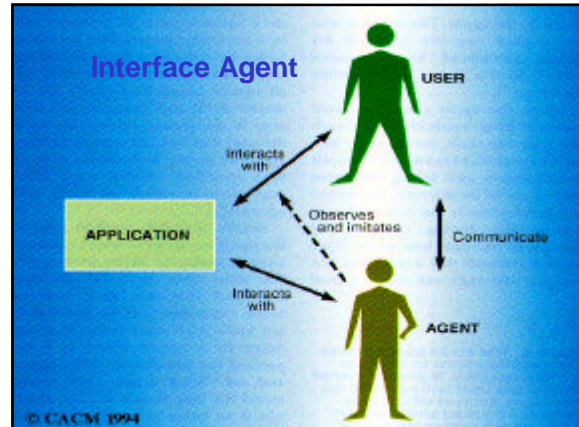


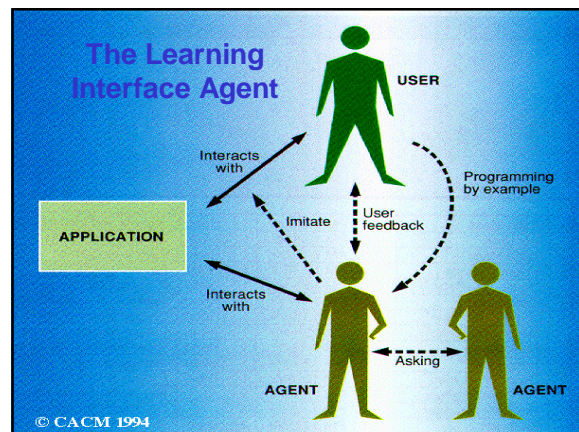
Agents that Reduce Work and Information Overload

Pattie Maes
 Communications of the ACM
 July 1987, Vol.37, No. 7, pp.30-40



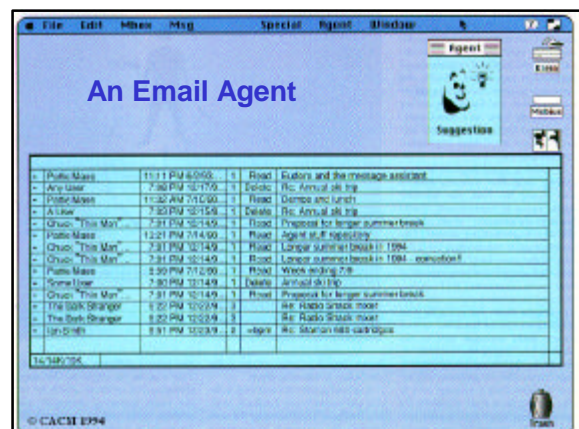
Interface Agent

- i The agent is not necessarily an interface between the computer and the user.
- i The most successful interface agents are those that do not prohibit the user from taking actions and fulfilling tasks personally.
- i The user is engaged in a cooperative process in which human and computer agents both
 - i initiate communication,
 - i monitor events, and
 - i perform tasks



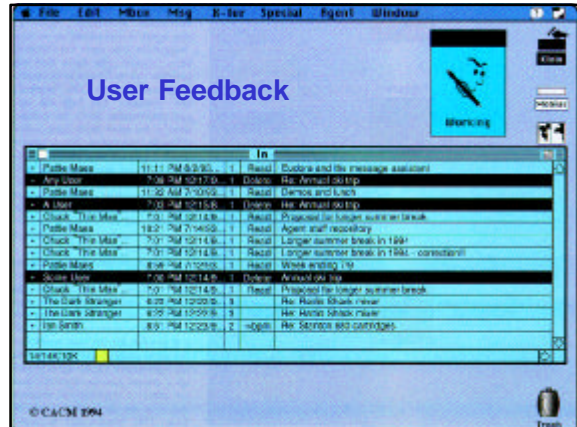
Sources of Learning

- i The agent observes and imitates the user's behavior
- i The agent adapts based on user feedback
- i The agent can be trained/programmed by the user on the basis of examples
- i The agent can ask for advice from other more experienced agents assisting other users.

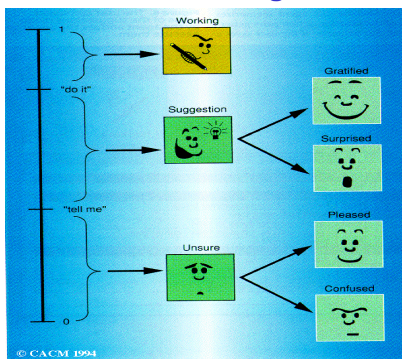


Maxims [Maes et al, 1994]

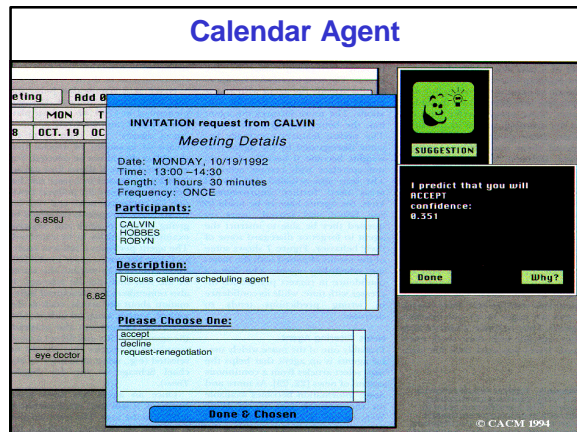
- Maxims learns to prioritize, delete, sort, and archive mail messages on behalf of the user.
- The agent continuously looks over the shoulder of the user as the user deals with his/her emails.
- Maxims learns by memory-based reasoning
 - memorizes situation-action pairs
 - keeps track of sender, receiver, cc, keywords in the subject line etc.



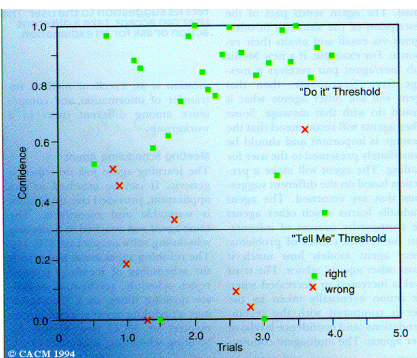
State of the Agent



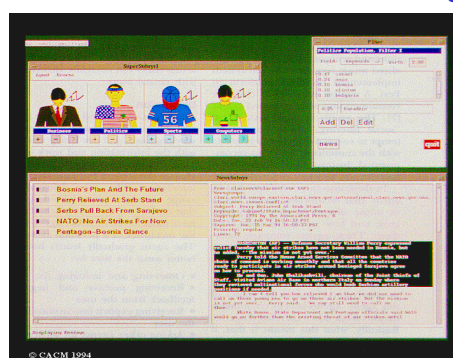
Calendar Agent



Confidence in Predictions



NewT Personalized News Filtering



Software Agents [Maes, MIT]

- i Human-Computer Interaction
- i Bottom-Up Approach to AI
- i The Network as An Intelligent Machine
 - i Completely distributed
 - i Mix of humans and machines
 - i Extremely robust and fault-tolerant
- i Firefly
 - i Collaborative filtering
 - i Personalized content and services

13

Entertainment Selection Agent

