# Smart Speakers

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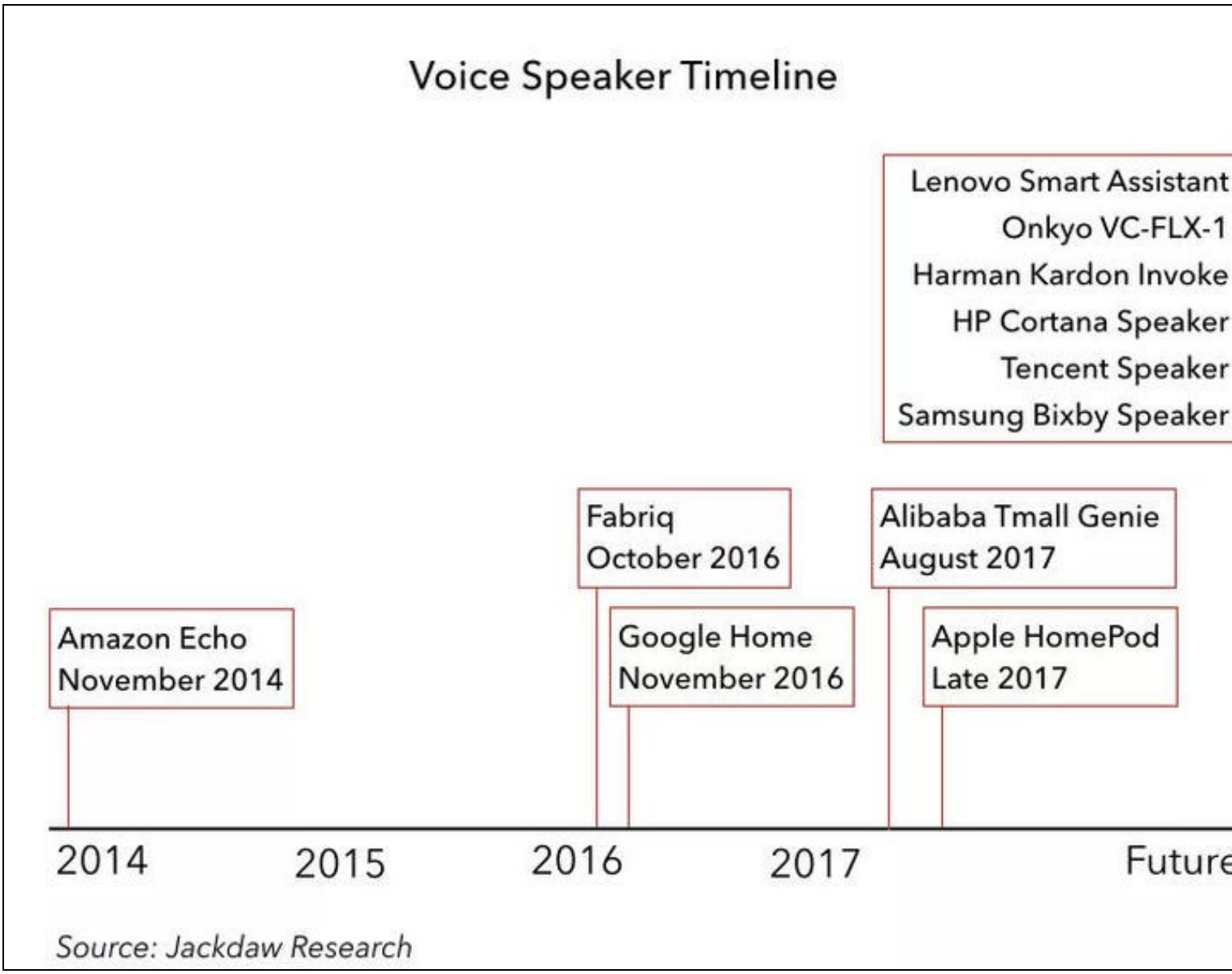

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# Objective

- Perform a landscape search in the area of Smart Speakers
- Use PCS to derive insights and gain competitive perspective
- Understand the value chain and recent M&A activities

