

Introduction to Interface Agents

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Introduction

The social interaction between librarian and patron that occurs in the traditional library setting is a unique and important component of the services that libraries provide. With more services moving online, libraries face the challenge of providing a friendly, socially rich environment for their online users. Using interface agent technology could be one way to make online library services more socially engaging.

Session objective

To raise awareness about the current state of interface agent technology by:

- Introducing the concept of the interface agent
- Demonstrating a few examples of current implementations of interface agents
- Describing potential roles for interface agents within the context of library services
- Presenting some design principles relevant to the development of interface agents
- Introducing MS Agent SDK, a freely available tool that supports the development of animated interface agents

What is an interface agent?

For the purposes of this presentation, an interface agent is defined as a character enacted by a computer that interacts with a user in a socially engaging manner. Some interface agents also attempt to assist users in accomplishing computer-based tasks. The essential characteristics of an interface agent include responsiveness, competence, and accessibility. Interface agents are often capable of using multiple cues to communicate, including written text, speech, facial expressions, and/or body language. As agents, they can act autonomously to perform operations without explicit directions from the user, and, potentially, they can collaborate with other types of software agents. Interface agents are generally rules-based applications that are often supported by knowledge bases. More sophisticated applications may employ artificial intelligence, machine learning, and/or natural language processing technologies.

Library applications

The most obvious application for interface agents in the context of library services is in providing services to patrons who access services online. Interface agents could be deployed as:

- Greeters or hosts, welcoming users to the library website and making announcements
- Tour guides, providing an introduction to the services available on the library's website, offering explanations of the various services offered and responding to users' questions.
- Tutors, instructing users in routine tasks such as searching for materials in the online catalog or submitting an interlibrary loan request.
- Personal assistants, monitoring the user's session and proactively offering context sensitive help and/or support in completing tasks.

One of the biggest challenges in providing online library services is providing a consistent user interface. Library web sites typically tie together web-based resources from many disparate sources, such as competing database vendors. End users are confronted with many distinctly different interfaces as they search for information. A robust interface agent application could provide a familiar, socially engaging presence that users can turn to for guidance and support throughout their visit to the library's web site.

Design principles

Research indicates that with even the slightest of cues, people respond to computers in a social manner. People seem to instinctively apply social rules in making judgments when interacting with computers. Well-designed interface agents take advantage this inclination by displaying behaviors that engender positive emotional responses in users. It's important to remember, however, that if an interface agent seems rude or unresponsive, this can just as easily trigger negative feelings. It is, therefore, very important to use great care in designing interface agents. Some basic design principles include:

- Interface agents should observe and obey basic social rules
- The character used should express the capabilities of the agent
- The character should express a clear and consistent personality
- The user should remain in control of the interaction
- Interface agents should not distract users from their primary task

Microsoft Agent SDK

<http://agent.microsoft.com/msagent/>

- Freely available, a set of software services that enables developers to incorporate interactive animated characters into their applications and web pages.
- Provides four default characters, each with a nice set of pre-defined animations
- Agents can be programmed using any ActiveX or COM-compliant language

Examples

Conversive	http://www.conversive.com/
Kiwilogic	http://www.kiwilogic.de/kiwilogic/_xml/fs_index.php?sprache=us
Microsoft	Starting with MS Office 97, select Show the Office Assistant under the Help menu in any MS Office application.
Native Minds	http://an1-sj.nativeminds.com/AboutUs_Conv.html
Pulse	http://www.pulse3d.com/
Talkie	http://www.talkie.com/

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