A Personal Life Assistant for "natural" social interaction: the PaeLife project

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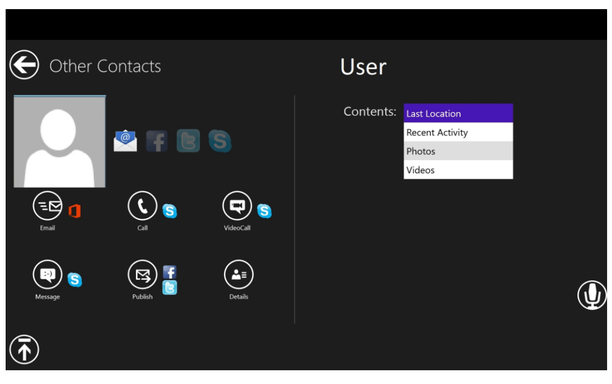
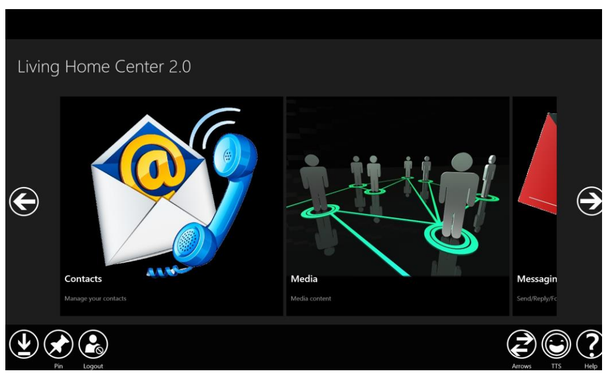
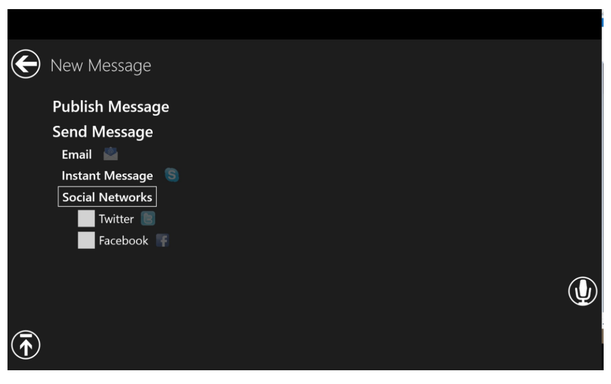
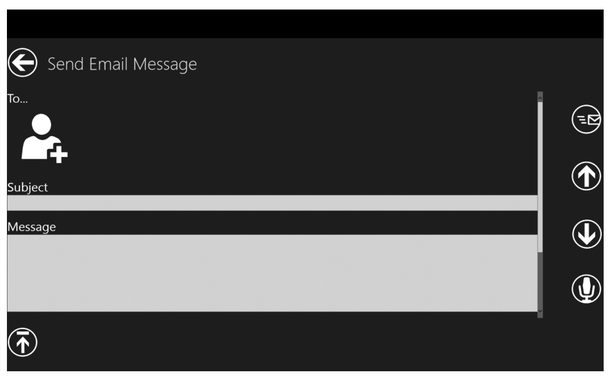
Introduction

- The main goal of the PaeLife project is to keep European older adults active and socially integrated, by empowering them with a multimodal Personal Life Assistant (PLA).
- The PLA is a platform which supports social communication, access to web information and services from home, in an integrated and easy-to-use way.
- Following user-centered techniques, PaeLife considers from the first moment of its development the biological and social aspects of aging, with two goals in mind: to provide useful services and to design a usable interface and natural interaction modalities.









