Raytheon unveils wearable exoskeleton suit

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Coinciding with the release of Iron Man 2 on Blu-Ray/DVD, Raytheon unveiled a real-life wearable robotic suit [1]. The second-generation exoskeleton (XOS 2 [2]) is purportedly lighter, faster and stronger than its predecessor, yet it uses 50 percent less power.

Before one conjures Sci-Fi fantasies of space marines, it's worth pointing out what the XOS 2 is *not*—it *isn't* a futuristic robotic battle suit. Rather, the XOS 2 is designed to tackle logistics challenges—specifically, repetitive heavy lifting. According to the company, the exoskeleton allows its wearer (or pilot?) to lift 200 pounds several hundred times without tiring, punch through three inches of wood, and do spiffy-looking pushups. The suit is also agile enough to kick a soccer ball, punch a speed bag, or climb stairs.

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Artist depiction of how the exoskeleton could be used to load missiles on aircraft. Image courtesy of Raytheon Company.

Built from a combination of structures, sensors, actuators and controllers, and powered by high pressure hydraulics, the XOS 2 has been compared directly to Iron Man because of the suits' ability to enhance its wearer's strength and endurance. Will these be deployed on the battlefield anytime soon? Probably not. Despite its agility, the XOS 2 is probably too cumbersome for infantry soldiers, not to mention the astronomical cost of equipping an entire platoon with exoskeleton suits. But the XOS 2 will serve its function well.

"Getting exoskeletons deployed is inevitable in my view," said Dr. Fraser M. Smith, vice president of operations for Raytheon Sarcos. "They are desperately needed, and I believe the military looks at them as viable solutions to a number of current issues they are trying to address. With a sustained commitment, they could be in place within five years."

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