

# CAMELEON - Context Aware Modelling for Enabling and Leveraging Effective interaction

<http://giove.cnuce.cnr.it/cameleon.html>

Recent years have seen the introduction of many types of computers and devices. In order to perform their tasks, people now have available a wide variety of computational devices ranging from cellular telephones, personal digital assistants, multimedia tablets, to Internet enabled televisions and electronic whiteboards powered by high end desktop machines. Users wish to

be able to seamlessly access information and services regardless of the device

they are using, even when the system or the environment changes dynamically. To this end, computer-based applications need to run on a wide spectrum of devices, and should adapt like a chameleon to the changing context of use. For software developers, this introduces the difficult problems of constructing multiple versions of single applications and endowing these versions with the ability to dynamically respond to changes in context. In the first year of this project, we have focused on how to provide software engineering support for the development of applications accessible through multiple heterogeneous platforms.

Currently, developers often create different versions of applications for

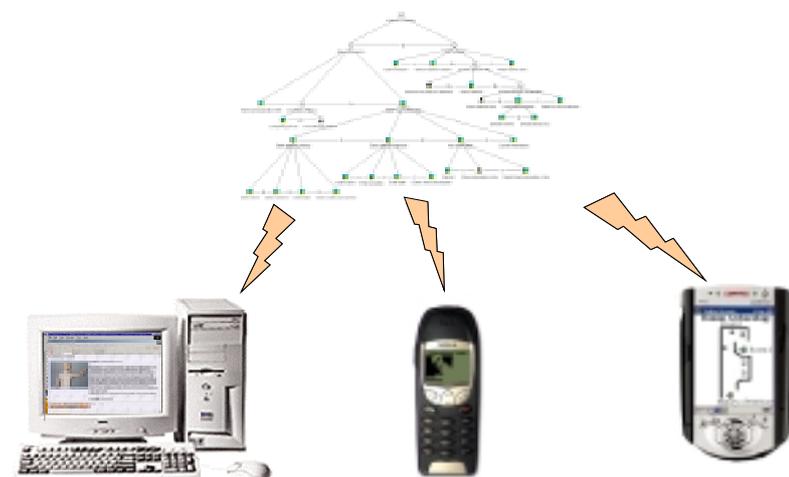
different devices. This requires extra development, and maintenance costs and complicates the problems of configuration management. A proliferation of versions dilutes the resources available for usability engineering, and requires expensive maintenance of cross-platform consistency of the user interface.

CAMELEON is a Shared-Costs RTD three-year IST Project (started in October, 1st 2001). The project's domain is located at the intersection between software engineering and human-computer interaction. This implies attention to systematic methods to support the design of usable systems, tools supporting such methods, representations able to formalise the information that the methods require and runtime support.

The goal of this project is to build methods and environments supporting design and development of highly usable context-sensitive interactive software systems by:

- Providing the means to express context-dependent information in a set of models usable at design-time by developers and at run-time by dynamically reconfigurable systems,
- Developing tools that support the use of information contained in abstract representations to drive the design and development of concrete interfaces for multi-context applications while preserving usability,
- Developing techniques and components that facilitate the development of adaptive, context-dependent applications,
- Providing prototypes for validating the methods, techniques and tools developed.

In particular, during the first year, the consortium has focused on conceptual models, methods and tools for addressing the issue related to the design of usable applications accessible through heterogeneous interaction platforms.



**Consortium:** ISTI-C.N.R. (coordinator) (Italy), University of Grenoble (France), University of Louvain (Belgium), IS3 (France), Motorola Italy (Italy)

## Recent Publications

Bouillon, L., Vanderdonckt, J., and Souchon, N., *Recovering Alternative Presentation Models of a Web Page with VAQUITA*, Proceedings of CADUI'02, Valenciennes, France, May 15-17, 2002

Calvary, G., Coutaz, J., and Thevenin, D., *Supporting Context Changes for Plastic User Interfaces: a Process and a Mechanism*, Proceedings of IHM-HCI 2001, Lille, France, September 10-14, 2001.

F.Paternò, C.Santoro, *One Model, Many Interfaces*, Proceedings Fourth International Conference on Computer-Aided Design of User Interfaces, pp. 143-154, Kluwer Academic Publishers, Valenciennes, May 2002.