

Shoes

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what worked in New York or Los Angeles didn't necessarily go over in Houston. He was shocked when Barneys, a New York institution, closed in the Galleria after being open for only a short time.

Six months after opening Sole Sen-

sation, he and Chea altered the concept, offering a more mainstream, value-oriented product.

After deciding that the entertainment-focused shopping center they were in was not right for retail, they moved to the River Oaks Shopping Center.

Moving into a space with higher rent meant that they had to start selling a higher-priced shoe, said Curtis, who noted with a smile, "There's a

lot of rich people here."

Currently, their merchandise is "a little bit edgy," and getting edgier all the time because TV shows like *Sex and the City* and stylish magazines are making Houston women more fashionably bold, Curtis said.

Sole Sensation has begun carrying women's clothing, which comprises about 35 percent of the inventory.

Hill would like to see Curtis and Chea carry an even greater percent-

age of clothing. The shoe business, he said, is one of the most challenging areas of retail, because one has to order so many colors and sizes of each shoe style.

Running a small business has never been easy, and after Enron's collapse and the terrorist attacks of 2001, it's gotten harder, Curtis said. There is little room for error, and without Hill's fine-tuning over the past few years, Curtis is not sure if his store

would have survived.

Now Chea and Curtis are bullish about their business. Later this month they will open a second Sole Sensation in the Royal Oaks subdivision.

And Hill has a generally optimistic forecast for Houston retailers:

"Overall, people seem to be doing a little bit better," he said. "From what I've seen with my clients, the worst may be over."

