Data analysis and rule definition: AIMedia tools for configuring the personalised agent behaviour

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Demonstration summary

The demonstration shows how to implement and configure a personalisation agent for e-commerce retail applications. The problem we address is how to turn customer data into added value personalised services on a web site. We demonstrate the process and set of tools that we have developed in the Esprit AIMedia project.

The key issue is to allow web sites to personalise their communication with their customers. The aim is to provide customers with a better service, to increase their loyalty by providing customised information, and their turn-over by proposing adverts for products that they are likely to buy.

We have developed an integrated personalisation framework composed of the following components:
- a Data Mining tool, that groups users into clusters,
- a Rule Editor, that relates the message/advert to the user cluster and implements the company’s marketing strategy,
- a Personalisation module that complements an e-commerce solution and delivers the personalised messages.

![Diagram of agent behaviour configuration process](image)

**Figure 1.** agent behaviour configuration process: marketers analyse data (1) and turn the new clusters into marketing rules (2). These rules specify how the on-line Shopping Assistant delivers personalised clusters to customers (3).
Using this framework, a marketer is able to configure a Personalised Advertising service, an electronic Shopping Assistant, which delivers personalised content (information, news, adverts, promotions), targeted to each customer. The agent remembers each customer’s personal history, and is thus able to deliver one-to-one personalisation. Moreover, the marketer is able to deliver efficient targeting based on data mining analysis results.

Demonstrating the process thus involves marketing tools and a Shopping Assistant enhanced web site application. The demonstrations are carried out on customer and web data provided by the retailers in the project (J. Sainsbury’s and Otto-Versand).

All data exchanged in the platform (profiles, rules, etc…) follow XML schemas. The Shopping Assistant is implemented in Java on an RMI distributed framework. Feedback on the platform development and scalability will be provided.

Storyboard

The demonstration follows the process step by step (see Figure 1 above):

- Customer data is analysed with the DM Tool (1): profiling and clustering is carried out, and customer clusters are generated.
- Targeting rules are then generated with the Rule Editor (2). The clusters are mapped to marketing actions. The content of the Shopping Assistant window is thus specified on a personalised basis.
- The Shopping Assistant window is thus demonstrated on the customer’s web browser (3).

Set-up

The demonstration will run on PC laptops.