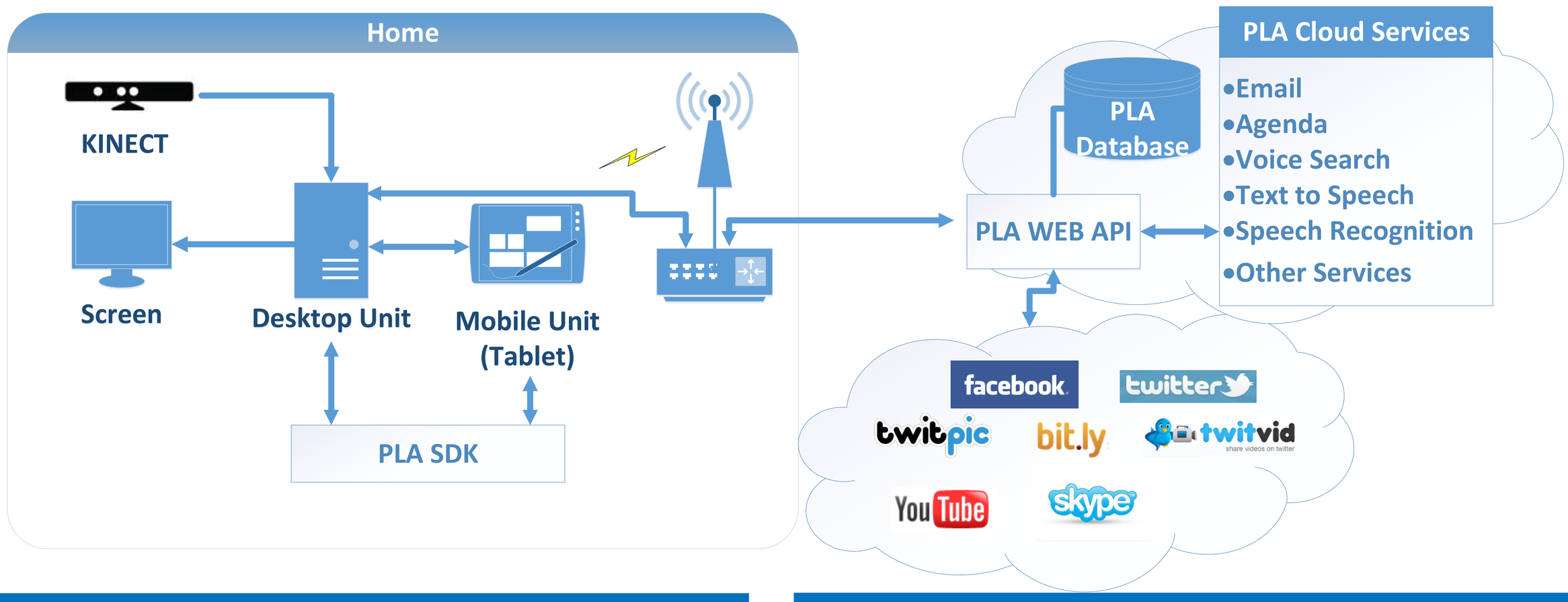
User Services

- The services identified collectively are based on insights from user requirements and workshop analysis held in Poland, France, Hungary and Portugal.
- Therefore, the PLA provides:
  - Unified messaging (Email, Twitter, Facebook);
  - Audio and video calls integrated with Skype;
  - Unified contact management;
  - Calendar and Agenda;
  - Secure media content sharing and management;
  - Social activity status;
  - Accessible and simple access to various sources of information, such as latest news for the elderly and weather information.

Interaction Modalities

- PLA provides "natural" social user interfaces with the following modalities:
  - Mouse and keyboard;
  - Speech;
  - Touch;
  - Gesture.
- Speech engines especially developed to recognize the voice of elderly citizens.
- Creation of several synthetized personalized voices, preferred by seniors.
- UI is kept very simple, with large icons and big fonts to make it easier for the elderly to use the system.

System Architecture



Usability Studies

- The Living Lab approach permits to understand user's context of use and to put user's perspective at forefront of design decisions.
  - Insights to iteratively improve usability, usefulness and acceptability:
    - Improvement of users' satisfaction;
    - Enhancement of market acceptance.
- Adapted techniques to follow the development phases:
  - Prototyping: user tests, interviews, focus groups;
  - Final product development: field trials – ethnography, log analysis.

Conclusions

- Services available in all Project languages: English, French, Hungarian, Polish and Portuguese.
- Improved accessibility on tablet touch devices.
- Easy, intuitive and simple access to services useful to the elderly.
- Ambient sensing to make the system simple to use and ensure that the interaction is as seamless as possible.
- Interaction modalities especially developed and adapted to the elderly users.
- User satisfaction, which will guarantee a long-term use and thus, a better well-being and quality of life.

Acknowledgements

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Link to the PaeLife website →