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Architecture of Agent Platform (SPACE)

The SPACE Agent Platform is the architecture behind a virtual agent that carries out automated tasks for a user and is capable of socially and emotionally interacting with people or other agents in a virtual world. The SPACE agent can carry out the same data-finding and automated tasks as current agents and it is capable of bringing social interactions with users and automatic virtual agents to an entirely new level. These agents are designed to act within a common environment provided by an environment server; this provides the automatic agents a shared context with one another and with any human users in the virtual world. The agents create emotional responses that enhance interactions with both users and other agents. These capabilities can greatly improve automated customer service, educational programs, online and offline video gameplay, and many other situations involving agents and automated characters.

Applications

- **Automated customer service**
- Educational agents in various educational programs for kids through adults - agents that are more engaging, relatable and entertaining
- **Online video game environments**: creates characters that better interact with human characters or blend in with the human characters
- **Offline video games**: enhances characters, giving them emotional and social characteristics to provide depth and variability to their behavior
- Agents that **interact with human users** (including in areas where other people or even other agents, interact as well)
- AI characters in **artificially generated crowds** (say, in animation)
- **Simulation of crowd behavior**
- Robotics - allows toys and robots that assist humans to interact with more depth and sensitivity and in a more entertaining way

- **Online advertising**, such as agents in chat rooms, games, or other situations

Advantages

- Uses emotions to better interact with users in a virtual world
- Enhances the responses of characters in gaming environments
- Allows agents to carry out automatic tasks in a user-friendly manner
- Allows agents to carry out roles such as providing help, aide or information similarly to how humans would perform those roles
- Smoothes interactions with agents and significantly increases the quality of those interactions compared to the user experience found with simple, canned response automatic systems

Patents

- Published Application: 20060282493
- Issued: 7,944,448 (USA)

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