# Introduction

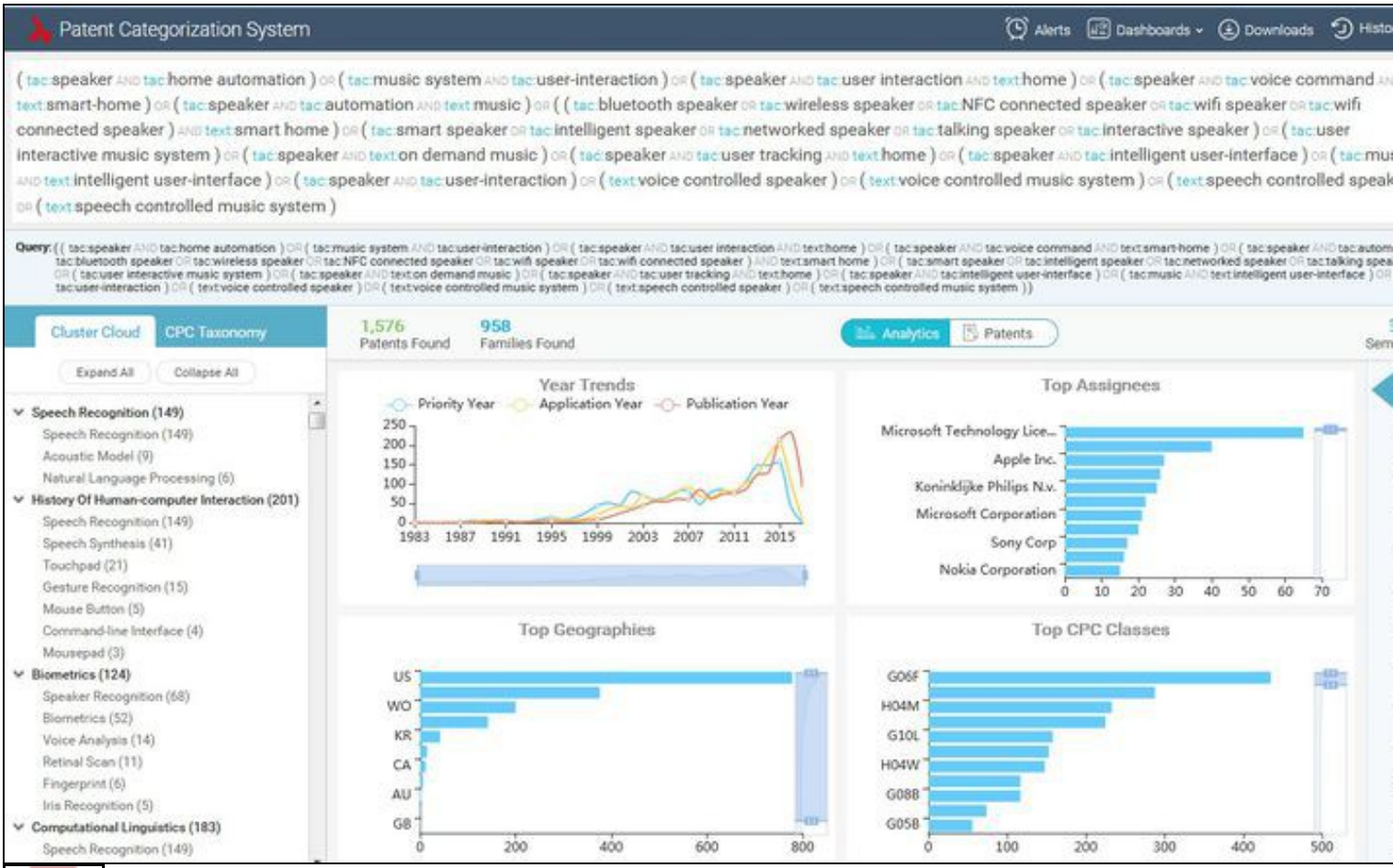
A smart speaker is a type of wireless speaker and smart device that utilizes Wi-Fi, Bluetooth and other standards to extend usage beyond audio playback. This can include, but not be limited to, features such as compatibility across a number of services and platforms, peer-to-peer connection through mesh networking, intelligent personal assistants, and others. Each can have its own designated interface and features in-house, usually launched or controlled via application or home automation software.




## Search in PCS

A search on PCS for Smart speaker was performed with the following search strategy:

(tac:speaker AND tac:home automation ) OR (tac:music system and tac:user-interaction ) OR (tac:speaker AND tac:user interaction and text:home ) OR (tac:speaker AND tac:voice command and text:smart-home ) OR (tac:speaker and tac:automation and text:music ) OR ((tac:bluetooth speaker OR tac:wireless speaker OR tac:NFC connected speaker OR tac:wifi speaker OR tac:wifi connected speaker ) and text:smart home ) OR (tac:smart speaker OR tac:intelligent speaker OR tac:networked speaker OR tac:talking speaker or tac:interactive speaker ) OR (tac:user interactive music system ) OR (tac:speaker and text:on demand music ) OR (tac:speaker and tac:user tracking and text:home ) OR (tac:speaker and tac:intelligent user-interface ) OR (tac:music and text:intelligent user-interface ) OR (tac:speaker and tac:user-interaction ) OR (text:voice controlled speaker ) OR (text:voice controlled music system) OR (text:speech controlled speaker) OR (text:speech controlled music system)






US-9699579-B2

## Networked speaker system with follow me

| US9699579B2 | Original Document |
|---|---|
| Publication Date | 20170704 |
| Application No | US201514974413A |
| Application Date | 20151218 |
| Priority No | US201414199137A, US201514974413A |
| Priority Date | 20140306, 20151218 |
| Expiry Date | 20351218 |
| Original Assignee | Sony Corp<br>Sony Corporation |
| Current Assignee | Sony Corporation |
| Norm. Assignee | Sony Corporation |
| Inventor | Carlsson Gregory Peter<br>Resch Keith |

### Abstract

In a multi-speaker audio system for, e.g., a home entertainment system or other entertainm system, each networked-speaker (wired or wireless) is activated or deactivated as appropri that audio play follows a user as the user moves around the home.

