ADAPT

Of interest to:

Tech Companies, Intelligent Personal Assistants (IPA) Developers, CDO, CMO, Product Owners

ADELE Next-Generation Digital Companion

A personalised intelligent conversational agent

Background

The proliferation of IPAs, (e.g. Siri and Alexa) is rising dramatically, with 24% of US households using smart speakers, and 81% of US citizens owning smartphones. However, speaking to these assistants currently falls short of conversational dialogue, instead offering interactions that are constrained and task-oriented. Human-like conversational ability will be important in supporting long-term human-agent interaction, such as for Virtual Companions.

Challenge

Develop a dialogue agent that achieves personalised and prolonged conversations with the user in a natural way.

Solution

ADAPT developed ADELE, a personalised, intelligent companion designed to engage with users through spoken dialogue to help them explore topics of interest.
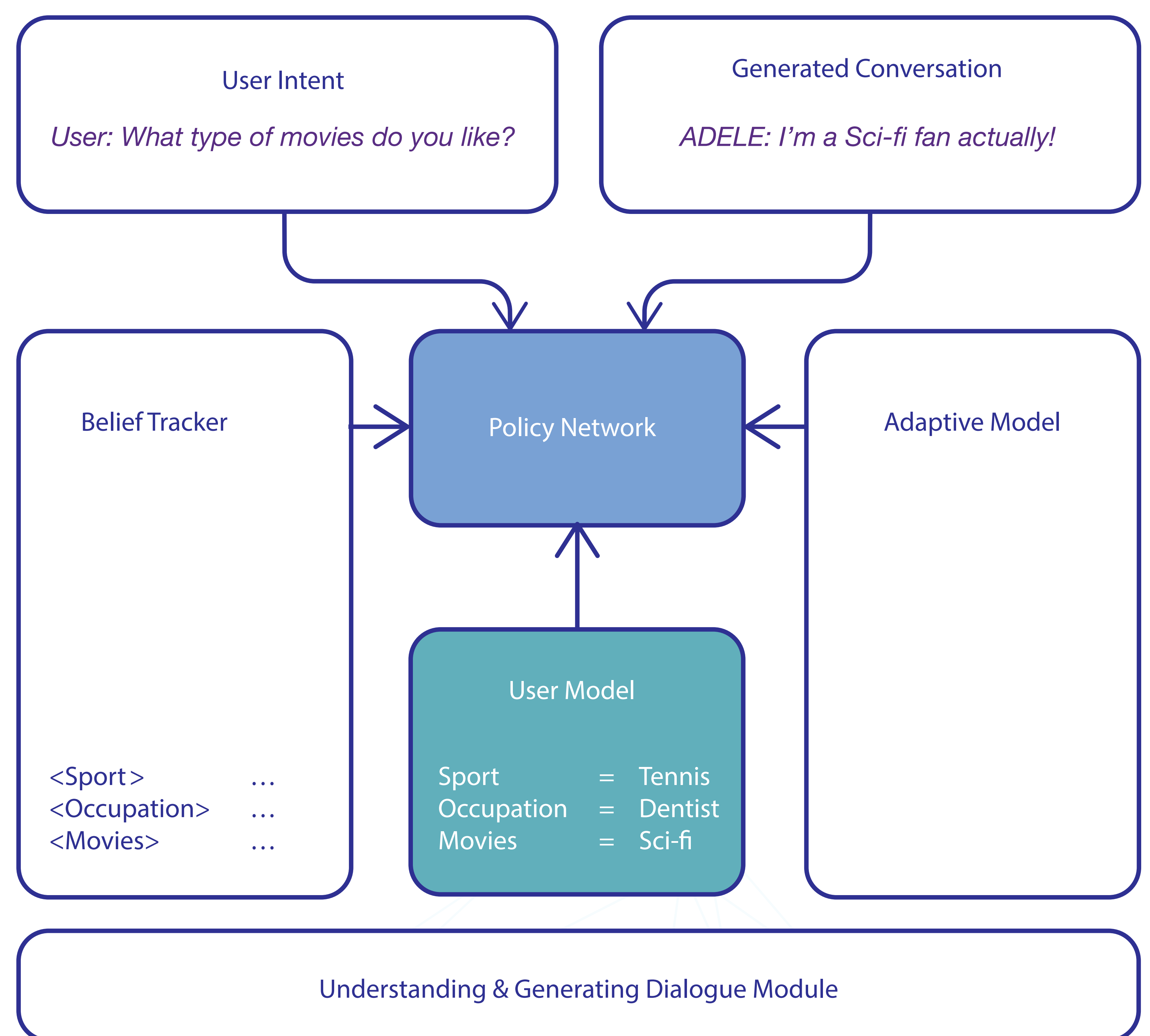
Input: Natural language user utterances and personalisation data.

ADAPT Technology: ADELE deep learning based dialog system technology leverages state-of-the-art neural networks to learn conversation from dialogue data and personalisation from profile and context embedding.

Outputs: Personalised natural language dialogue system utterances.

User Intent

User: What type of movies do you like?

Generated Conversation

ADELE: I'm a Sci-fi fan actually!

Policy Network

Belief Tracker

<Sport>   …
<Occupation> …
<Movies>   …

Adaptive Model

User Model

Sport   = Tennis
Occupation = Dentist
Movies   = Sci-fi

Understanding & Generating Dialogue Module

Results and Benefits

- Enables natural conversations tailored to your current interests
- Enhances conversation based on prior interactions
- Facilitates the exploration of your personal information hub
- Maximises user engagement based on preferences and mood

Use Cases

- Finance
- Client services
- Health care interaction
- Social connectivity for older adults
- Personalised learning
- Mediation with digital services

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To learn more about innovative ADAPT technologies, contact: collaboration@adaptcentre.ie