



Challenges and solutions for user interface design on mobile devices

The main goal of the FLAMICO (FLEXible Applications exploiting Multi modal INTERaction and Context) BIP project is to facilitate Norwegian service and application developers as well as tool vendors in meeting the challenges they face in the next years to come when developing user interfaces on mobile devices. This shall be achieved through finding solutions to some of the major problems facing developers of future mobile solutions. In FLAMINCO, these problem areas are addressed:

- 1) Handling layout in varying conditions
- 2) Multi modal user interfaces
- 3) Adaptive and context sensitive user interfaces
- 4) Forms based user interfaces (including automatically generated ones)

Issues regarding both user interface design and evaluation methods are addressed in FLAMINCO, but the presentation will focus on the activities in the project addressing user interface design.

In the presentation, the four problem areas addressed in the project will be described in more detail, including which challenges that are addressed in each problem area, and how these are founded in the pilot activities conducted by the participating industry partners (Captura, IT liberator, Locus and Teleplan). We will also present preliminary solutions to and promising directions for some of these challenges.

The design challenges and their solutions are documented as design guidelines using a standard user interface design patterns format. The design guidelines being developed in FLAMINCO complement, enhance and extend the design guidelines developed in the BIP project UMBRA (2004-2005). The design guidelines from the UMBRA project was recently presented as a tutorial at an international user interface conference. During the tutorial, information about relevance of the different parts of these design guidelines – as well as relevance and usefulness of selected design patterns – was collected from approximately 40 participants through a questionnaire. The participants have a number of different nationalities, have varying educational and technical background, and work on different platforms. In the presentation, preliminary results from this survey will be presented.