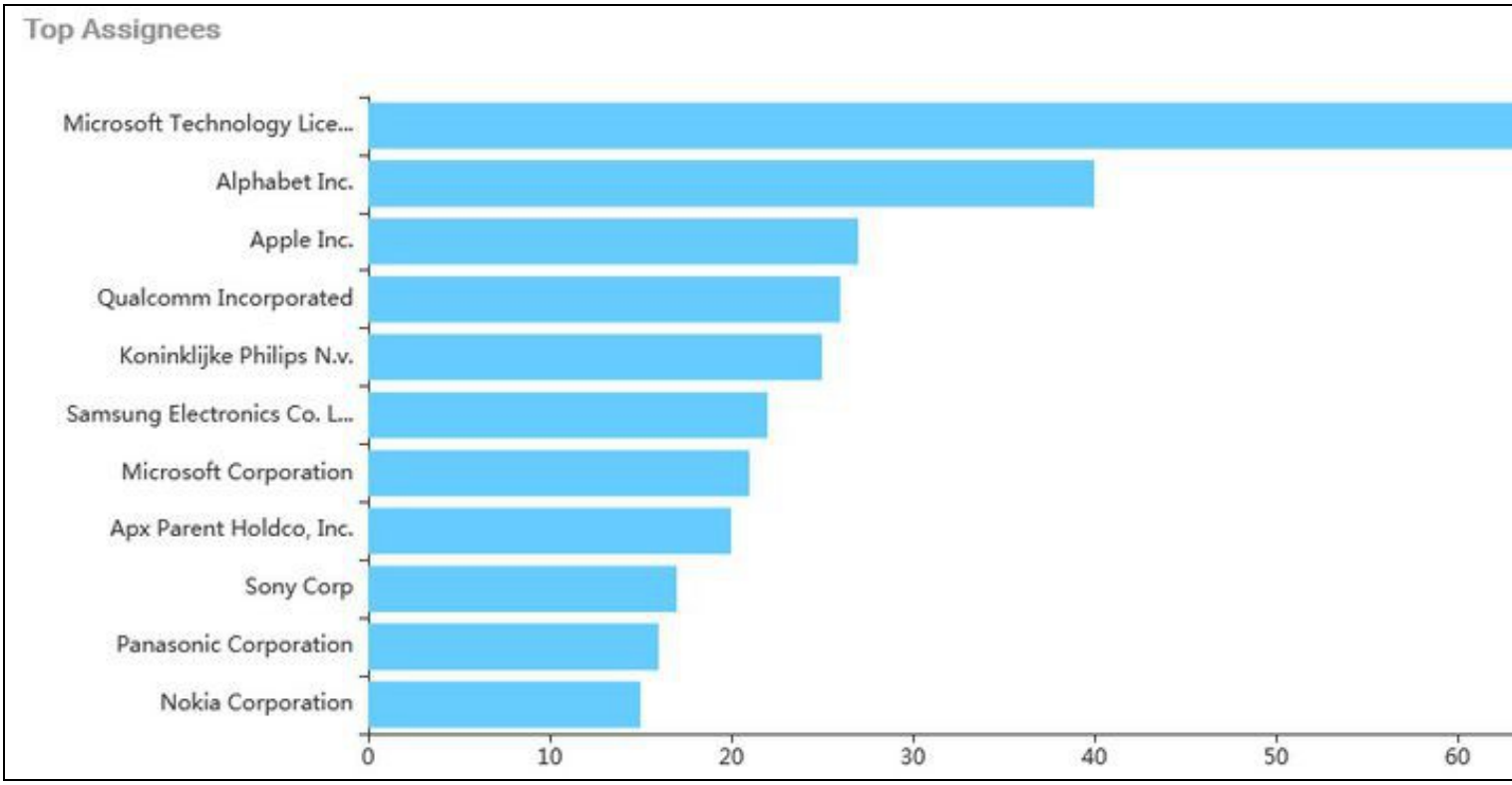
### Family Members

US9699579B2, US20160105754A1, US20150256954A1, US9232335B2

### Class Codes

| | |
|---|---|
| CPC | H04N21/44227, H04R2420/07, H04S7/308, H04S7/303, H04R2227/005, H04R27/0 H04R3/12, H04R2420/03, H04S7/301, H04R2227/003, H04S7/301, H04R2420/03, H04N21/44227, H04R27/00, H04R3/12, H04S7/308, H04R2227/005, H04R2420/07 H04S7/303, H04R2227/003, H04H20/71, H04N21/25891, H04N21/4108, H04N21/ H04N21/43615, H04N21/44227, H04N21/482, H04N21/4852, H04N21/6125, H04N H04N21/6587, H04N21/8106, H04R3/12, H04R27/00, H04R2227/003, H04R2227/0 H04R2420/03, H04R2420/07, H04S7/301, H04S7/303, H04S7/308, H04W64/00, G0 |
| IPC | H04R27/00, H04B3/00, H04N21/442, H04R3/12, H04S7/00 |

# Top Assignee



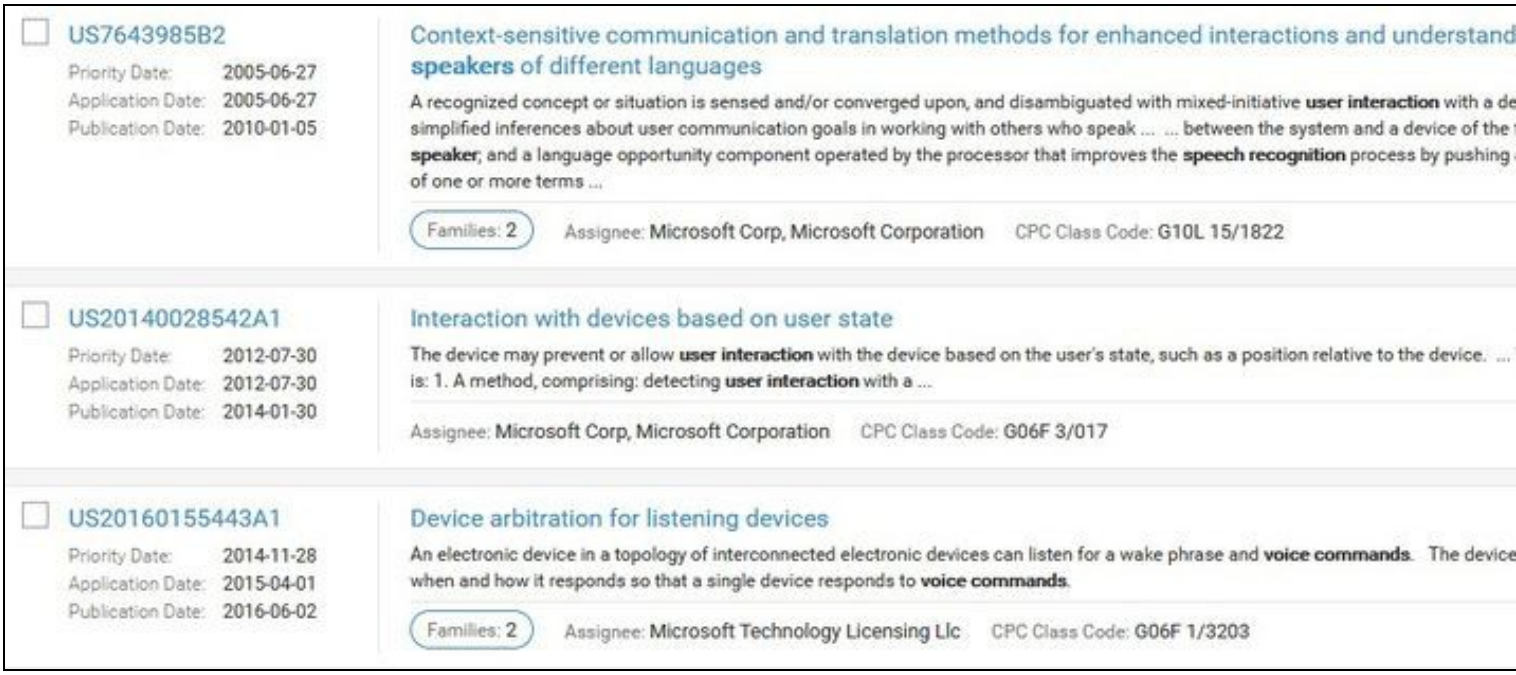

- All Top Players have Smart speakers products in market.

