Surgeons have demonstrated the medical applications of Google Glass, an advanced new device that can take pictures, record videos and surf the Internet, by using it for the first time for streaming of a dental procedure in real time.

In October, three dental surgeons at Hospital de Molina in Murcia in Spain conducted a historic maxillofacial surgery at a master class. The clinical procedure, performed by Drs Pedro Peña Martínez, Juan Francisco Piqueras Gómez and Alejandro López Gómez, was part of a 3-D diagnostics and treatment surgery course at the hospital’s dental clinic and was attended by dentists from all over Spain.

The clinic’s programme provides training to dentists, and achieved an international milestone by using Google Glass to transmit a complex maxillofacial surgery live for the first time.

The surgery was performed on a 70-year-old patient with a fully edentulous maxilla using a computer-guided implant technique pioneered by Dr Peña in Spain. The computer-guided surgery system allows surgeons to plan the clinical case.

A 3-D model of the patient’s maxilla is created, which shows the position in which the implants are to be placed. A surgical guide is then fabricated to place the implants. In an hour, the patient has a complete prosthesis on dental implants.

The advantages of this implant system are accurate diagnosis, reliable information on bone quality, predictable treatment, reduced surgery time by avoiding the need for incisions and bone exposure, and shorter recovery time.

Using Google Glass in such a procedure has the additional benefit of allowing direct communication between the surgeon and the audience. The surgeon at the master class can interact with and answer questions from attendees, all of whom are able to see the procedure via the Google Glass broadcast.

The Google Glass device is a head-mounted wearable computer available only on a trial basis. It displays information and can communicate with the Internet via natural language voice commands. It is part of Google’s Project Glass, a research and development initiative, which has worked on other futuristic technologies, such as driverless cars.

The technological advancement at the hospital was made possible by Droiders, a Spanish company that develops applications for Google Glass. According to representatives of the hospital, the procedure is an example of its commitment to providing high-quality training to professionals using the most advanced technologies. Dental publisher Ripano, who works with Drs López and Piqueras regularly, promoted the event and was on-site during the surgery.

The surgical procedure has attracted widespread media attention, as this new technology creates new possibilities for professional education in dentistry.