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# Ideas for Speech Recognition in Noisy Environments



TAGS: [Computer/Info. Technology Engineering/Design](#) [Physical Sciences](#) [Ideation](#)

STATUS: **Awarded**

Active Solvers: 222

Posted: Aug 10 2017

Challenge ID: 9934038

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## Abstract

The Seeker is interested in receiving ideas, insight, and instruction on how to accurately capture and transcribe speech in noisy environments. While currently available speech recognition systems work quite well under controlled circumstances like dictating into a microphone, none of the systems are able to work effectively in situations where there is a high level of background noise (including machine alarms) or overlapping multi-person speech at various distances from the microphone(s). An ability to discriminate among the various voices is ideal. Submissions may run the range from suggestions on how to adapt current software to ideas on microphone placement to novel methods to filter out background noise and anywhere in-between.

*This is an Ideation Challenge with a guaranteed award for at least one submitted solution.*

## Overview

Accurate speech recognition in complex environments is a difficult task but one that must be tackled in order to move “smart assistants” from local hand-held devices and desktop computers to real world work situations. Several in-home devices are also available but these tend to work best in quiet settings with little background noise. Desktop speech to text systems have become quite accurate in transcribing speech directed into a microphone placed close to the speaker but are not generally designed to filter out the significant background noise typically found in places such as production lines or laboratories. Much money has been spent by people and companies around the world to develop speech to text systems and this Challenge is not asking for new systems to be developed, but rather the Seeker would like ideas on how to approach this subject using any combination of software and/or hardware improvements to existing technologies, particularly using newer sound capture and noise-cancelling technologies.

**This is an Ideation Challenge, which has the following unique features:**

- **There is a guaranteed award.** The award(s) will be paid to the best submission(s) **as solely determined by the Seeker**. The total payout will be \$15,000, with at least one award being no smaller than \$5,000 and no award being smaller than \$1,000.
- The Solvers are not required to transfer exclusive intellectual property rights to the Seeker. **Rather, by submitting a proposal, the Solver grants to the Seeker a royalty-free, perpetual, and non-exclusive license to use any information included in this proposal, including for promotional purposes.**

Submissions to this Challenge must be received by 11:59 PM (US Eastern Time) on September 10, 2017.

**Late submissions will not be considered.**

After the Challenge deadline, the Seeker will complete the review process and make a decision with regards

to the Winning Solution(s). All Solvers that submit a proposal will be notified on the status of their submissions; however, **no detailed evaluation of individual submissions will be provided.**

What is InnoCentive?

InnoCentive is the global innovation marketplace where creative minds solve some of the world's most important problems for cash awards up to \$1 million. Commercial, governmental and humanitarian organizations engage with InnoCentive to solve problems that can impact humankind in areas ranging from the environment to medical advancements.

What is an InnoCentive Ideation™ Challenge?

An InnoCentive Ideation™ Challenge is a broad question formulated to obtain access to new ideas, similar to a global brainstorm for producing a breakthrough idea or market survey which may include ideas for a new product line, a new commercial application for a current product, or even a viral marketing idea to recruit new customers. Ideation™ Challenge submissions are typically about two written pages, and Seekers receive a non-exclusive, perpetual license to use all submissions.

**In an Ideation™ Challenge, Solvers may:**

- Submit ideas of their own
- Submit third party information that they have the right to use and further the authority to convey that right and the right to use and develop derivative works to Seekers
- Submit information considered in the public domain without any limitations on use

Solvers should not reveal any confidential information in their submissions. Often the Ideation™ Challenge will be followed by one or more of the other three Challenge types to further develop the ideas and gain Intellectual Property protection when the concept has been well-defined.

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