# Project GEMINI - Summary

The GEMINI project has two main objectives: a) The development of a flexible platform able to produce user-friendly interactive multilingual and multimodal dialogue interfaces to databases used in information services with the minimum of human effort, and b) The demonstration of the platform's efficiency through the development of two different applications based on this platform: EG-Banking, a Voice-Portal for high-quality interactions for bank customers, and CitizenCare an eGovernment platform framework for citizen-to-administration interaction, filled with content for an exemplary community, which will be enhanced with a multimodal interface. The interfaces will be user-friendly, enabling mixed-initiative dialogues with combined multimodal interaction. The platform will be able to produce applications for both Windows and Unix-based systems.

The platform will exploit the structured information contained in databases of information services and sets of sample dialogues, to create customized dialogue models (i.e. dialogue scripts, grammars & lexicons) for specific information services with the minimum of human effort. Several components that have already been developed by the partners will be integrated in the platform (e.g. a speech recognizer, a dialogue script manager, etc.), while others will be further extended to serve this purpose. Research results on automatically generated language models from sample sentences are also available from previous R&TD projects. These will be completed for the needs of the present project from further work in the area of transition from the sentence-level to the dialogue level, as well as on the portability of an existing model to other languages. The adaptability to new applications will be achieved by a test-and-refinement procedure on the initial dialogue model, where every model instance is tested on the actual environment and re-adjustments are proposed that could increase the performance. In a similar way the platform will be adapted to new languages. The dialogue model will utilize efficiently a personalization engine able to track the language of the user and even change the course of the dialogue according to the user model. Similar models for other modalities (e.g. text input) will be derived and incorporated in the platform. Two different applications, interfaces to existing services, will be developed in four languages total.

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