

The personal assistant model: The new standard in user interfaces?

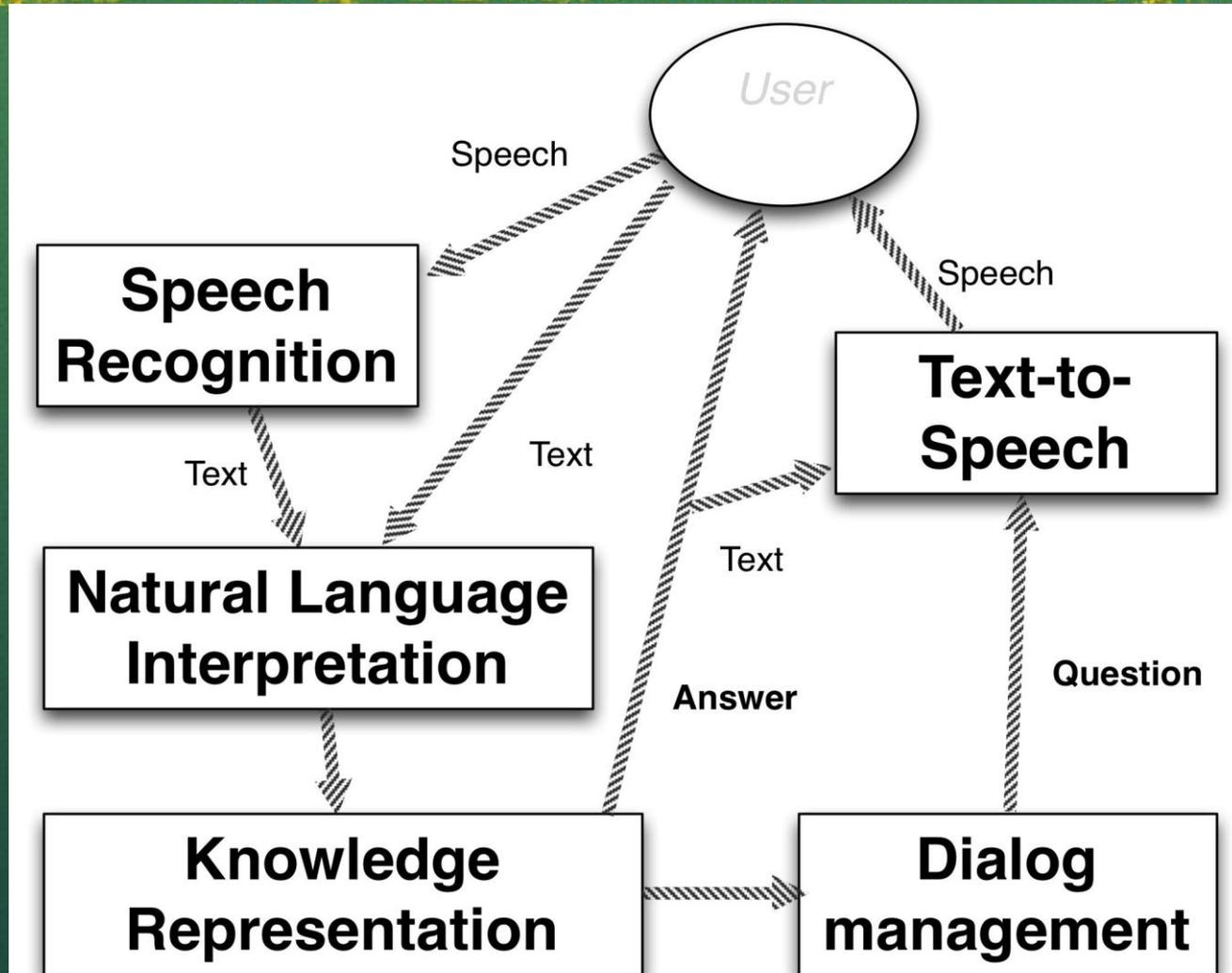
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Personal Assistant

It provides answers and/or does things for you given a “natural language” request

- User manual: *Just say or type what you want*
 - But remember you’re conversing with a computer
 - And the particular assistant you are talking to may have a limited objective
- “Virtual assistant” an alternative term

Underlying Technology



General vs. Specific

- The “general” personal assistant (GPA)
 - Like Siri
 - Like Google’s natural-language search (voice or text)
 - Google’s GPA, but limited to info, not actions
 - **Analogy: A web browser with a search engine**

General vs. Specific

- Specialized personal assistant (SPA)
 - Company-specific personal assistant
 - Task-specific personal assistant
 - **Analogy: A web site with a search box for that site**

Implications of the analogies

- If a GPA is a browser with a search engine, shouldn't it be able to find an SPA (a "web site") if requested?
- If every company needs a web site, won't every company eventually need an SPA?
- If search generates ad revenues, won't a GPA?
- If a web site can be used for e-commerce, won't a SPA?
- If a web site can be used for information or entertainment, won't a SPA?

But more than a search engine

- GPA knows **which device you are using** and uses the specific features of that device
 - Mobile phone: Dialing, texting, appointments, navigation, display...
 - Automobile: Hands- and eyes-free mode
 - PC: Navigation, help with OS and application features
- SPA can use GUI when available (multimodality)



Personal Assistant Model

- Can it be a **primary** user interface?
 - The first option?
 - Getting to know you, all about you...
- Can a general personal assistant enable **integration**--call a specialized personal assistant?
 - When requested (e.g., customer service)
 - When needed (specialized knowledge, entertainment)
- Can it be **ubiquitous**?
 - Follow us from device to device
 - And bring what it knows about us with it

Hurdles

- Why would a GPA call a SPA?
 - Demand
 - Competitive positioning
 - Advertising revenue!



Hurdles

- The chicken-and-egg problem
 - Integration features in the GPA
 - Enough SPAs to motivate integration
- *Potential solution:* Conventional user actions lead to SPA download with minimal effort
 - Click on link on Web site
 - Conventional customer service call
 - Voice-interactive mobile ads & infotainment, ending with option to download SPA app

The Personal Assistant Model

- A unifying user interface across applications and devices
 - Enabling easier use of the complex options we are offered today
- A major technology innovation that can drive another economic expansion