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### Company pitching a better view for doctors

Startup aims to provide surgery with a different light

Dallas Business Journal - by [Jeff Bounds](#) Staff Writer

At one point in his career, Austin Crowder sold lights that surgeons wear on their heads during operations. And he heard the same complaints over and over.

Some weren't bright enough. Plus, most headlamps use bulbs filled with Xenon gas. Those require the physician to be tethered to the light source via a fiber-optic cable. Those cables deteriorate quickly and need to be replaced, as do the bulbs, leading to high maintenance costs.

An alternative headlamp solved the brightness problem by using a technology called light-emitting diodes, or LEDs for short. But LED-based gear got too hot for comfort.

So after nine years in sales, management and education about surgical devices, Crowder decided to start his own company and come up with a better mousetrap.

The result is Frisco's **Alpha Med-Surge Inc.**, which kicked off operations in 2005 and plans to have three copies of the first prototype of its system by April 23. Pre-production prototypes are scheduled to be ready by the end of the summer, and Crowder hopes to hit the market with his product in the late fall of 2008.

Crowder takes a radically different approach to existing systems with his AMS-Alpha Star product.

For one, the head mounting contains the light source, meaning the physician isn't tethered to a machine. That light source is on the back of the headpiece, and contains 18 to 20 LEDs.

Using a "heat sink" -- which expels heat into the surrounding air -- the headpiece remains cool enough to wear for an extended time. Crowder's heat-management system uses a combination of small fans and nanotechnology.

The light is moved over the top of the physician's head via a pipe of sorts, dubbed an optical wave guide. The beam of light that's emitted into the surgical area will be about 80 times brighter than a 60-watt lightbulb.

#### Tailored to needs

The first version of this contraption will shine shades of light tailored to the needs of a given surgeon. For instance, neurosurgeons require blue light to work on the gray matter of the brain.

The second permutation will allow doctors to tune the light to specific frequencies they require. One flavor of light reflects hemoglobin, and another shows structures underneath fat.

The whole enchilada will weigh between nine and 12 ounces, depending on the physician's specialty. According to Crowder, the headpiece is balanced over the spine. "It feels like you're wearing nothing," he says.

Crowder plans to sell the AMS-Alpha Star for \$6,000 -- about \$1,500 less than the \$7,500 competing light systems sell for.

The big saver, according to Crowder, is the roughly \$1,600 in annual repairs and maintenance that he says traditional systems cost. Over the seven-year depreciation of rival products, that adds up to more than \$11,000 in additional expenses.

AMS is a program company of the **North Texas Enterprise Center for Medical Technology**, a Frisco incubator for medical-device startups. It currently has three employees.

Aside from NTEC, Crowder has a believer in one of his former bosses, Tom O'Brien, CEO of the Dallas surgical-device distributor **Eclipse Medical Ltd.**

He admits he was initially skeptical of Crowder's idea, but changed his mind after looking at the intellectual property Alpha Med Surge had generated.

O'Brien thought so highly of the idea that his firm invested \$250,000 in seed financing into Alpha Med-Surge, with O'Brien taking a board seat. Crowder hopes to land another \$500,000 from wealthy individuals by the end of this month.

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As with any startup, there is risk in putting money in the venture, O'Brien concedes. But, he adds, the technology is "something that will make a loud statement in the market. We wanted to be part of it, and we just put our money where our mouth was."

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