

Smart India Hackathon 2018 – Hardware Edition

INVENTION DISCLOSURE

1. Title of Invention: **SMART INDOOR NAVIGATION SYSTEM**
2. Date: **28-04-2018**
3. Field of Invention (e.g Chemical, Mechanical, Electrical, Biotechnology, Electronics, Medical System, Miscellaneous): **ELECTRONICS**
4. Name and contact details of the Inventor: **M-NAVEEN NARAYANAN (TEAM LEADER)**
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EMAIL ID: naveennarayanan1996@gmail.com.
5. Whether your invention is product/Composition/ Process/Equipment/Device/System?
SYSTEM APPLICATION)
6. Problem in the prior art, e.g prior patent, prior reported literature (Give relevant prior art and state the problem of the prior art based on patent and literature search). Prior art search may be conducted using keywords from inventive area. Conduct prior art search use public databases e.g. <https://scholar.google.co.in> <https://patents.google.com>
<http://www.wipo.int/tools/en/gsearch.html> https://worldwide.espacenet.com/?locale=en_EP
<https://search.uspto.gov/search?query=+&op=Search&affiliate=web-sdmg-uspto.gov>
<http://www.tkd1.res.in/tkd1/langdefault/common/TKDLSearch.asp?GL=Eng> :

Keywords Used: **Wi-Fi, Transceiver, Audio Message, Wi-Fi Access Point, MAC Address**

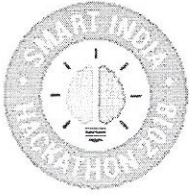
Prior Art (Literature Closest Match): **"A Local optimal User Position for Indoor Wireless Devices"**

- System did not take in the problems of the visually challenged.

"<http://www3.ucl.ac.uk/mgbarry/Pubs/theses/Heng%20-%20nicola-benihan.pdf>

Prior Art (Patent Closest Match): **Application of Wi-Fi Based Indoor Positioning System in Handheld Directory System"**

- Entire system was very complex due to the



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implementation of kiosks and websites, database and mobile modules.

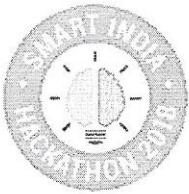
Reference: ' www.wseas.us/e-library/conference/2011/Paris/ECC/ECC-01.pdf

7. Statement of invention e.g state your inventive area and what solution you are providing to solve the problem not addressed in prior art:

Existing method uses sophisticated technologies, while proposed system uses Wi-Fi to help in indoor navigation. Hence it is a much simpler system.

8. Describe your invention with working model/ example; (e.g if the invention is product/composition, give details of product composition in the form of range at least, Give working example (testing result of composition and properties, If it is process, give process flow chart mentioning process parameters, at least in range, give working example. If it is system operated based on algorithm, give the hardware/unit details and how the algorithm is affecting the functionality of the unit)

- Find the MAC details of the nearby Wi-Fi access point.
- Communicate with the server and receive the corresponding audio files.
- Play the audio files with directions.



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9. Identify the novel features (Just put in bullet form, e.g....Algorithm to detect signal in the signal system components)

- Simple to implement, with the existing technologies
- Can be updated easily and regularly.
- Audio files can be provided in various languages.
- Provides hassle free navigation, at lower cost.

10. State possible application of your invention:

- Can be used in banks, hospitals, schools, universities and other ~~indoor~~ government offices.
- Can be used in smart wheel chairs and stretchers
- Can be used by blind people, with the help of audio messages.

I hereby declare that, to the best of my knowledge and belief, the particulars given above and the declaration made therein are true.

M. Naveen Narayanan .

Signature of the Corresponding Inventor
