

## **Researchers design steady-handed robot for brain surgery**

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Surgeons operate on a patient in July 2011 in Baghdad. Neurosurgeons may one day get help in operating rooms from a robot with movements 10 times steadier than the human hand to perform delicate brain surgeries, the EU said Monday.

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The European Commission touted the EU-funded ROBOCAST project as a breakthrough in robotic neurosurgery that could in future help treat tumors, epilepsy, Parkinson's disease and Tourette syndrome.

Developped by British, German, Italian and Israeli researchers, the <u>robotic hand</u>, guided by a surgeon, has 13 types of movement compared to four available to human hands during minimally <u>invasive surgery</u>.



It even has "haptic feedback", or physical cues that allow surgeons to assess tissue and feel the amount of force applied during surgery, the European Commission said in reporting the EU-funded ROBOCAST project.

The robot has only been tested on dummies so far, performing keyhole neurosurgery, in which a probe enters a tiny hole in the skull to manipulate tissue or collect blood and other fluids.

"Robots can reduce surgeon's tremor tenfold, making them especially useful in protecting the delicate and important <u>brain matter</u>," the commission said.

The European Union, marking European Robotics Week, said it was funding a parallel project involving three robots to assist surgeons operating on patients who must stay away during <u>neurosurgery</u>.

The EU's executive Commission has already spent 400 million euros in around 100 robotics projects. Brussels says <u>global demand</u> for robot-related products was worth around 15.5 billion euros in 2010, including 3.0 billion in Europe.

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