Researchers examine how characteristics of automated voice systems affect users' experience

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The personality and gender of the automated voices you hear when calling your credit card company or receiving directions from your GPS navigational system may have an unconscious effect on your perception of the technology. Human factors/ergonomics researchers have studied how the gender and tone selected for an interactive voice response system, or IVR, affects its user-friendliness and will present their findings at the upcoming HFES 56th Annual Meeting in Boston.

IVRs have become increasingly popular, particularly with the introduction of mobile technology such as Apple Siri and Iris for Android. Past studies have indicated that users are more responsive to actual human voices than to computer-generated voices, but little research has been completed on the role that voice characteristics play in user perceptions of the technology.

In their upcoming Annual Meeting presentation, "He Says, She Says: Does Voice Affect Usability?" Rochelle Edwards and Philip Kortum conducted a study in which participants interacted with a medical IVR that collected information about their health. Users responded to both male and female voices that spoke in different tones – upbeat, professional, or sympathetic - and then were asked to judge the system's usability.

"We have been systematically looking at what affects user performance

on IVRs for some time now," said Kortum. "Voice is the major element in an IVR interface, as graphical elements are for a Web page, and this study was a first attempt to understand the impact voice might have on the perceived usability of such systems."

The authors found that although IVRs with male voices tended to be perceived as more usable than those with female voices, they were not considered more trustworthy. The researchers encourage designers to take voice characteristics into consideration when developing future systems.

"Anyone who uses an IVR knows how frustrating they can be," continues Kortum. "Much of this frustration stems from poorly designed IVRs, not from the form of interface being intrinsically 'bad.' This research shows that some simple modifications to the design of these systems can have an impact on the usability of voice interfaces."

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