- Microsoft - The Invoke
- Google - Google Home
- Apple - Homepod

# Top Assignee Insights

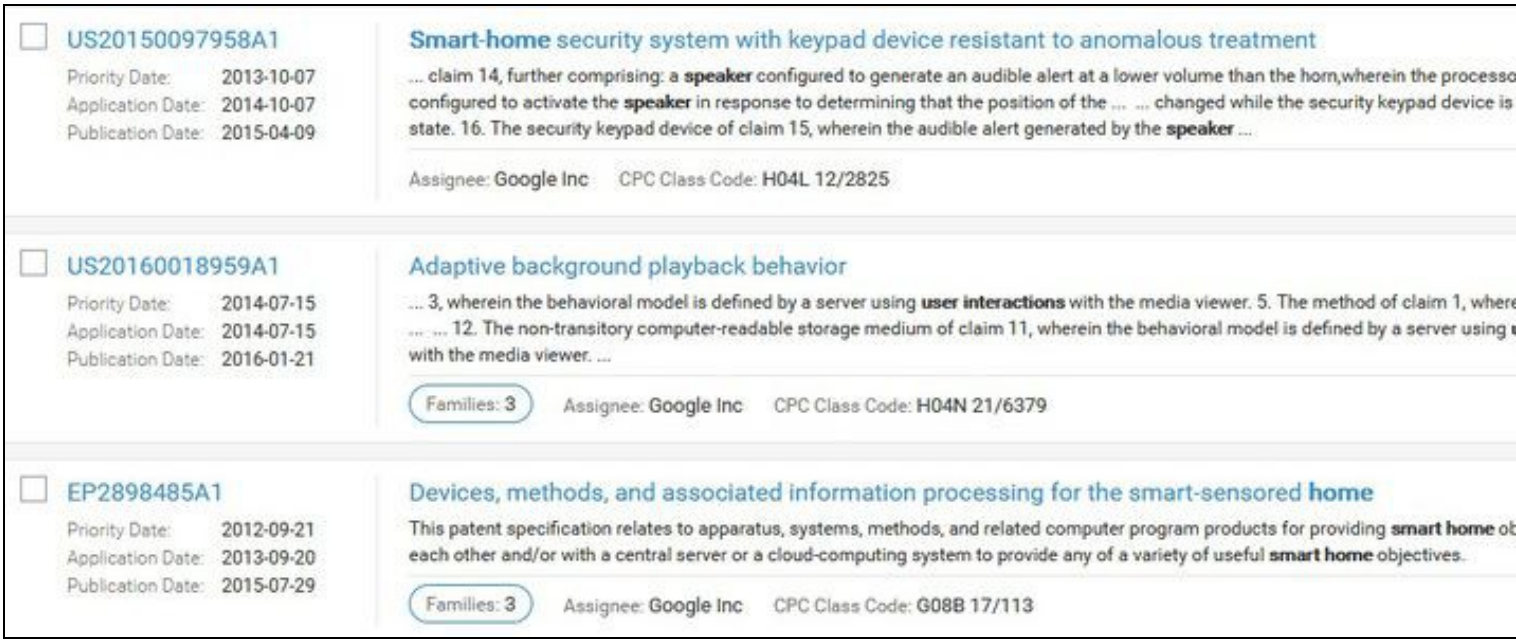
### A) MIcrosoft technology Licensing

- **Microsoft** has patents related to smart speakers as shown below



