



Voice Operated Assistants



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Voice Operated Assistants

- Dedicated Devices
 - Amazon Echo, Dot, Echo Plus, Show, Look
 - Google Home, Mini, Max
- Augmented Devices
 - Amazon Fire HD10 Tablet, Fire TV Stick
 - Sonos One speaker, Garmin Speak GPS
- Assistants on Smartphones / Tablets
 - Google Assistant, Apple Siri, Microsoft Cortana

Voice Operated Assistants

- What are they?
 - Voice-controlled speakers
 - Wi-Fi connected
 - Bluetooth enabled
 - Answers questions
 - Control devices
 - Call and message
 - Provide voice interfaces for other devices
 - Assistive for impaired

Amazon Echo Family

- Echo - 9” cylinder speaker - 2014 - now \$100
- Dot - hockey puck speaker - 2016 - \$50
- Tap - portable Bluetooth speaker - 2016 - \$130
- Show - large screen, table-top - 2017 - \$230
- Look - Style camera - 2017 (by invite) - \$200
- Echo Plus - includes hub - 10/31/17 - \$150
- Spot - puck with screen - 12/19/17 - \$130
- https://www.amazon.com/b/?ie=UTF8&node=9818047011&ref_=fs_ods_fs_aucc_cp

Amazon Echo Family

- Responds to “Alexa” (default)
 - Change to Echo, Amazon or Computer through app
- Runs on ac power (except Tap - battery)
- High-quality speakers (some models)
- Links to phones / speakers with Bluetooth
- Audio output jack (Dot)
- Screen for showing information, playing videos (Show and Spot)
- Multiple microphones for voice recognition

Additional Amazon Devices

- Fire HD 10 Tablet w/ Alexa- \$150
- Fire TV Stick w/ Voice Remote - \$40
- Fire 7 Tablet w/ Alexa - \$50
- Echo Connect - speakerphone makes and receives calls thru home phone service - 12/13/17 - \$35
- Fire TV w/ 4K Ultra HD & Voice Remote - 10/31/17 - \$70

Alexa-Enabled Devices

- On 10/29/17, Amazon listed 91 Alexa-enabled devices, including:
 - iHome Bedside Clock, ecobee4 Thermostat, Moto X4 Smartphone
 - Garmin Speak Auto GPS, Guess Smartwatches, Nucleus Intercom
 - OV Bluetooth Headphones
- Many smart watches, smartphones and portable speakers

Alexa App

- Configures Echo device
- Available for iOS, Android and Fire OS
- Also thru browser
- Sets
 - Wi-Fi
 - Bluetooth
 - Preferences
 - Skills



What Can They Do?

- Answer questions
- Play music
- Check calendar
- Control smart home devices
- Set alarms and timers
- Read Kindle books
- Get news, traffic info, weather, business info
- Order and track items from Amazon

What Can They Do?

- Get info from Wikipedia
- Intercom (call between devices in same house)
- Call or message other people's devices
- Call your smartphone contacts
- Call any phone number
- Perform math and conversions
- Many things through skills, including order pizza, call an Uber, play games

Smart Home Devices

- 608 items listed on Amazon on 10/29/17
- Includes:
 - Lights, switches, thermostats, outlets
 - Door locks, cameras, sprinkler controllers
 - Home theater receivers, ceiling fans, smart TVs
- Philips Hue, Belkin WeMo, iRobot Roomba

Google Home Family

- Home - 5.62” tall, squat speaker - 2016 - \$130
- Home Mini - “donut” speaker - 10/2017 - \$49
- Home Max - 13.2” speaker - 12/2017 - \$399
- Common features
 - Responds to “OK Google” (or “Hey Google”)
 - Runs on ac power
 - High-quality speakers
 - Does most everything Echo does
- https://store.google.com/product/google_home

Benefits of Virtual Assistants

- Convenient, hands-free voice interface
- Always on and ready to assist
- Quick answers
- Easy to use - great for seniors
- Technology continues to improve
- New capabilities continue to be added
- Costs dropping
- Can be a help to those with disabilities

Dark Side of Virtual Assistants

- Performance issues
- Privacy concerns
 - How much is it listening to?
 - How much is stored?
 - Is the microphone really off?
- Can it be hacked?
 - Security of Amazon account
 - Security of all those IoT devices
- Can it be part of a police investigation?

References

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Questions?

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