

# Repeat After Me “I am a Human”:

## A Speech-based Method to Detect Spammers in VOIP

Sajad Shirali-Shahreza

✎ Sajad Shirali-Shahreza

✎ PhD Student

- Department of Computer Science
- University of Toronto

✎ Supervisors:

- Prof. Ganjali
- Prof. Balakrishnan

## VOIP

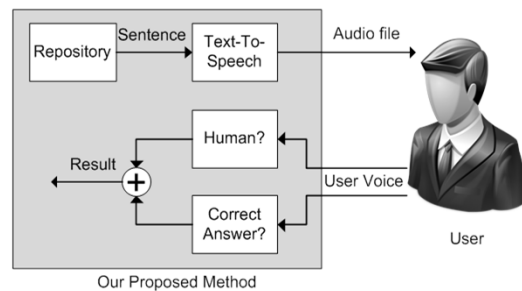
- ∞ VOIP: Voice Over IP
- ∞ Use Internet to make telephone calls
- ∞ Cheap long distance and international calls
- ∞ Replacing current landline phones

## Spam

- ∞ Serious problem for emails
- ∞ More annoying in VOIP network
  - Calls in the middle of night
  - Waste time to answer them
  - Could not redirect to voice mail easily
    - Change the two-way nature of phone call
- ∞ One of the major research concerns for VOIP network security

## Our System

- ⌘ Verify the caller is human
- ⌘ Easy to use over the phone
- ⌘ Idea: asks the user to repeat a sentence and analyze the response to detect computers



## Do you want to test it?

- ⌘ Conducting a user study to collect user's opinion
- ⌘ Call the system: 647-478-8352
- ⌘ Fill out questionnaire at:  
<http://frazier.cs.toronto.edu/survey/>
- ⌘ Participants will included in a draw for the Acer 10.1" netbook with approximate retail value of \$300
- ⌘ More info? spokencaptcha@cs.toronto.edu

## Participants needed for a user study

We are looking for volunteer participants for our user study about user experience for interacting with automated systems over the phone. The study is similar to calling a company customer support system by phone and interacting with automated agents over the phone. Participants must be able to communicate in English, but their first language could be other than English. No specific prior knowledge or skills required for this user study.

Participants will call our system at **647-478-8352**, which is a local Toronto phone number, and perform requested simple tasks over the phone, which will be completed in about 15 minutes. Then they fill out the questionnaire about their experience during the phone call. Participants will fill out the questionnaire online at "<http://frazier.cs.toronto.edu/survey/>". No personally identifiable information such as user's name or address will be asked. There is no need for participants to come to the university to perform this user study. They could complete it from anywhere, using a phone for calling the system and a web browser to complete the questionnaire. Participants have the right to quit the study, for whatever reason. If they want to quit during the phone, they can simply hang up anytime during the call and their entry will be removed. If they did not complete the questionnaire, their entry will be removed. If they also completed the questionnaire and later on decided to quit, they can contact us.

Users could enter an email address if they want to include in the draw for the **Acer 10.1" netbook** (Acer Aspire One D255E, Intel Atom N455, 1GB of RAM, 250 GB HDD, Windows 7), with approximate retail value of **\$300**. One of entered email addresses will be randomly selected and will be contacted to receive the netbook after the study. For more information, contact us at [shirali@cs.toronto.edu](mailto:shirali@cs.toronto.edu).