INTERNET DOCUMENT INFORMATION FORM

A . Report Title: **DOD Eye Sensors to Give 'Urban Canyon Visibility'**

B. DATE Report Downloaded From the Internet: 02/25/02

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): **Center for Army Lessons Learned**
Virtual Research Library
Fort Leavenworth, KS 66027-1327

D. Currently Applicable Classification Level: Unclassified

E. Distribution Statement A: Approved for Public Release

F. The foregoing information was compiled and provided by:
DTIC-OCA, Initials: __VM__ **Preparation Date 02/25/02**

The foregoing information should exactly correspond to the Title, Report Number, and the Date on the accompanying report document. If there are mismatches, or other questions, contact the above OCA Representative for resolution.

DoD Eyes Sensors To Give 'Urban Canyon Visibility'

Jane's Defence Weekly
February 16, 2000
By Bryan Bender, JDW Bureau Chief

Washington DC -- The US Department of Defense (DoD) is considering supplying troops with low-cost, disposable hand-held sensors that can be fused into an intelligence network accessible at the lowest levels on the future urban battlefield.

The Smart Sensor Web initiative will initially use $7 million in science and technology funding and begin testing in August at the US Army's military operations in urban terrain (MOUT) training facility, Ft Benning, Georgia. Project officials want to equip troops with a large number and variety of sensors, such as thousands of acoustic, optical, weather, seismic and magnetic sensors. Such devices will soon be available on the commercial market for as little as $10 each. These sensors, planted around the battlefield by troops, would feed data into a network to give a better battlespace picture than is currently available.

"We're focused on the lowest levels of the military, especially in urban combat," said Jasper Lupo, director of sensor systems in the DoD's Science & Technology (S&T) office. He envisions a group of soldiers "moving from building to building placing cameras instead of bombs on the sides of buildings".

Present urban-terrain operations use traditional surveillance platforms such as satellites and aircraft. However shadows and other masking effects make their job difficult.

The Smart Sensor Web could deliver "the kind of visibility in urban canyons that we haven't seen before", Lupo said, adding that the Smart Sensor Web will be pursued in incremental steps or "sub-webs".

The overall system would consist of separate, auxiliary webs that feed into it, beginning with an imagery web relying on charged-couple device cameras, thermal-imaging systems and other wireless video technologies to provide a 3-D view of the battlespace.

Other sub-webs would provide weather data and relay images from battlefield weapons such as small arms with integrated cameras or a missile's seeker-head. Another sub-web would serve as the node where all information is disseminated.

Military and industry officials believe the Smart Sensor Web initiative may signal a shift in future towards low-cost, low-end technologies, moving away from complex, costly sensors currently in use and under development - for example, the US Navy's Cooperative Engagement Capability.

Sensing this possible shift, major US defence companies have expressed a surprising level of interest in the project, seeing the initiative as an effort of relatively small proportions in terms of near-term dollar value.

"They're going to have to beat them off with a stick," said one industry official. "They know this could grow into a huge programme."

S&T officials, working with all four services as well as the Defense Advanced Research Projects

Agency, plan to brief industry on the project on 29 February. A formal solicitation is not expected until next year - when additional money should be allocated.

However, the DoD hopes the August experiment will determine what commercial technologies are available and whether they can fulfil the Smart Sensor Web vision.