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
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