



WICHITA STATE  
UNIVERSITY  
COLLEGE OF ENGINEERING  
*Department of  
Electrical Engineering  
and Computer Science*



## CONSENT TO PARTICIPATE IN RESEARCH

# Improving Public Transportation Accessibility for Blind and Visually Impaired Travelers

You are invited to participate in a research project conducted by **Dr. Güler Aarsal & Dr. Vinod Namboodiri** at the Envision Research Institute.

## **Purpose**

Safe and independent travel on public transportation requires the blind and visually impaired (BVI) to perform complex tasks (e.g., knowing which bus to enter). Understanding the cognitive processes underlying these tasks remains an important research question that has implications for the development of any assistive technology for BVI. This is also essential for creating effective training programs for BVI.

The aim of this research is to investigate critical cognitive skills and strategies used by BVI for safe and efficient travel on public transportation.

## Participant Selection

You were selected as a possible participant in this study because you:

- are blind, or
- have vision loss in your eyes, or
- have normal vision in both eyes, or
- work in the education or rehabilitation of BVI, or
- design or develop assistive technology systems for BVI;

AND

- do not have any cognitive impairment\*

\*based on our screening questionnaire

Approx. 100 participants will be invited to join the study.

## Explanation of Procedures

There are four sessions to this study: 2 interviews and 2 experiments. You can participate up to two sessions. You are free to choose which session(s) you would like to take part in, provided you fit the inclusion criteria for the particular session.

Data collection will involve video and/or audio-recording for each session. Each session will be **approximately 1 hour**.

If you decide to participate, depending on the selected sessions, you will be asked to:

- Interview 1: Answer open-ended questions on orientation and navigation. An example question is “What are the main challenges in navigating without vision?”
- Interview 2: Answer questions on thinking involved in some travelling tasks (e.g., planning a bus journey with public transport). An example question is “What information would you need to make a good decision?”
- Experiment 1: Navigate in indoor/outdoor spaces. While navigating, you will be telling us what you are thinking. For indoor navigation, you will be asked to find your way to a specific location in a (familiar or unfamiliar) building. For outdoor navigation, you will be asked to complete a bus journey in Wichita by Wichita transit. You and I will ride the bus together. Envision will pay your bus fare.
- Experiment 2: Communicate with people through typed questions and answers. Your communication will happen via computers.

## **RISKS OR DISCOMFORT**

You may experience boredom, mental fatigue, an invasion of your privacy, or embarrassment at poor performance. However, these risks are minimal or no greater than those ordinarily encountered in your daily life. You can always choose not to respond to the questions or actions. You will be given several rest breaks during the session(s), and you can ask for a break whenever you need one.

There is also some risk of bumping into objects or walls, stumbling while navigating, or falling down stairs, but should be no more than what you would typically encounter in navigating indoor or outdoor spaces.

For any video or audio recordings we take, we will protect your identity and conceal all identifiable information by face blurring and voice modification; however, there is always the chance someone may recognize you.

## **BENEFITS**

There are no direct benefits to you for taking part in the study. However, this research will help scientists better understand how a person with visual impairment thinks and performs complex travel tasks.

Scientists will be able to use this information to come up with ways to create effective training programs and develop better assistive technology for BVI.

## **CONFIDENTIALITY**

Every effort will be made to keep your study-related information confidential. However, in order to make sure the study is done properly & safely there may be cases where this information must be shared.

By signing this form, you are giving the research team permission to share information about you with the following groups:

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- The Wichita State University Institutional Review Board.

We may publish the results of the study. If we do, we will only discuss group results. Your name will not be used in any publication or presentation about the study.

If we use your video or audio recordings for presentations, we will protect your identity and conceal all identifiable information by face blurring and voice modification.

We will use a unique code, assigned by the researcher, to represent you. This code number will appear on all study materials. The list pairing your name to the assigned code

number will be kept separate from all research materials & will be available only to the researcher. Confidentiality will be maintained within legal limits.

Retaining Research Records: Hard copies of the data including the signed consent form & the study findings will be stored in a locked file drawer at Envision. Any video/audio recordings will be stored in a password secured computer that can be accessed only by the study team. We will keep this study information for at least 5 years after the study is completed, or until the data is no longer suitable for studies similar in purpose to the current study.

## Payment

If you complete one session:

- you will be given a **\$25 VISA gift card** after you finish the session.

If you complete two sessions:

- you will be given a **\$50 VISA gift card** after you finish the sessions.

This payment is taxable income. A Form 1099 will be sent to you and to the Internal Revenue Service if your payments are \$600 or more in a calendar year.

## Refusal/Withdrawal

Taking part in the study is voluntary. You can refuse to take part or withdraw from the study at any time, without giving a reason. You will NOT be penalized or lose any benefits or services that you normally would receive. Whether you decide to take part in this study or not will not affect your future relations with Wichita State University and/or Envision.

## QUESTIONS/CONTACTS

If you have any questions about this research, you can contact me, **Dr. Güler Arsal** at 316-440-1528 and/or at [Guler.Arsal@envionus.com](mailto:Guler.Arsal@envionus.com). You may also contact Dr. Vinod Namboodiri, the Principle Investigator of this study, at 316-978-3922 and/or at [Vinod.Namboodiri@wichita.edu](mailto:Vinod.Namboodiri@wichita.edu).

If you have questions about your rights as a research participant, or about research-related injury, you can contact the Office of Research and Technology Transfer at Wichita State University, 1845 Fairmount Street, Wichita, KS 67260-0007, and telephone (316) 978-3285.

You are under no obligation to participate in this study. Your signature below lets us know that:

- You have read (or someone has read to you) the information provided above,
- You are aware that this is a research study,
- You have had the chance to ask questions and have had them answered to your satisfaction, and
- You have voluntarily decided to take part in the study.

You are not giving up any legal rights by signing this form. You will be given a copy of this consent form to keep.

Do you agree to be audio and/or video recorded? \_\_\_Yes \_\_\_No

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**Printed Name of Subject**

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**Signature of Subject**

**Date**

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**Printed Name of Witness**

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**Witness Signature**

**Date**

**Participant Study ID:** \_\_\_\_\_