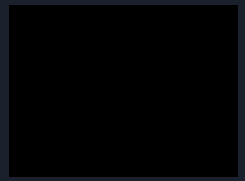
GIDER

Sensor Technology to Improve Navigation for the Visually Impaired

Team 11 (Table 7)
Minjun Chen, Venky Konanur, Jeremy Ney, Shubham Sharma, Vanja Srivastava, Katie Stevo, Will Wang, Richard Xu.

Problem Statement: A testimony

User testimony



Transcription: “My name is Tim Cummings, and I am a mentor for the Hackathon this weekend. I am a blind assistive technology trainer at Perkins. One problem many blind people have is **finding a particular bus stop** when they are getting to the bus and finding a particular bus to get on. **GPS only works within 15 feet**. You may know approximately where the bus stop is but you may not know how to find it when you get there. **Anything that can be done to alleviate this problem will be very helpful for blind people.**”

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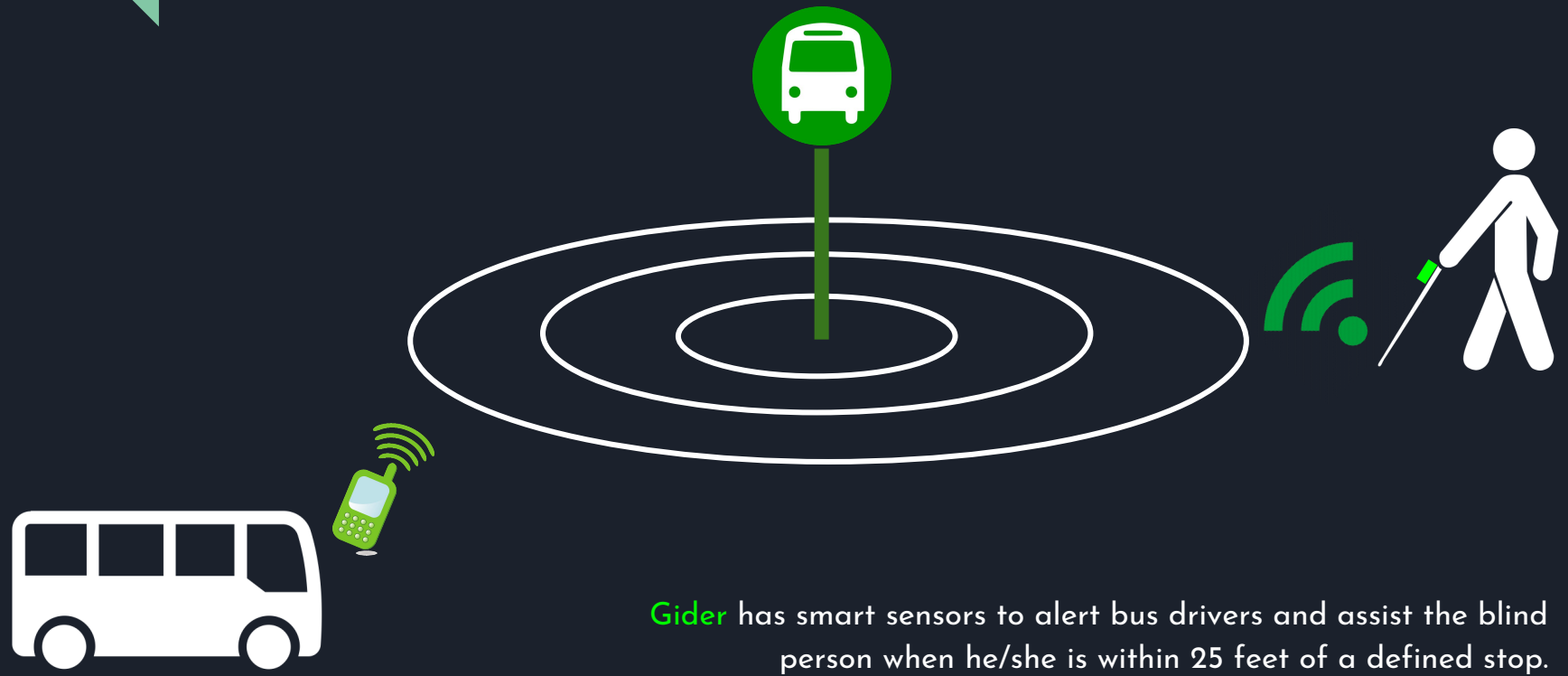
How might we solve the 15-foot problem for blind people riding public buses?

The solution? GIDER



Gider has smart sensors to alert bus drivers and assist the blind person when he/she is within 25 feet of a defined stop.

Sure, but how does it actually work?

VIDEO PROTOTYPE

RFID

Haptic feedback

Google Maps

Feasibility, Desirability, Viability

Feasibility: These add-ons to the probing stick could be mailed for only $3. This is an improvement over current technologies, which requires community input and high maintenance.

Desirability: Not only are we solving the most crucial navigation challenge for the visually impaired, we are also empowering the ecosystem of people who are supporting blind travelers.

Viability: RFID sensors cost fractions of a penny and can be easily installed on bus stops.

Next Steps

1. Integrate Google API more fully with our product

2. Conduct interviews not only with visually impaired users, but also with bus drivers

3. As a use case, partner with the MBTA to install RFID tags at Boston bus stops

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THANK YOU!

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