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Surgeons trial smart glasses for mid-op note taking

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Google Glass is being explored by University of Sussex engineers for healthcare applications. Credit: Loïc Le Meur - Flickr: Loïc Le Meur on Google Glass, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=26050963

Surgeons could soon be using smart glasses to make notes during operations, after a promising first trial led by the University of Sussex.

If further testing is successful, it could eventually end the practice of doctors hand-writing notes from memory once the patient has left the room; a practice that introduces an "unnecessary burden of potential error", the researchers say.

For the study, urologists with Brighton and Sussex University Hospitals

NHS Trust were asked to wear Google Glass when carrying out simulated data entry of cystoscopy findings, which are used to investigate suspected bladder cancer.

Using head movements and speech, they could enter data – such as the size, number and appearance of lesions - in real time, while leaving their hands free to carry out the procedure.

It also enabled them to create, for the first time, a single, annotated image for each patient's file, rather than lots of separate notes and drawings from multiple clinicians.

Dr Daniel Roggen, Reader in Sensor Technology in the University's School of Engineering and Informatics, will present the results of this collaboration with consultant urologist Andrew Symes today (Wednesday 14 September) at UbiComp 2016 in Heidelberg, Germany.

Dr Roggen said that the NHS can make significant cost savings by embracing the advances being made in wearable technologies. He said: "These technologies are becoming more affordable by the day and would also save time and money by speeding up data entry and removing the need to employ a transcriber or note taker.

"Most of the surgeons we spoke to in our study were really positive about the potential for this technology and could easily see how they could integrate it into their procedures."

The eight surgeons and junior doctors involved in the study said the technology could improve surveillance of cancer patients and provide more accurate data for surgeons.

Dr Symes said: "There is currently a degree of inconsistency when attempting to track progression of disease as the same clinician may well

not be performing subsequent cystoscopy procedures and individualised style and approaches to notation are common.

"As well as providing an imperfect record of the evolution of lesions over time this can have an impact on the efficiency of analysing public health data.

"Another disadvantage is that of the reliance on memory, inserting an unnecessary burden of potential error into the procedure."

Provided by University of Sussex