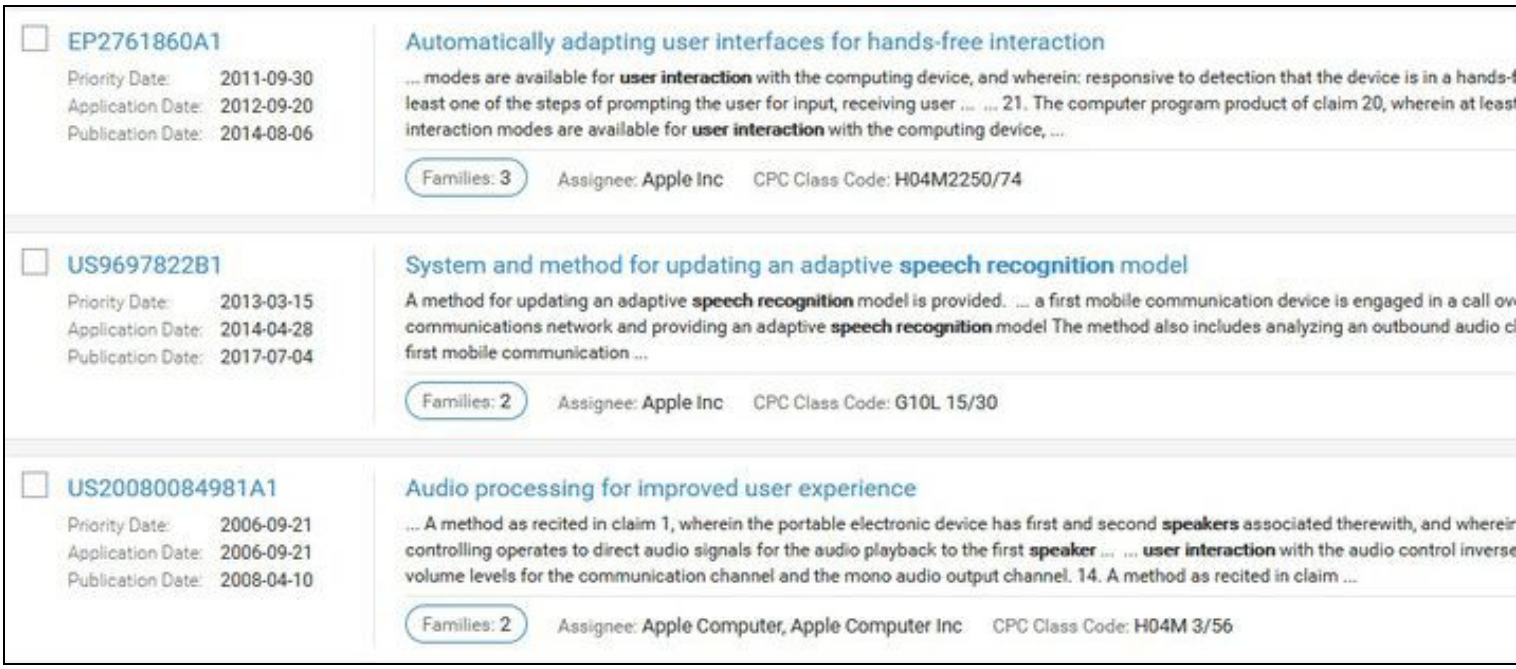

### B) Alphabet Inc.

- **Alphabet** has patents related to smart speakers as shown below



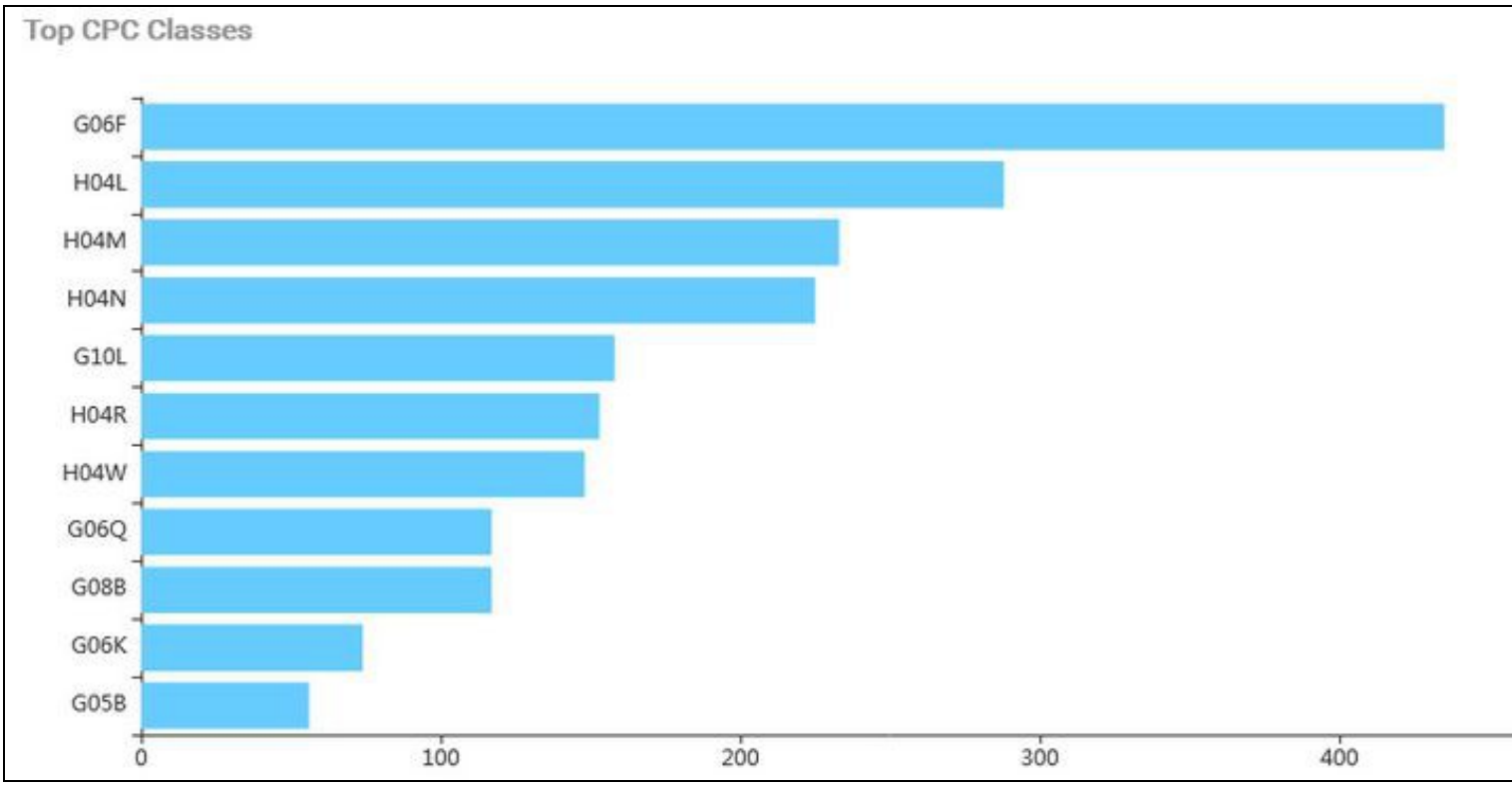

**B) Apple Inc.**

- **Apple** has patents related to smart speakers as shown below



