



Autopsy on a Virtual Body

Case: Interactive Institute for Norrköping Visualization Centre

Product: MultiTouch Cell

Use case: Exhibition, Education and Research

Norrköping Visualization Centre wanted to help people to see things that would otherwise be impossible to see with the naked eye. Interactive Institute made a Virtual Autopsy Table for the centre to show exhibition visitors the inner parts of the human body, whose functions otherwise would have been much more difficult to understand.

The Virtual Autopsy Table allows users to perform dissections and analyses on "real live" human bodies. Volumetric 3D data sets from actual bodies are input via CT scan or MRI and processed using software developed by Linköping University and the Norrköping Visualisation Centre. Users examine and study the 3D virtual visualization on a 46-inch Multi-Touch Cell.

The MultiTouch Cell autopsy table was designed as an educational tool and to promote research by utilizing state of the art medical visualization. Through simple hand movements, the display allows the user to manipulate or cut any bone or organ in the body. The displayed body can be flipped, turned, or bisected in any direction necessary and the point of view can easily be zoomed to better see and understand the pathology or etiology. Bodily injuries, illnesses and abnormalities can be analyzed completely without even donning surgical gloves and analysis can be performed over and over again without harming the specimen.

The Textbook Comes Alive

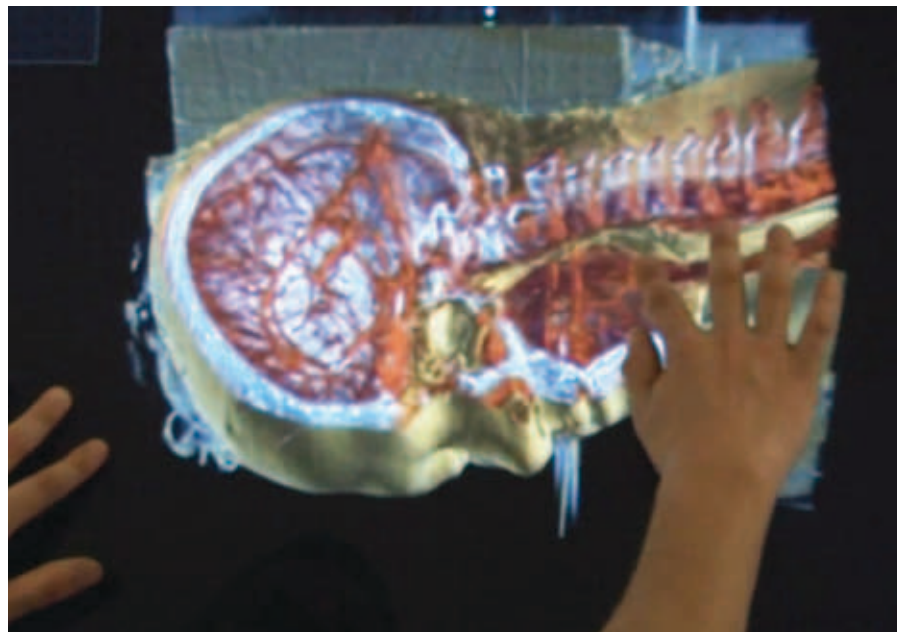
The MultiTouch Cell is a far more captivating and engaging media than a slide presentation or a textbook. It is also much less smelly and a lot more colorful visually than a cadaver. Most human anatomy classes have one cadaver which may be shared by hundreds of students. Over the course of a semester or term, these specimens become degraded. A far better choice would be to display a live-quality human body which allows the user to remove the skin or the muscles, or to view just the skeletal system, the lymphatic system or the circulatory system.

The MultiTouch Cell virtual autopsy table allows users to view amazingly accurate samples and dissect a "virtually live" human as many times as they wish. Finding a particular body part is as simple as directing the screen to zoom in on an area where it is located. For example, to find the ulnar nerve, simply zoom in on the elbow next to the ulna bone. Looking at the liver, pancreas or brain for evidence of disease is as simple as bisecting that organ with a virtual knife.

High Quality, Cost Effective Interactive Display

The client selected the MultiTouch Cell because it is a stable, high resolution, plug and play multi touch solution with immediate response and delivery. The 46" Cell is the only HD full multi-touch solution that is readily available in the marketplace and in a feasible price range.

The Interactive Institute developed this application to run on a 46" Cell. Professional support was provided by the MultiTouch Development Team.



User can perform an autopsy on a virtual body on the Virtual Autopsy Table.

More information

Video:

<http://www.youtube.com/watch?v=bws6vWM1v6g>

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/// Challenge

To present an entertaining, understandable and interactive research and educational autopsy format.

/// Solution

The MultiTouch Cell running the 3D autopsy application

/// Benefits

A captivating and interesting teaching and research tool allowing users to view any part of the human body via an extremely high quality visual display.