

## Israel Aircraft Industries Ltd. (IAI)

### Immediate response: unmanned security vehicle (USV)

**Description** Since the tragedy of 9/11, security in the United States has taken on a new dimension. The demand for effective solutions to ensure the safety of the public and protect civilian and government installations has accelerated, bringing with it the demand and the opportunity for innovations in perimeter security.

IAI's Guardium perimeter security system addresses the critical period between the initial warning of perimeter intrusion and response. Operating in the perimeter fence area, Guardium deploys its unmanned ground security vehicle (USV) to continuously patrol, survey, and report on the status of the perimeter area and react immediately to isolate, contain, communicate with, and control intruders until backup support arrives. Each high-speed USV is equipped with a precise navigation system, cameras that relay field data, voice communication capabilities, and can include other operational means.

The heart of the Guardium system is its C<sup>4</sup>I (command, control, communication, computer, and intelligence) center, which monitors and controls USV activity and continuously processes data. As appropriate, the C<sup>4</sup>I commander or operator can override automatic vehicle operation and assume direct control. This security solution significantly reduces incident response times, minimizes the manpower required for continuous monitoring, and reduces security personnel exposure to physical danger.

**Applications** The Guardium system is a first responder for perimeter intrusion that is appropriate for a broad range of civilian and military applications including:

- Air/sea ports
- Critical government assets/structures
- Nuclear reactor and other energy products/storage sites
- International borders
- Military bases

Other applications may include mine and roadside bomb detection, and the use of customized scenarios for simulation training.

**Competition** The first line of perimeter security currently consists of fences, motion detection systems, and remote controlled weapons. A number of companies are active in developing autonomous defense vehicles. Guardium is unique in its focus on providing immediate, effective response in a controlled area while both optimizing and protecting manpower.

**Market.** The non-military market potential for perimeter security in the U.S. alone includes: 7,500 miles of land borders, 429 commercial airports, 361 ports, and 103 nuclear reactors. The U.S. Department of Homeland Security (DHS) has a discretionary budget of \$33.8 billion through 2005, with border and transportation security among the key components.

**Approach to Market.** IAI is aiming to establish a joint venture with a U.S. partner that has marketing strength in the U.S. security market. IAI is aiming to deploy a U.S. pilot system by the end of 2004.



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#### ■ KEY PERSONNEL

##### **Tal Shazar, Project Manager**

Extensive business development, marketing, and technology development experience; leader in IAI's Lahav Business Innovation; agricultural engineering studies at Technion-Israel Institute of Technology

##### **Eyal Nahum, Lahav Division CFO**

Over 20 years in IAI's Lahav Division; responsible for building, negotiating, and executing complex contracts involving high-volume sales; BSc degree economics, Tel Aviv University

##### **Meir Shabtai, Project CTO**

Has managed a range of complex industrial projects with responsibilities including technology integration, software development, contract negotiation and deployment; senior project manager, Production Engineering Center of IAI's Lahav Division; BSc mechanical engineering; combined MSc bio-medical engineering and business management from Tel Aviv University

#### ■ COMPANY STATUS

**Ownership** IAI

#### ■ INTELLECTUAL PROPERTY

Patent pending

Additional patents in preparation

#### ■ DEVELOPMENT STATUS

Guardium is now establishing a test site in Israel and expects to be ready to install its first test site at a U.S. site in 2004

#### ■ CONTACT INFORMATION

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