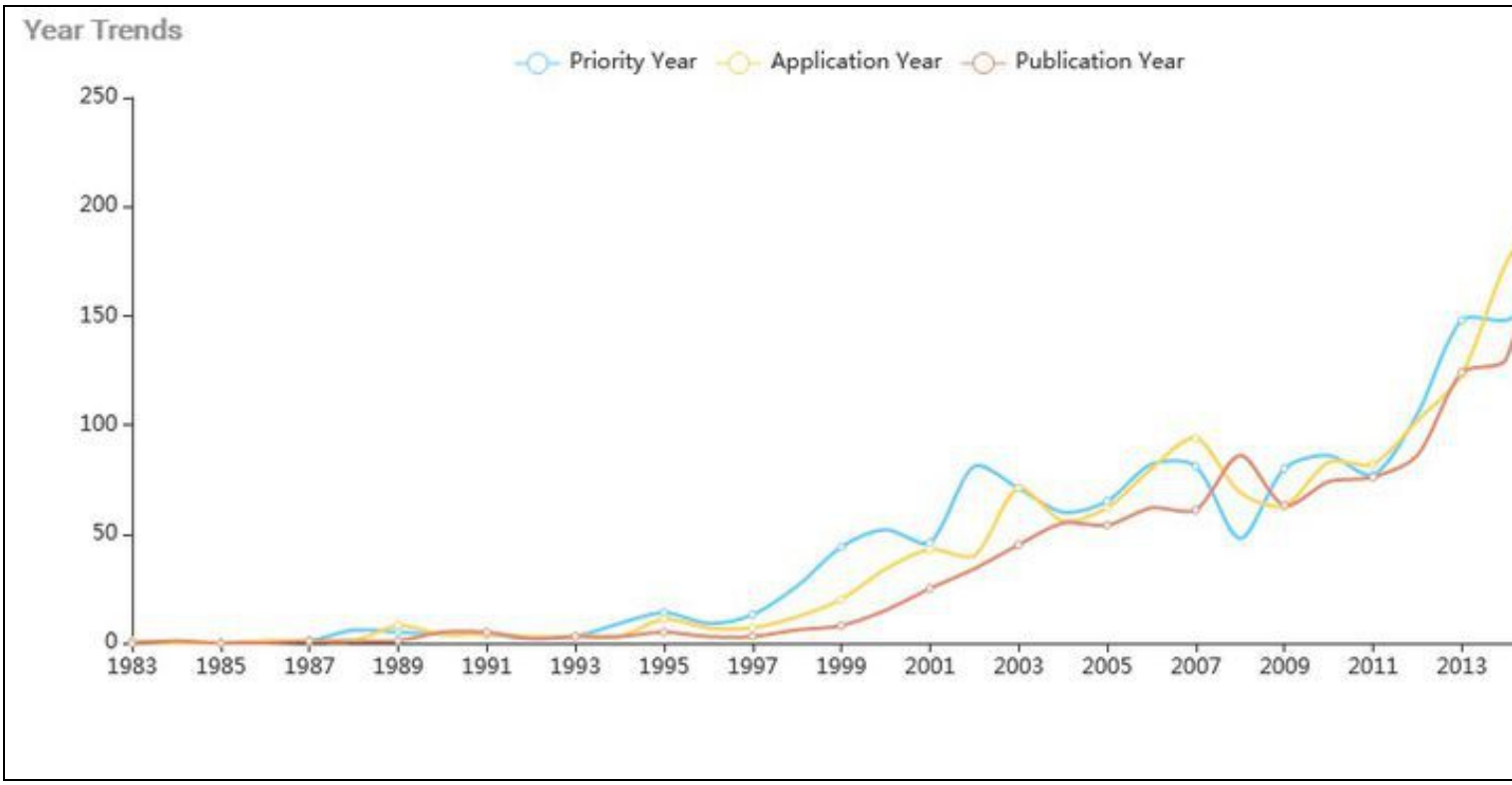

# Bibliographic Analytics

**Main CPC?s:**

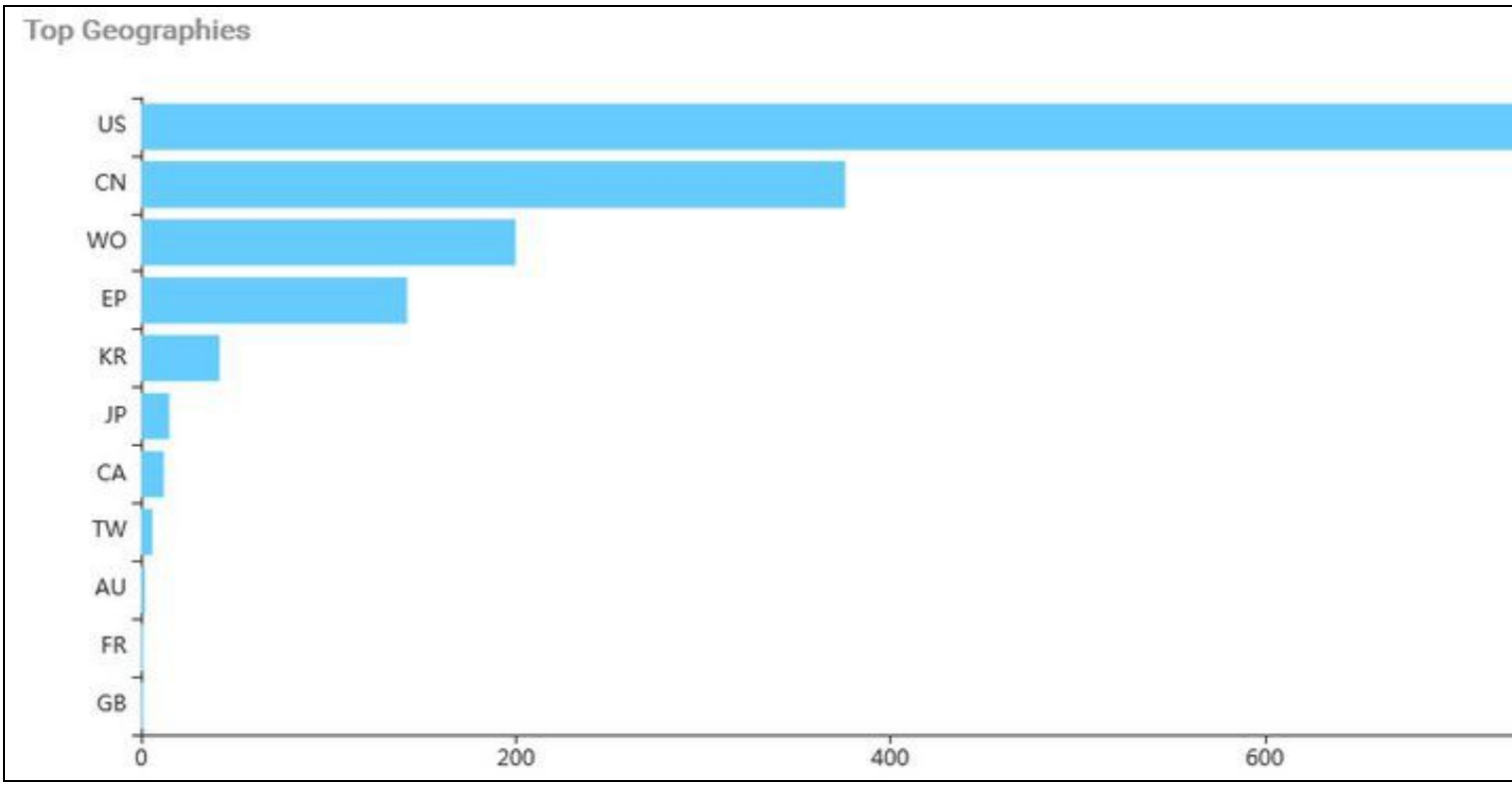



- **G06F** - Physics---> Computing;calsulating;counting ---> Electrical digital data processing

