

[TECHNOLOGY★ ★] VOICE CONTROL: COMING SOON TO A HOUSE NEAR YOU

(P1) It's not unusual to find yourself talking to an **uncooperative appliance** or **gadget**. Soon, though, it could be more common for those devices to actually pay attention.

(P2) A startup called **Wit.ai** plans to make it easy for hardware makers and software developers to add custom voice controls to everything from smartphones and smart watches to Internet-connected **thermostats** and **drones**.

(P3) While big companies like Apple and Google have their own voice recognition technology, smaller companies and independent developers don't **have the deep pockets** required to create voice software that continuously learns from mountains of data.

(P4) Wit.ai, based in Palo Alto, California, is taking aim at the **swiftly** growing number of devices with small displays, or no screen at all, and at activities like driving and cooking, where you may want the aid of technology but don't want to look at or touch a display.

(P5) And to give all kinds of developers access to a simple-to-use, always-learning **natural-language** service, the company is offering it free to those who agree to share their user data with the Wit.ai community. Collecting this data should help improve the accuracy of the system over time.

(P6) "Everyone will benefit from that," cofounder and CEO Alex Lebrun says.

(P7) Lebrun has been thinking about how to make something like Wit.ai work for a while. He previously founded and led **VirtuOz**, a company that spent months building **Siri-like** voice-controlled software for clients like **eBay** and **AT&T** (bought by the speech recognition company **Nuance** in late 2012, these days it goes by the name **Nina Web**).

(P8) With Wit.ai, developers type a handful of plain-English commands they want it to recognize, such as "Wake me up tomorrow at 6" or "Wake me up in 20 minutes," and note what they want to accomplish through each command — in this case, set the alarm on a **hypothetical** voice-controlled smart watch. Wit.ai uses what it knows about language to figure out the different ways a command might be expressed. Then, when a user wants to set the alarm for a specific time, that person's **utterances** are sent to a Wit.ai server, which analyzes the audio and sends structured data back to the gadget — here, the instruction to set the alarm for the proper date and time. A demo on the company's site gives an idea of how this can work. Already, about 4,600 developers are using Wit.ai with things like mobile apps, robots, home **automation**, and **wearable devices**.

(P9) Nick Mostowich, a student at the University of Waterloo in Ontario, is one of them. At a **hackathon** last month at his school, Mostowich and his team used Wit.ai to add voice control to a toaster and microwave. Mostowich says they quickly put together a set of commands and targets that could be mapped to a list of recipes on a remote server, so a user could say something like "Cook me some bacon" and the microwave would turn itself on, set to the right power level and time.

(P10) Voice-powered **bacon-nuking** aside, there are still plenty of obstacles for Wit.ai to overcome. Like many similar systems that **rely** on the cloud, such as Siri, it's not as quick to respond as it could be, and it can't work if you don't have an Internet connection. And while Lebrun says Wit.ai can also be used **to varying extents** in Spanish, French, German, Italian and Swedish, it's still far better in English.

(PII) Lebrun believes that as more data is added to the system, the non-English languages will improve. And he hopes to enable developers to use Wit.ai online to build and train voice interactions and then download it so it can be used on, say, a smartphone, without needing an Internet connection. Instead, it could just occasionally check in with Wit.ai's servers to update its learning.

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DISCUSSION QUESTIONS

If you found the passage difficult to read or had problems understanding specific words or idiomatic expressions, please discuss them with your tutor. The following discussion questions should be answered in your own words and with your own arguments.

1. Briefly summarize the content of the article in your own words.
 2. Explain the technology that Wit.ai is developing (P2). Why is it useful for other smaller companies and independent developers (P3)?
 3. Who is Alex Lebrun? Describe his background and how it relates to his current company (P6 & 7).
 4. What do you think of current voice-control technology? Have you used it at all? If voice-control can allow machines to understand human perfectly in any language, what kind of products do you want to make (or have)?
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WHO / WHAT / WHERE ARE THEY?

Wit.ai

(Company) Wit.ai makes it easy for developers to build a Siri-like speech interface for their app or device. It's an API that turns natural language (speech or messages) into actionable data.

VirtuOz

(Company) a digital customer relationships platform, provides intelligent virtual agents for enterprises to ensure quality user experience

<http://techcrunch.com/2013/01/10/in-our-inbox-a-memo-that-says-nuance-has-bought-virtuoz-to-ramp-up-its-enterprise-services/>

Siri

(Software) an intelligence personal assistant and knowledge navigator which works as an application for Apple Inc.'s iOS.

eBay

(Company) an American multinational corporation and e-commerce company, providing consumer-to-consumer & business-to-consumer sales services via Internet.

AT&T

(Company) an American multinational telecommunications corporation, headquartered at Whitacre Tower in downtown Dallas, Texas. AT&T is the second largest provider of mobile telephone and the largest provider of fixed telephone in the United States, and also provides broadband subscription television services.

Nuance Communication

(Company) an American multinational computer software technology corporation, headquartered in Burlington, Massachusetts, United States, that provides speech and imaging applications. Current business products focus on server & embedded speech recognition, telephone call steering systems, automated telephone directory services, medical transcription software & systems, optical character recognition software, and desktop imaging software. The company also maintains a small division which does software and system development for military and government agencies. In October 2011, unconfirmed research suggested that its servers power Apple's iPhone 4S Siri voice

recognition application.

Nina Web

(Software) delivers personalized Web customer service via a human-like conversational interface to quickly address customer needs.

<http://www.nuance.com/landing-pages/products/nina-web/>

VOCABULARY

Uncooperative	(adj) 비협조적인
Appliance	(n) (가정용) 기기
Gadget	(n) (작고 유용한) 도구
Thermostat	(n) 온도 조절 장치
Drone	(n) 원격 조작 기구; (무선 조종되는) 무인 비행 물체; 원래의 의미는 수벌
Have the deep pocket	(expression) 자금이 많다
Swiftly	(adv) 신속히, 빨리, 즉시, 즉석에서
Natural-language	(n) (인공 언어가 아닌) 자연 언어
Hypothetical	(adj) 가상의, 가설의
Utterance	(n) (말로) 표현함, 입 밖에 냄
Automation	(n) 자동화
Wearable device	(n) 착용형 장치
Hackathon	(n) 해커톤, 마라톤을 하는 것처럼 정해진 시간 동안 해킹을 하는 프로그램 마라톤
Nuke	(v) 데우다
Rely on	(v) ~에 의지[의존]하다, ~을 필요로 하다
To ...extent	(expression) ...한 정도로
Varying	(adj) 가지각색의; (연속적으로) 바뀌는, 변화하는