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Intel® Real Speech Debuts in Oakley's* Radar Pace Smart Eyewear

Natural-Language Processing Technology Creates Intuitive and Engaging Experiences

Oct. 3, 2016 — Intel® Real Speech is making its debut as the voice technology behind Oakley's* new Radar Pace smart eyewear. Intel Real Speech allows users to have a natural and conversational dialogue with the coaching system featured in the eyewear. This innovative technology combines multiple language and machine learning capabilities to create engaging, conversational communication with devices for new immersive experiences.

Context-Aware Natural Language Interaction
Users tend to remember what a system is capable of, but not the specific commands required to interact with it. Therefore, Intel Real Speech is built on deeply complex language and reasoning models to interpret tens of thousands of phrases without the limitation of predetermined commands.

The conversational dialogue capability combines grammar, rule-based and statistical language models with machine learning technologies to achieve natural, conversational interaction, including automatic speech recognition, natural language understanding and generation, language-based reasoning, as well as artificial intelligence. In-app analytics also enable context for future conversations.

Hands-Free and Adaptable Two-Way Communications
Intel Real Speech technology enables simple and intuitive user interactions for simple hands-free input and output, which is ideal in distraction-laden environments. Intel created an automated voice based on natural speech patterns gathered from multiple sources. For the highest degree of flexibility and to account for the dynamic nature of conversation, Intel Real Speech uses a mixed initiative framework, enabling the user or the system to begin an interaction. The gender and tone of the voice varies by language based on cultural preferences.

The Result of Years of Research
Intel combined decades of experience with voice technologies across platforms and more than four years of software development to develop Intel Real Speech. For Oakley's Radar Pace, the first commercial implementation of Intel Real Speech, Intel engineers led the technology development across hardware, software, mobile app and cloud solution, building on previous research, in concert with Oakley's design and engineering teams. Intel and Oakley worked with athletes and coaches around the world to gather and define research on training behaviors and interactions with coaches to inform the Intel Real Speech language models.

Future Uses for Intel Real Speech
Radar Pace is the first use of Intel Real Speech to come to market. Intel Real Speech has additional far-reaching future applications where natural language and hands-free interaction could be beneficial. The platform was designed with a wide variety of products and applications in mind. Among others, Intel is researching applications in automotive entertainment and navigation systems, home and industrial robotics, and personal assistant software.

For more information on Radar Pace, visit http://www.oakley.com/RadarPace.

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