that uses web standards and covers APIs from multiple domains (PC, home media, mobile and automotive), allowing the development of all parts of a multiscreen application with a single system, making the developer's life easier and simplifying code-re-use.



Solutions across domains

Device discovery

For maintaining stable communication between a smartphone and a TV set, users usually have to follow a couple of steps: first, they have to register their TV sets at the manufacturer's portal site. Afterwards, they log in on the manufacturer's site with their smartphones, so their devices are able to find the TVs. This might work well for applications which are provided by a single TV manufacturer. But once users decide on different TV and phone manufacturers, it becomes difficult to handle the different applications. The webinos platform provides a personal zone to help with this. Devices in the personal zone publish their services to the personal zone and other devices can discover these services. This makes it possible for smartphone applications to discover the TVs in the living room or the bedroom and communicate with them.

Synchronization

Users expect the different elements of an application to work together seamlessly. Input on a smartphone should have an immediate effect on the TV screen and supplementary information on the tablet should run in sync with what is shown on the television. Users also expect the status of the application to be synchronized over application instances - the audio book a user is currently listening to should continue playing in the car at the position it was stopped at on the smartphone. The webinos platform provides multiple synchronization mechanisms to keep applications synchronized. These include cross-device event management, application data synchronization, application state store and restore, preference exchange and merging, media synchronization and signaling. This synchronization support simplifies the provision of multiscreen applications and allows implementers to focus on the aims of the application instead of the underlying mechanisms.

Availability

The webinos project is an open source project with open governance. The webinos platform is freely available via the project partners and easy to port onto different platforms. As the coordinator of the project, Fraunhofer FOKUS provides expertise, support and tutorials, and can implement and realize multiscreen applications.

At a glance

Applications that provide functionality across multiple screens face challenges that go beyond traditional applications. These challenges are in synchronization, security and alignment of user preferences – all across different operating systems. The webinos project addresses these challenges and provides support to simplify the provision of multiscreen applications.