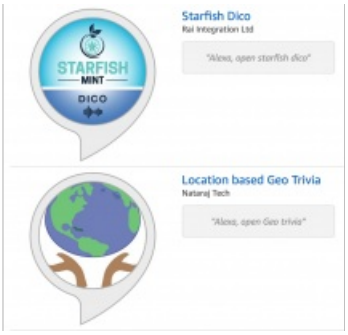
Smart Speakers, Voice Assistants and Location



Do you speak to a voice assistant? Perhaps you ask Google Assistant via Google Home to check the local weather or have Alexa via an Amazon Echo tell you a "knock knock" joke. You might request more complex tasks like finding a local restaurant with open tables for tonight. For now, those are about the extent of current assistants' spatial capabilities.

I dug into the Amazon Echo's "skills," the name for the voice-activated apps it runs. The most utilitarian skills related to maps and location offer answers to questions like "How long will a known commuting route take today?" or "Where is a person (who must be sharing their location information via an app on their phone)?" Alexa can also offer a response to "Where is my favourite food truck?" I also found several skills that store the locations of objects. The user announces where something is, "My keys are in the right-hand desk drawer," so it can be recalled later, with "Where are my keys?"

There are some "educational" games offering geographic trivia questions or fun facts. One game challenges the player to identify contiguous states in the U.S. starting from one coast to reach the other coast. Several skills report back the latitude and longitude of a city, though I'm hard-pressed to identify a common use cases for that skill.

Google Home doesn't have skills or apps, but rather depends on the search engine's ability to mine data from the Internet. Queries about traffic, local events and businesses, weather and travel information are fair game. Users can build "recipes" that use location information to trigger an action in a supported device by using the scripting tool IFTTT ("If this, then that"). For example, with supported sensors and connected appliances, it'd be possible to start the oven when a specific vehicle crossed a geofence.

Apple's entry into the smart speaker space, the HomePod, based on the iPhone's Siri, was announced in June and is expected to ship in December of this year. My suspicion is that like Amazon and Google's offerings, it will support only basic location queries at launch.

What's the Advantage?

Why are smart speakers so popular? I'll suggest part of the success relates to location. For Google and Apple, these speakers take the "smarts" of their respective in-phone assistants and bring them into the home for the family to use. For Amazon, the Echo and its progeny, the Dot, Look and the Show, put Alexa's smarts, and an open shopping cart, in every room. If consumers follow the smart speaker vision to its logical conclusion, these devices will be located across a property such that users can get a response to a request from any square inch, inside or outside the house!

The other reason for the speaker's popularity is the interface. Speaking the "wake word", from wherever in the house the user happens to be, prompts a response. That can prevent a lot of wasted time getting out of bed, washing hands or settling children before getting the information of interest!

What's Next?

Perhaps the most valuable products of the widespread use of these assistants, both at home (via smart speakers) and away (via a mobile device), are the data collected about each user. Data on what an individual asks or orders from these locations can lead to incredibly detailed service offerings and marketing opportunities. The future may hold some mix of exceedingly valuable suggestions and endless annoying promotions.

From a geospatial standpoint, I hope these assistants will include more support for spatial queries via voice. I'd like to be able to ask, "When can I expect the 88 bus at the stop at the corner?" and "When should I expect it to start raining in Prague tomorrow

night?” The future, I suspect, will not be a quiet one.

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