The Advanced Technology That's Powering Hospital Innovation

Presented by Bodo Schwarz on 28 March
from an article written by Lyndsey Gilpin

Perfint Healthcare

Perfint Healthcare (http://www.perfinthealthcare.com/MaxioOverview.asp) makes Maxio, a guided robotic system that helps take doctors through cancer diagnostics, pain care, and surgeries. It can do things such as find exactly where to place a needle in a tumour more accurately than even a human doctor could. The robots have been wheeled around about 1,500 hospitals around the world so far.

Image: Perfint Healthcare

TUGs

TUGs are smart courier robots made by Aethon (http://www.aethon.com/tug/benefits/) taking over simple tasks in UC San Francisco's new medical centre. It does deliveries, so staff can better focus on the more important parts of their job. They can carry loads of up to 1,000 pounds and are great for carrying things like linens, equipment, and paper work. It does its job with the help of many sensors and a camera.

Image: Aethon

High-tech patient rooms

Robots aren't the only advanced technology at the UCSF Medical Center. The hospital also offers MRI and CT scan rooms that show scenes of places around the world and allow patients to browse the web. The patient rooms also have tablets with which they can Skype friends, email doctors, or order food.

High-tech sanitation

This Biovigil (http://www.biovigilsystems.com/) badge monitors when a doctor or nurse enters a patient's room using infrared sensors on the wall – and then chemical sensors in the badge can tell if the staff member washes their hands. If they do, it shows a green light. If they don't, it glares red, and if they delay the process too long, it shows yellow. It's good for shaming people into cleaning their hands correctly.

Image: Biovigil

Biorepository

The Johns Hopkins Medicine Paediatric Biorepository (http://www.allkids.org/body.cfm?id=396&action=detail&ref=1331) at All Children's Hospital offers a range of storage options for medicines, plasma, DNA, and many other bio specimens. Since it has to be kept a certain temperature and monitored almost constantly, it's one of the most high tech systems in the hospital. It's monitored by a data tracking and alarm system, and the specimens are retrieved with a robotic arm.

Image: Johns Hopkins
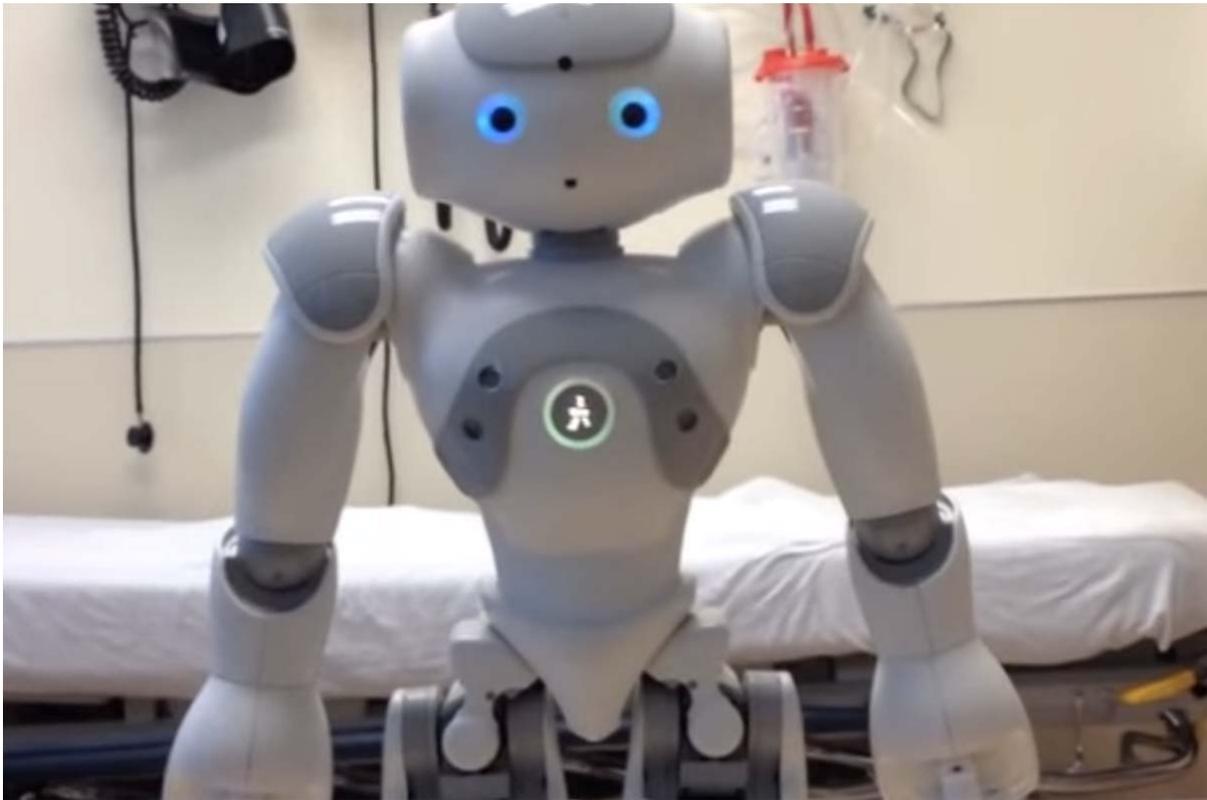
MEDi

MEDi, which stands for Medicine and Engineering Designing Intelligence, are childlike robots that are being used at Alberta Children's Hospital. They are supposed to calm kids' nerves by giving them high fives and making small talk, and they've been tested for about three years at the hospital.

