Projects

Overview


- RFID Netzwerk (2015-2016) (Austrian Research Promotion Agency)


- ICONE (2010-2013) Intelligent Assistance for Configuration Knowledge Base Development and Maintenance (Austrian Research Promotion Agency - Bridge)


- XPLAIN-IT (2009-2011) Intelligent Explanations in Financial Service Decision Making (funded by the Privatstiftung Sparkassenverband)


- PerSoDe (2009-2011) Persuasive Software Development Environments (Industry Project, Flextronics Austria)


- WSDiamond (2005-2007) (Web Services - DIAgnosability, Monitoring and Diagnosis ) (EU funded IST-6 Project).


- LearnIt@UniKlu (2006): Recommendation technologies in E-Learning (funded by Klagenfurt University).


- Further recommender applications have been developed in the areas of e-Government, e-Tourism, and electronic services.

IntelliReq: Intelligent Recommendation Technologies for Software Requirements Engineering

The major goal of IntelliReq is to develop intelligent recommendation technologies that proactively support software engineers in their daily requirements engineering activities.
ICONE: Intelligent Assistance for Configuration Knowledge Base Development and Maintenance

The major goal of ICONE is the development of intelligent techniques that will help to improve the accessibility and understandability of knowledge bases (the focus is "configuration knowledge bases").

WECARE: Community-based Configuration of Complex Products and Services

The goal of WECARE is to develop new interfaces for intelligent financial service decision making. These interfaces will support community-based recommendations and reconfigurations of financial service solutions (on the basis of case knowledge stemming from already completed sales dialogs).
Casa Vecchia: Recommendation Technologies for Ambient Assisted Living

The goal of Casa Vecchia is the development of intelligent assistance technologies supporting elderly people in their daily living (for details see here).

XPLAIN-IT: Intelligent Explanations in Financial Service Decision Making

The goal of XPLAIN-IT is the analysis of the impact of decision phenomena (such as decoy effects, serial position effects, priming, and framing) on the decision behavior of consumers in online financial service recommendation scenarios.

SOLID Configurator: Configuration and Visualization Techniques for Solar-based Cooling and Heating Equipment
The goal of the project is to develop innovative user interfaces and knowledge bases for the configuration and visualization of solar-driven cooling and heating equipment.

PerSoDe: Persuasive Software Development Environments

The goal of PerSoDe is the integration of persuasive concepts into state-of-the-art software development environments - on the basis of these concepts, programmers should further improve their productivity (e.g., higher quality of software artefacts, less errors, etc.).

COSMOS: Customer-oriented systematically managed Service Offerings

The goal of COSMOS is to develop methods, tools and theory that facilitate companies profitable business that is based on systematically managed configurable services. Such business can be achieved by developing and offering mass customized, configurable services with clearly defined modular structures and systemized sales, delivery, and information processes. COSMOS supports definition, development and documentation of services by developing a modeling methodology especially suited for configurable services. Methods and theory are created that help companies to manage the impact of configurability in practice.

V-KNOW: Collaborative Knowledge Base Debugging & Refinement (funded by FWF)
In V-KNOW different concepts for the collaborative development and maintenance of knowledge bases have been developed, for example, methods and techniques for the intelligent discrimination of diagnosis candidates and for the personalized repair of inconsistent constraint sets.

Knowledge-based recommender applications provide valuable support for online customers in the identification products and services on e-Commerce platforms. State-of-the-art recommender technologies provide a couple of mechanisms for improving the accessibility of product assortments for customers, e.g. in situations where no solution can be found for a given set of customer requirements, the recommender application calculates a set of repair actions (minimal changes to the given customer requirements) which can guarantee the identification of solutions. Further examples for such mechanisms are explanations (why does a certain recommendation fit to the wishes and needs of a customer) or product comparisons (what are the major advantages of a certain product compared to other products in the result set), etc.

However, none of the existing recommender approaches exploit an underlying holistic view on the recommender process, i.e. take into account properties of the online customer such as domain knowledge, trust, available time, receptivity, etc. These and other aspects of an online sales dialogs are investigated within COHAVE in order to derive an integrated view on recommender processes. In this context, we analyze existing theories about customer behavior in online sales situations - especially, we focus on the areas of social psychology and cognitive psychology.

The goals of COHAVE are the following:

- Development of a dialog component which accompanies the online user in a sales dialog by taking into account psychological theories of consumer buying behavior (e.g. minimize time efforts, increasing the interest related to the product domain, etc.).
Implementation of a knowledge acquisition component which allows the explicit definition of strategies how recommenders should behave in certain online buying contexts.

Evaluation of the implemented environment within the context of user studies.

WS-Diamond

Web Services -
DiAgnosability, Monitoring and Diagnosis is a project of IST/FP6. It's a Specific Targeted Research or Innovation Project. Specific Diagnosis functionalities related to workflow structures (represented as finite state automata) have been contributed in this project.

Koba4MS: Knowledge-based advisors for Marketing&Sales
The focus of Koba4MS is the improvement of state-of-the-art advisor/recommender systems focusing on the improvement of explanation- and knowledge-acquisition processes. The major goals of the project are the following:

- Advanced interaction technologies supporting intelligent diagnosis and repair mechanisms in user dialogs.
- Intelligent support of testing and debugging recommender knowledge bases.

Financial Services Sales Support Environments
Sales support environments have been implemented and deployed for the Wuestenrot and Fundamenta Building and Loan Associations in Austria and in Hungary and the Hypo-Alpe-Adria Bank in Austria.
The focus of ILearn is the effective support of online learning processes based on the usage of recommender technologies. The major goals of the project are the following:

- Personalizing the access to course materials for students.

- Alleviating the personalized provision of course materials for lecturers.

- Empirical evaluation.

CAWICOMS: Customer-Adaptive Web Interface for the Configuration of Products and Services with Multiple Suppliers

Focus of this project is to enable businesses to market complex customizable products and services by the new ways of electronic commerce. CAWICOMS will develop the technology for: a new generation of configurators that will be able to deal simultaneously with multiple suppliers over a network; to interact with other configurators as well as with component catalogues; and to deal with different interaction styles and levels, depending on the customer; web-based human computer interaction that will be able to identify the skill-level, preferences, and needs of the customer. This will lead to products that better match their buyers' needs, and reduce costs by a more efficient sales process. Acting on a European scale makes it possible to bring together key players of the European telecommunications market with key players in research and development regarding configuration and human computer interaction. (IST project).
Focus of this project is the implementation of a system supporting personalized and life-event oriented recommendation of services - knowledge-based advisor/recommender technology is used in order to provide customers (e.g. entrepreneurs, citizens) with a set of advisory services. One of the major goals was the identification of trends/problems, etc. by deriving major citizen requirements from the interaction with the portal.