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Able has 3-D images on the brain

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A Massachusetts company has an imaging product that it thinks will be, well, just what the doctor ordered.

Able Software Corp. of Lexington recently released its latest version of 3D-DOCTOR, a personal computer-based software program which takes a two dimensional image and recreates it in a three dimensional digital image.

The advantages to having a 3-D image as opposed to a flat two dimensional image are several-fold, said Dr. Yecheng Ted Wu, the president, founder and chief executive of Able.

“A three-dimensional image is much more accurate than one in only two dimensions,” Wu said. “A lot of features that doctors need to look at through imaging are three-dimensional. Organs and tumors are both three dimensional objects and doctors would have to look at two or three different two-dimensional images to gauge the complete

size of a tumor.”

The latest version of 3D-DOCTOR includes some marked improvements over old versions, including enabling doctors to virtually slice an image across any axis. There are several other benefits, as well.

A 3-D image can be displayed in a plane view window, in a montage window where all image planes are organized side-by-side, in a 3-D volume-rendering window, in a 3-D surface-rendering window, or in all of the windows at the same time.

“When doctors are given the ability to rotate the section of the body they’re looking at, check it from all angles, they have a definite advantage over trying to create a 3-D image in their minds from 2-D pictures,” Wu said. “We were also one of the first companies to offer both surface and volume rendering.”

Surface rendering, he explained, lets a doctor take, for instance, a magnetic resonance imaging procedure done on a patient’s head, and examine the surface of the brain in a 3-D image taken from the two-dimensional MRI, using pixels generated during the test. But Able also offers volume rendering, which uses both pixels and “voxels,” which are volume pixels that add depth to an image.

“The pixels in the volume rendering are transparent, so a doctor can see through them to whatever he’s looking at inside,”

he said. "This would work very well with simple bone breaks, where a doctor can see exactly where the bone is broken, how severe the break is, and how it could affect the surrounding tissue."

The software is usable on a PC platform using a Windows operating system — which is a break from the tradition, where mainframe machines still run a sizable portion of imaging centers in hospitals.

Able offers day-long classes to teach physicians and technicians how to use the software. The company recently closed on a deal for a teaching facility in Billerica and opened it for training purposes earlier this month.

"The teaching portion of the class only takes about a half day and then we let them play around with it for the other half until they feel comfortable with the system," Wu said. "Our system is installed in some local hospitals, including Brigham and Women's."

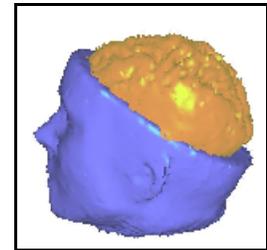
Wu founded Able in 1993 as an imaging company, offering its first software and services to people interested in rendering different views of maps. Its first software package, R2V, is an automated, raster-to-vector (R2V) conversion software for mapping. It enables a user to create a digitized, three-dimensional image of a map that the user scans into the system.

"The R2V was our first software package, but we are really focusing on this medical

SOFTWARE

This is your brain on 3D

Able Software Corp. of Lexington recently released an upgraded version of its 3D-DOCTOR



imaging software. The new version has some extra features, but is still able to run on a standalone PC, making it available to nearly all health care facilities.

area now," Wu said. "We'd really like to be a big player in the medical imaging market. We know we're not alone in this space, but I think we can have a large impact. We have a good product and now we need to get our distribution up."

The 3D-DOCTOR software is available

About Able Software Corp:

Able Software is a leading software developer for 3D imaging and raster to vector conversion applications. Able Software was founded in 1993 and currently has users in more than 60 countries.

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