Image: University of Calgary

High-tech wall

This interactive media wall (http://today.uconn.edu/blog/2015/01/hospitals-high-tech-wall-opens-doors-to-imagination/) at Boston Children's Hospital is meant to engage patients and families of all ages. It's in the lobby and towers at 30 feet tall. When a child moves into the space, an avatar appears and tracks their movement, and reacts to gestures they make. It also shows various images like underwater scenes and art.

Image: UConn
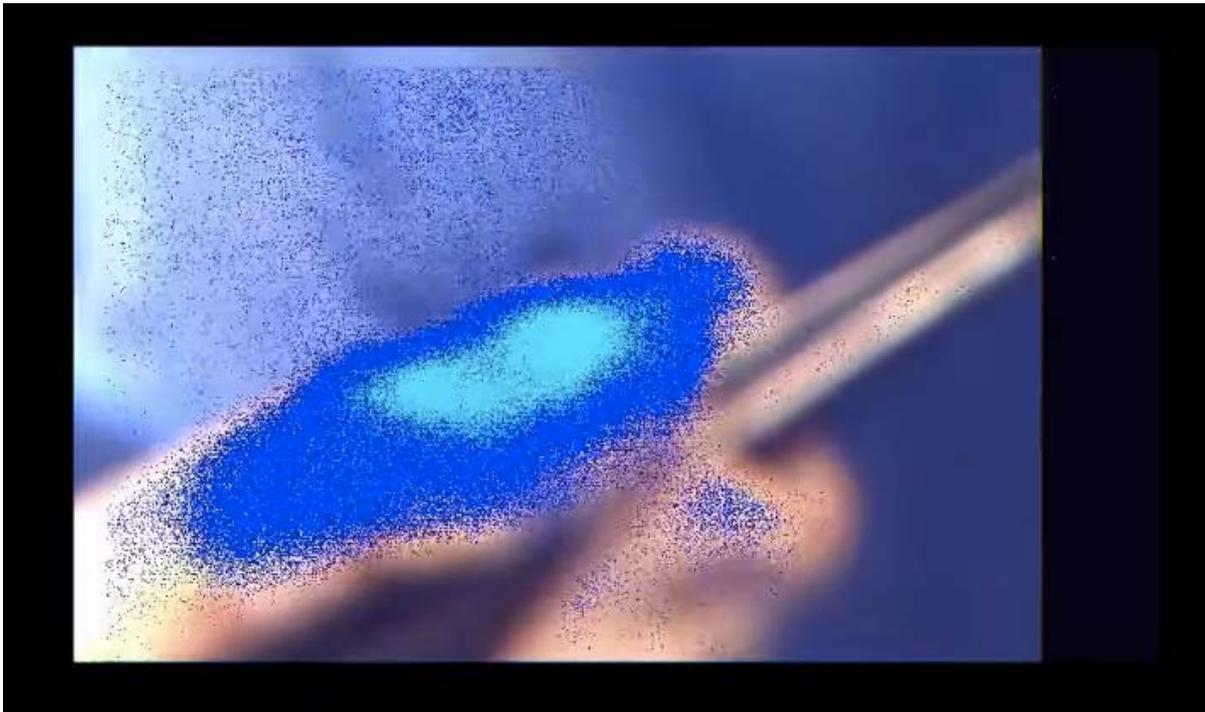
Glasses that can see cancer

Researchers at Washington University School of Medicine in St. Louis created high-tech glasses (http://news.wustl.edu/news/Pages/26496.aspx) that surgeons can use during surgery that detect cancer cells. Using a special mounted video display, the glasses can see cancer cells light up after a molecular agent that is injected into a patient attaches to them.

Image: Washington University School of Medicine

On-demand video interpreting

Yale-New Haven Hospital recently rolled out remote video interpreting systems for those patients that have limited English proficiency, or are hard of hearing. The units are iPads mounted on poles that access healthcare interpreters through a company called Stratus (http://www.stratusvideo.com/videos/), which connects clients with more than 175 spoken and signed languages.

Image: Stratus

Haiti's solar-powered hospital

In Haiti, 1,800 solar panels were put on the roof of a hospital as part of a project by Partners in Health (PIH) and Hôpital Universitaire de Mirebalais (HUM), to ensure that the facility wouldn't run out of power. It's part of a larger project where 11 medical facilities are getting photovoltaic systems.

Image: Partners In Health

About Lyndsey Gilpin

Lyndsey Gilpin is a Staff Writer for TechRepublic. She covers sustainability, tech leadership, 3D printing, and social entrepreneurship. She's co-author of the upcoming book, Follow the Geeks.

Source: http://www.techrepublic.com/pictures/photos-the-advanced-technology-thats-powering-hospital-innovation/10/