SonoKey

***Company Description: SonoKey (angel stage) is solving a large and critical gap in the voice assistant and the voice UI spaces and will pioneer a new class of products and solutions to help the voice-UI devices to become gateways and rival the current visual-UI paradigm, and more.***

**Pain:** Currently, voice industry **does not strongly authenticate** (or identify) the user in the same voice channel and depend on the weak voice recognition or the phone as the second channel. Thus, **voice services (and industry revenue, skills) are stalling at the current "lite" uses** (e.g., "play music"). Strong authentication in the same channel is needed for **voice UIs to provide strong services as does the current visual UIs** (e.g. browser).

**Solution: SonoKey data-over-sound tag/device** and the voice assistant speaker or the audio enabled smart or networked device will directly "talk" - in the same active audio channel, exchange data, and use the secure security protocols - **and strongly authenticate or identify the user.**

*#voice assistants, # voice UI, #user security, #cryptography, #smart home, #smart cities, #connected devices, #data-over-sound*


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**Basic Details:**
Founded In: n/a # Of Employees: n/a

**Funding History and Deal Terms:**
Total (Bootstrapped) to Date: ~$30,000 (3 years)
Total Seeking: $100K-$300K
Valuation Expectations: TBD
Type of Financing: Convertible or SAFE with cap and with above average discount.

**Use of funds:** 1) Device development; 2) business and partnership development with the leaders in voice space, Google, Amazon, etc.; 3) Competing for government/military contracts for the COVID-19 wearables (stealth design), and SBIR Phase 1 grants.

**Financials:**
Burn Rate: n/a
Cumulative Revenue: $0
Trailing 12-month revenue: $0
Cash Flow Positive in: Year 3

**Market Size: (Direct: Voice Assistant Market)**
$1.7B (2019) > $27B (2030)
**Market Size: (Indirect: Voice UI market)**
$31.82B by 2025

**3-Year Revenue Forecast:**
Year 1: $250Kto $500K (if 1~2 SBIR Phase 1 grants)
Year 2: $3M to $6M (if COVID-19 device contracts)
Year 3: $TBD

**Team:**
**Michael Chung**, founder/inventor/idea guy – 20+ years real estate and retail (NYC); 7 years tech startups (SF) - apps, hardware, blockchain, fintech.

**Advisors –** engineers and tech experts in hardware and software with decades of experience each, more background at www.sonokey.com

**Background** – we started 3 years ago by exploring light (LEDS) then onto data-over-sound - for uses in the proximity distance range (several meters) as alternative to the radio tech (Bluetooth, NFC, UWB).

## Use Case Example #1 – A "strong" use of voice assistants

1) User: "Alexa, please reorder my prescription and pay with my Paypal". 2) Alexa: "Please authenticate". 3) User: Several meters from Alexa, the user activates his/her SonoKey device; the device and Alexa do an authentication protocol using data-over-sound in Alexa's audio channel. 4) Alexa: "Thank you, the order is done". (Etc.: User walks around the home/office and the smart devices will know exactly "who is here" and provide ambient smart services.)

## Use Case Example #2 – A non-radio, proximity and secure, smart key

1) Smart doorbell or the door-sensor zone is activated and issues a challenge "tone". 2) The user arms are full and the SonoKey key-fob is in their pocket. 3) The doorbell and fob do a challenge and response. 4) Door unlocks and greets.

## The Thesis Gambit

Voice is the next great UI and service gateway and thus needs to strongly authenticate or identify the individual user in the same open audio channel.

## Technology: Data-over-sound works

Google is using "audio QR" in their payment app Tez in India since Oct. 2017. However, we are and will push the technology beyond its current state of art – as we discovered big new uses and problems to solve in the voice space. We are the first to mash data-over-sound with the emerging voice-first era. "Mics and speakers are the largest installed infrastructure". We apply the same principles and protocols as the visual web of authenticating the user in the same channel.

## Go-To-Market Strategy

Sales, partnerships, licensing, and open sourcing: Direct to consumers and enterprises; joint ventures with security devices (RSA-ID, YubiKey, Google OpenSK); partnerships with FAMAG, et all; open source for wide/fast adoption.

## Competition and Defensibility

Currently, there about 7 other startups and companies, seed to series C, in the data-over-sound technology space, not including Google. The biggest is funded to $30 million. However, nearly all are focused on the phone platform! We have been focused on the device-form from the beginning. Also(AFAIK), the others have not discovered the voice-space opportunities and the possible mashing. We have several patents pending with broad claims with several more to file and plan to have a suite of patents for both offensive and defensive needs.

## Milestones

Discovering and validating the market opportunities and tech; pivots; patents filed; benchtop prototyping; SBIR P1 proposals; device components/suppliers.

## Exit Strategy: The smart ambient voice responsive environment

TBD, but there are several device companies to inform us. Some are: Tile (the BT tag) which is at series C ($104M funding); YubiKey ($55M funding); and the RING doorbell (sold to Amazon for $1 B). Also, we have a 2nd product concept – that (IMHO) is just as revolutionary for the voice space and to be disclosed later – which could 2x to 3x+ the market sizes, and could be ideal for Facebook or Samsung to go from back of voice-pack to be abreast with the leaders.