Robotic legs lift burdens

Exoskeleton helps carry heavy loads

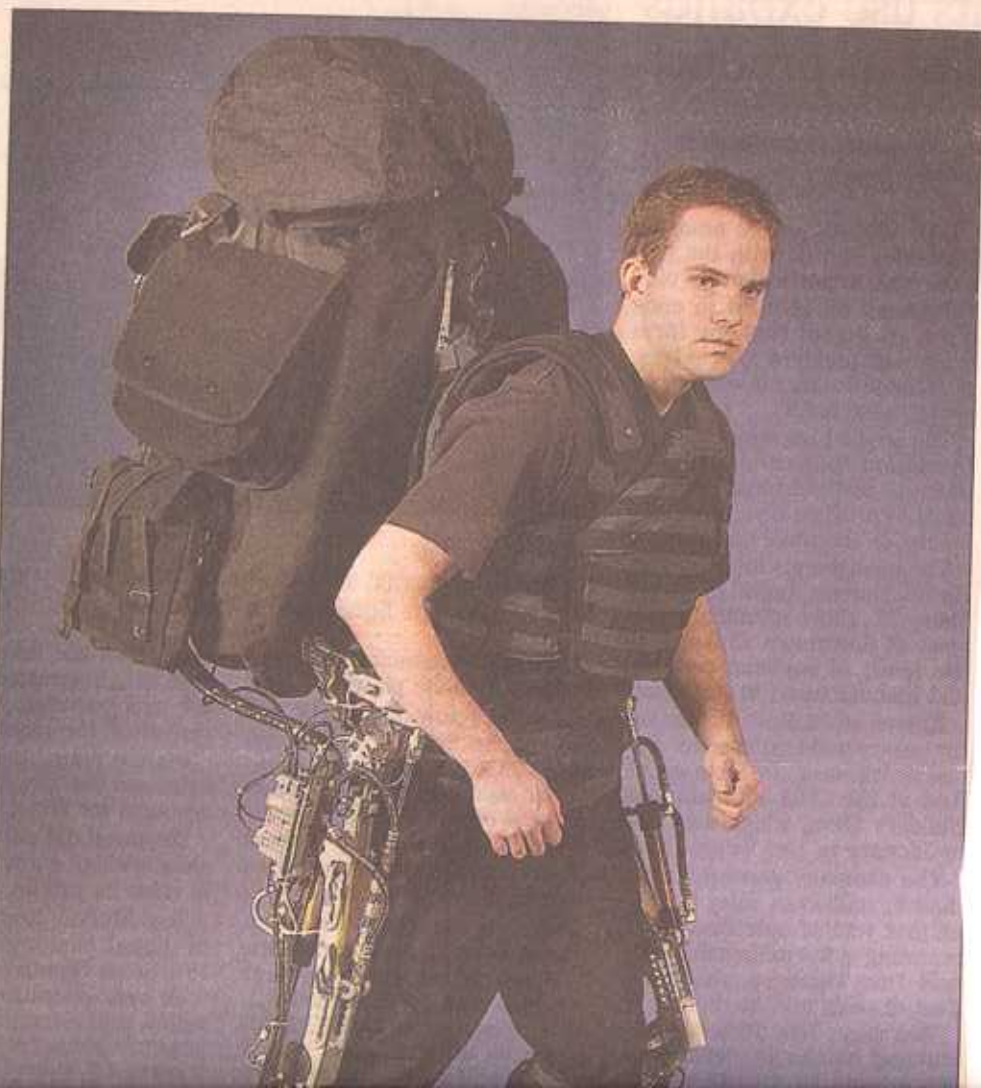
By MICHELLE LOCKE
Associated Press

BERKELEY, Calif. — Move over, Bionic Man, and make room for BLEEX: the Berkeley Lower Extremities Exoskeleton, with strap-on robotic legs designed to turn an ordinary human into a super strider.

Ultimately intended to help people like soldiers or firefighters carry heavy loads for long distances, these boots are made for marching.

"The design of this exoskeleton really benefits from human intellect and the strength of the machine," says Homayoon Kazerooni, who directs the Robotics and Human Engineering Laboratory at the University of California-Berkeley.

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The exoskeleton consists of a pair of mechanical metal leg braces that include a power unit and a backpacklike frame. The braces are attached to a modified pair of Army boots and are also connected, although less rigidly, to the user’s legs.

More than 40 sensors and hydraulic mechanisms function like a human nervous system, constantly calculating how to distribute the weight being borne and create a minimal load for the wearer.

“There is no joystick, no keyboard, no push button to drive the device,” says Kazerooni, a professor of mechanical engineering. “The pilot becomes an integral part of the exoskeleton.”

In lab experiments, says Kazerooni, testers have walked around in the 100-pound exoskeleton plus a 70-pound backpack and felt as if they were carrying just 5 pounds.

Eventually, the device could help rescuers haul heavy equipment up high-rise buildings or turn tired troops into striding super soldiers.

What it won’t do is turn you into a Borg, a bionic *Star Trek* creature.

“The exoskeleton is not going to magically transform people into killing machines,” says Kazerooni, known to his students as Professor Kaz. “They’re really good, it turns out, at enabling firefighters, soldiers, post-disaster rescue crews to carry heavy loads over great distances for hours.”

So, no cyborg cops. But at least you get Terminator togs.

The next step for the BLEEX team is making the power source quieter and stronger



University of California-Berkeley

A model demonstrates a robotic device designed by the University of California-Berkeley to help soldiers or firefighters bear heavy loads over long distances.

SEE IT IN ACTION

■ www.me.berkeley.edu/hel/bleex.htm

and miniaturizing components.

BLEEX is funded by the Defense Advanced Research Projects Agency, the Pentagon’s research and development arm, and was among the projects being showcased at

a tech symposium held by the agency last week in Anaheim.

The project is one of scores in the field of robotics, which ranges from industrial machines that assemble cars to orthotics, surgical devices that activate or supplement weakened limbs or functions.

In Japan, a leader in robot research, Sony Corp. has developed a child-shaped walking robot, known as Qrio, and Honda Motor Co. has developed a walking, talking humanoid robot. This spring, some Japanese companies plan to start marketing a “robot suit,” a motorized, battery-operated device to help old and infirm people move around.

1095 Evergreen Circle, The
Woodlands, Representatives: Art
Nicholson of CB Richard Ellis for
Seller: David Duncan, trustee. De-
scription: 1 acre for development
of retail center. Location: Texas
249 and Seton Lake. Representa-
■ Buyer: Gary Kemp, trustee.
■ Tenant: House of Power Elec-

TRANSACTIONS

IN BRIEF

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