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Mitsubishi Electric Develops User Interface and App to Render Spoken Words Instantly as 3D Text in Live Video Recordings

Leverages AR technology for more expressive social media video communications

TOKYO, March 5, 2019 – [Mitsubishi Electric Corporation](http://www.mitsubishi-electric.com) (TOKYO: 6503) announced today its newly developed SwipeTalk Air™ user interface (UI), which is believed to be the world's first UI to use augmented reality (AR) technology to render spoken words instantly as three-dimensional text during live video recordings. Text positioning is implemented by simply swiping a finger over the tablet or smartphone screen. The company also announced its development of SwipeTalk Air app on iOS® that integrates the UI, video recording and other functions for extra-expressive videos that are expected to enliven social media.

A prototype of SwipeTalk Air will be displayed at the SXSW (South by Southwest) digital technology exhibition in Austin, Texas from March 8 to 17. Going forward, operability and functions will be further upgraded prior to launching the UI and application in commercial products and services.



Subject speaks and cameraperson swipes finger (left) to instantly render 3D text in video (right)

Main Features

1) *UI renders spoken words as text along swiped path on screen*

The UI immediately renders spoken words as 3D text in a video as the cameraperson swipes a finger across the device screen. The device is pointed at the subject, a few words are spoken, a line is swiped on the screen and then the text instantly appears in the swiped area.



Steps for using SwipeTalk Air UI

Video recording and editing are seamlessly integrated, so the experience of capturing the moment live is never interrupted and users can enjoy inputting text intuitively.



Screenshot of integrate video and audio text created with SwipeTalk Air app

2) *App incorporates various functions to create highly expressive videos*

It will contribute to accomplish a new video expression by placing letters in anywhere of virtual midair in the screen. As the arranged text will look fixed in place, even when changing the camera angle, taking videos that combine such text and recorded objects enables new ways of expressing oneself and new uses based on users' ideas. Due to swift text positioning, user can easily produce videos full of creativity.

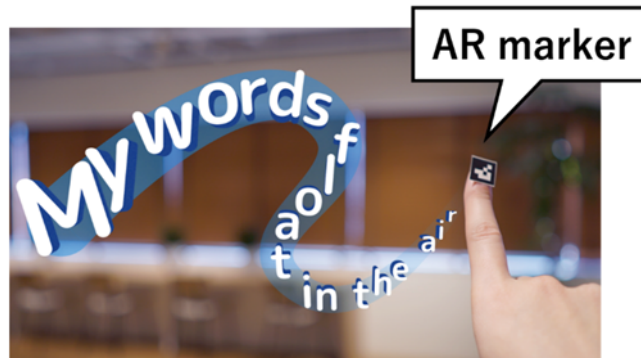


Image from a video taken with the app

Other Features of the App

1) *Text display using AR markers*

When the subject wears an AR marker (camera-recognizable images) on the subject's finger, it will make text follow the path of the subject's moving finger.



Rendering text by tracing an AR marker within the camera image



Positioning text using an AR marker (left: before, right: after)

2) *AR picture drawing*

Lines can be drawn in the video by tracing them on screen to supplement text with illustrations, such as arrows, pattern or cartoon-like decoration, to enhance the effect and clarity of the message.



Arrow and bubble drawn on screen for more expressive message

3) *Multilingual translation*

The positioned text can be translated into a foreign language instantly. When the displayed text is changed to another language, it is read out loud in that language to enable communication and collaboration with people who speak other languages.

Background

Video posting via social media is now very common, so people are constantly searching for greater means of expressing themselves through video. Also, the demand is growing for UIs that enable people to record, edit and share videos to inform others of what is happening at the moment. Since 2013, Mitsubishi Electric's Industrial Design Center (IDC) has been implementing its Design X project to allow designers to freely create innovative concepts for new products and services. Research includes interviewing social media influencers to learn about the latest user needs, such as for quickly editing and sharing videos. The center previously developed a precursor to the newly announced UI: *Mitsubishi Electric Develops World's First Voice-activated Drawing Function that Displays Spoken Words Where Finger is Traced on Screen*

<http://www.MitsubishiElectric.com/news/2016/0209.html> (February 9, 2016)

Patents

Pending patents for this news release number one in Japan and one outside of Japan.

Design Registrations

Pending design applications number four in Japan.

SwipeTalk and SwipeTalk Air are trademarks of Mitsubishi Electric.

SXSW and South by Southwest are registered trademarks of South by Southwest LLC in the United States and other countries and regions.

iOS is a registered trademark of Cisco Technology, Inc.

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About Mitsubishi Electric Corporation

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion*) in the fiscal year ended March 31, 2018. For more information visit:

www.MitsubishiElectric.com

*At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018