



To safety in seconds

Anti-terror specialist brings potential life-saving device to market

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On Sept. 11, 2001, Yoav Barzilay sat in disbelief watching live television coverage of desperate people jumping from windows of the blazing 110-storey World Trade Center skyscrapers.

"I wondered why people were jumping," Mr. Barzilay said. "I didn't understand it. These people could have been saved."

Mr. Barzilay, a 27-year veteran of the Israeli police's elite anti-terror unit, made an immediate decision as he watched people jumping to certain death. "I decided to take action."

One year later, Mr. Barzilay -- who for 15 years headed the development of combat systems, including rappelling and climbing devices for the anti-terror unit -- came up with an idea that has the potential to save the lives of people trapped in skyscrapers due to events such as fires, terrorist attacks or earthquakes.

Doublexit uses a simple cable and harness system to lower people trapped in high-rise buildings to safety at the controlled speed of 3.3 feet a second. The system is suitable for homes or offices on any floor of a building up to 1,155 feet. (For comparative purposes, the World Trade Center's Tower One was 1,368 feet high.)

The device is generally installed within a specially designed door because doorways are considered the safest location in any building. But it can also be installed directly into walls or other niches.

Doublexit, which has both heat and smoke detectors, automatically deploys in a fire or other emergency situation, granting high-rise residents the option to strap themselves into a harness, make their way to the nearest window or balcony, and be automatically lowered to safety by the device.

Each unit has two harnesses, one at each end of a coated steel cable. Once the first person has reached the ground and disengages from the harness, the second person at the other end can begin his or her descent. The system, which can carry a load of at least 336 pounds, allows parents to carry children with them and grants a certain amount of fire protection. It takes an average of three minutes from the moment the system deploys until the first individual safely reaches the ground.

A secondary solution when building staircases or other escape routes are blocked, Doublexit gives trapped individuals the option to make their escape from a skyscraper in the critical minutes before rescue services arrive.

Mr. Barzilay is co-founder of Doublexit Ltd. together with chief executive Rafi Salahov and serves as research and development manager. The company is based in Ashkelon, Israel, and shares office space, manufacturing and testing facilities with Reshafim Security Doors, headed by Mr. Salahov.

Will trapped high-rise residents be able to remain calm enough to make use of Doublexit?

Fear is definitely a factor. Doublexit's creators said they took human psychology into account when developing the system.

"People trapped by fire act differently," said Cobi Bitton, Doublexit's business development director. "You are in an office, in a fire, and you know you cannot use the stairways or elevators. The only way out is through the balcony or the window. You don't have time to think about it. You will act automatically, instinctually. When you know you have a device to rescue yourself and others, you will use it."

The instinct to flee danger would overcome the natural fear of climbing out the window of a skyscraper high above the ground, Mr. Bitton said. He also said the Doublexit system provides psychological comfort and security to high-rise residents because it remains visible in an entry door.

Doublexit received United States patent approval in December. The company is now working with ASTM International (a voluntary standards development organization), the National Fire Protection Association in the United States, and the Standards Institution of Israel to establish internationally accepted standards for controlled descent devices such as Doublexit. When Doublexit goes on the market, it will meet these international standards, Mr. Bitton said. The system already complies with certain European, Canadian and American standards. Initial wariness of the system on the part of firefighters evaporated following Doublexit's success with ASTM International and NFPA.

Interest in the device has come from several countries, including Israel, the United States, Japan, China and Taiwan.

The estimated cost of the DE1001 model, which comes installed inside a door, is between US\$8,000 and US\$10,000, including installation and regular annual service. The DE1002, which is installed in alternate locations, will be US\$5,000 to US\$6,000.

Mr. Bitton said Doublexit already has Israeli buyers lined up and the company expect to make its initial sales in the first quarter of this year, once the system receives final standards approval.

Doublexit has signed memorandums of understanding with both an American company -- Winner International in Pennsylvania, makers of The Club anti-auto theft device -- and the United Kingdom-based Ozonelink to serve as its exclusive distributors in those markets. It intends to target the business sector first, followed by the residential sector.

In late December, Doublexit reached an agreement with the Moscow-based API Group to jointly establish a new company whose exclusive goal will be to tap the mushrooming high-rise market in Russia's capital city.

Dan Aridor, whose company, Dan Aridor Holdings Ltd., is involved in developing Doublexit's business plan, says Doublexit is not sexy. It is not high-tech and it doesn't fall into the classic categories of security products. But he sees this as an advantage.

"They didn't try to be sophisticated. They tried to be direct. The solution was simple ... and with the right price tag. That's why we liked the solution." He predicted Doublexit is "going to take the market by storm."

The Doublexit system is classified a "controlled descent device." There are other systems in existence that allow people to escape high-rises, but many of them are one-time-use devices and are limited by their weight, the heights at which they can be used, and their dependency on the presence of rescue forces.

Could Doublexit have saved the lives of any of those people trapped on Sept. 11?

"Of course. I have no doubt about it," Mr. Bitton said.

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