**IP Activity:**

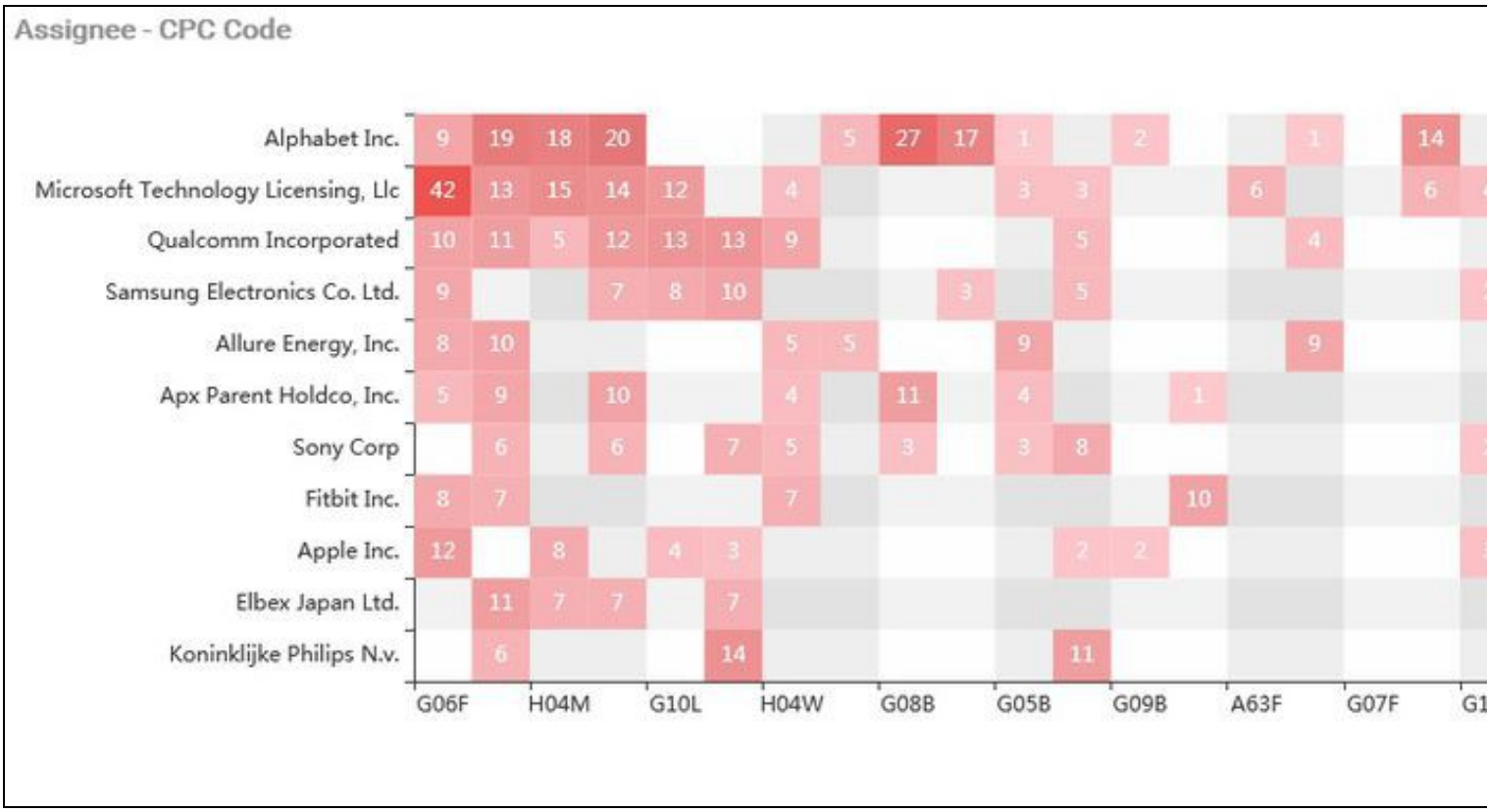



**Geographical Distribution**



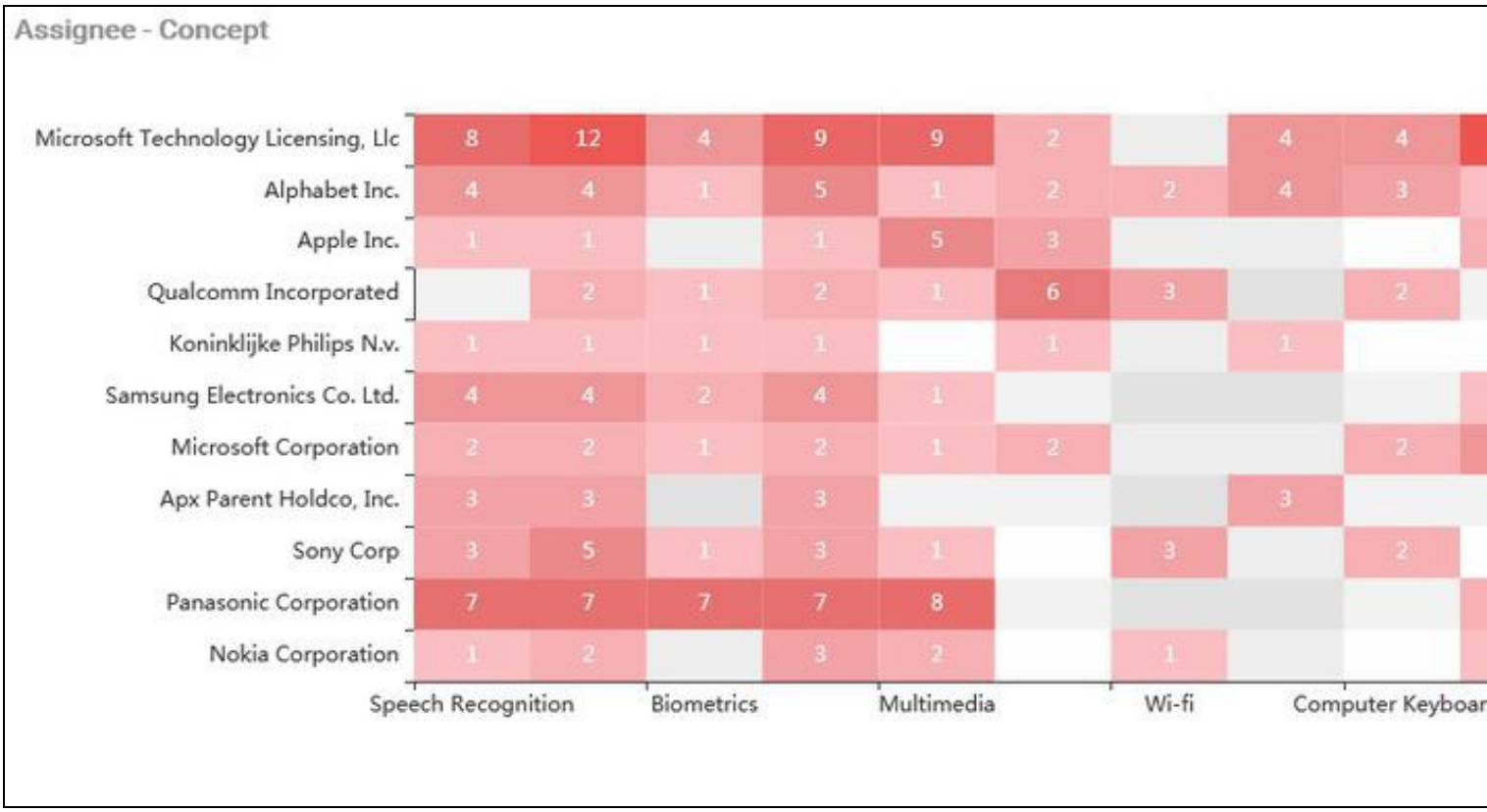

## Technical Insights: CPC Distribution in Top Assignees:

**CPC Distribution:**

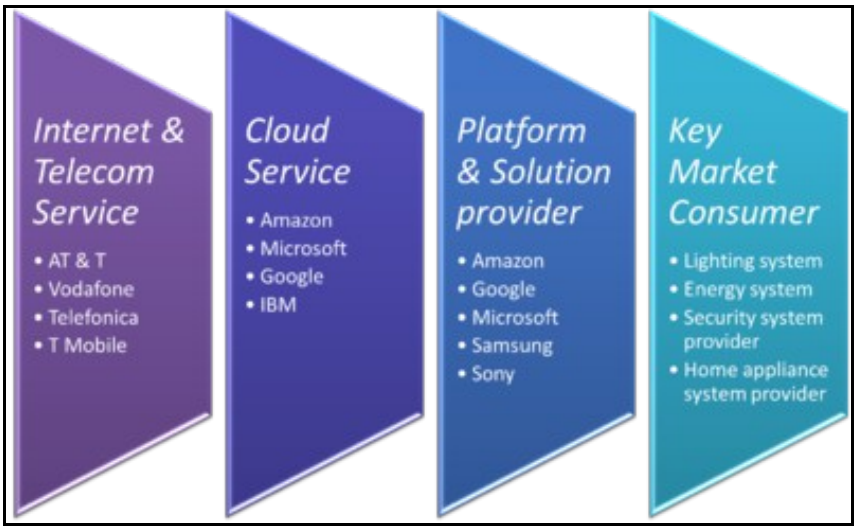



## Technical Insights: Concepts vs Top Assignees

**Technology Concepts:**




## Value Chain Analysis




## Latest M&A Activity in the Space

Implementation of virtual personal assistants are expected to positively impact the smart speaker market growth. This technology can stream music and audio books with single voice commands. The launch of Amazon Echo has caused disruption in the market, with several other companies such as Google and Apple following suit.
Multiple companies are acquiring startups. Here's the quick snapshot of the M&A activity in this space

- Microsoft acquired Solair IoT services based Italian company and Groove machine learning based company in 2016. Also automation technology solution company for house id8 Group R2 studio acquired in 2013.
- Samsung actively acquiring Innoetics and Melaud regarding speech experts and smart headphones. Harman (audio product system), Viv (intelligent interface), Smartthings(monitor and control home) and mSpot (mobile music service and provides cloud solution) acquired by Samsung.
- Apple acquired Workflow, Camel audio (provid tools for music production), Beats electronics (premium consumer headphones) and Novauris (voice recognition system)
- Sony accquired Orchard music distribution, marketing and sales company
- Google accquired Symphony (secure and effective communication workflow application) and Magic Leap (wearable technology and digital device solution company)