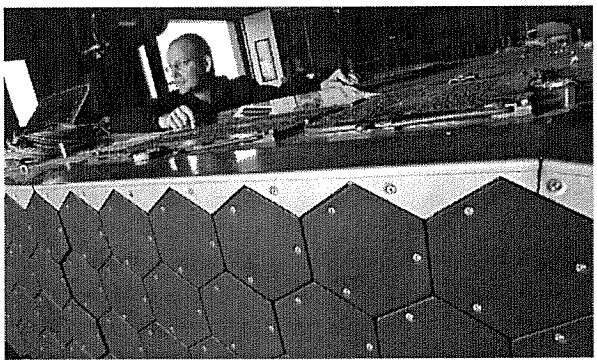
BAE Systems ADAPTIV Hexagonal Pixelated Thermal/IR (Infared)/Multispectral Adaptive Camouflage/Invisibility Cloaking System/Vehicle Armor System for Infantry Ground Vehicles (Armored Vehicles, APCs and Main Battle Tanks), Aircraft (Helicopters and Fixe-Wing), Ships and Structures/Buildings: Active Camouflage for Vehicles Gets Real

David Crane

By David Crane
defrev (at) gmail (dot) com

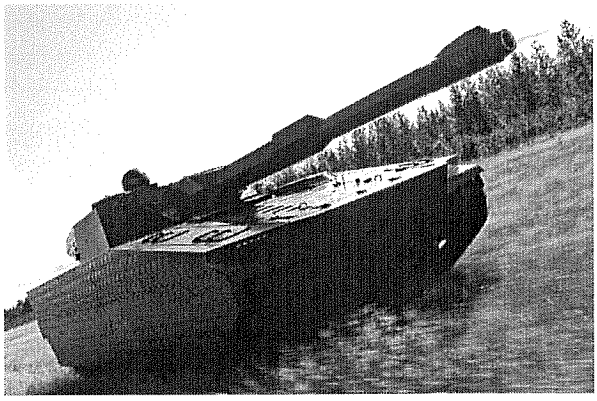
Photo(s) Credit: BAE Systems

September 19, 2011



Speaking of BAE Systems, they're currently developing a thermal/IR (infrared) adaptive camouflage/"invisibility cloak" technology/sytem called ADAPTIV. Catchy. Adaptiv is comprised of sheets of hexagonal "pixels"/panels that "can change temperature very rapidly". ADAPTIV (as in "adaptive camouflage") would appear to work in a similar fashion as ELTICS Black Fox active/adaptive thermal/IR camo tech, which DefenseReview (DR) reported on back in April (2011).

Like Black Fox, the Adaptiv thermal/IR adaptive camo system uses on-board cameras to capture the background and surrounding scenery and display the corresponding thermal/IR image on on the vehicle's Adaptiv pixelated/paneled skin. The Adaptiv hexagonal pixel/panel matrix can also mimic another vehicle's thermal/IR signature for the purpose of misdirection and subterfuge, as well as display identification tags to reduce the chance of fratricide (friendly fire casualties).



According to a BAE Systems press release on the ADAPTIV tech, entertainingly titled *BAE Systems Conjures Up Invisibility Cloak*, thermal/IR signature camo and mimicry, while the primary goal, isn't the company's only goal. "BAE Systems engineers have combined the pixels with other technologies, which provide camouflage in other parts of the electro-magnetic spectrum at the same time to provide all-round stealth, which will be developed further over the next few years." In other words, BAE's shooting for invisibility in the visible light spectrum, or visual stealth, as well. And, if Adaptive can work in the thermal/IR AND visible light spectrums, one must assume it will also be able to handle the near-IR, or night vision (NV), spectrum, which means it will be a true multispectral adaptive camouflage/invisibility cloaking system.

"Earlier attempts at similar cloaking devices have hit problems because of cost, excessive power requirements or because they were insufficiently robust. Our panels can be made so strong that they provide useful armour protection (armor protection, for us Americans) and consume relatively low levels of electricity, especially when the vehicle is at rest in 'stealth recce' mode and generator output is low," says Adaptive project manager Peder Sjölund explains. He adds: "We can resize the pixels to achieve stealth for different ranges. A warship or building, for instance, might not need close-up stealth, so could be fitted with larger panels."



In other words, BAE Adaptiv thermal/IR/multi-spectral adaptive camouflage is situationally adaptive. That's a lot of adaptivity they've got going there.

In mid-July, the BAE Adaptiv thermal/IR adaptive camo/invisibility cloaking tech development team demonstrated the technology on a CV90 armored vehicle, effectively rendering it invisible, as well as making it look like other vehicle types, including a 4×4 vehicle, when viewed in the infrared spectrum.

Adaptive panels can also reportedly be applied to helicopters, ships, and fixed installations.

Hat Tip: Discovery News

Company Contact Info:

Mike Sweeney, BAE Systems
Phone: +44 (0)780 171 6452
Email: mike.sweeney2@baesystems.com

Rachael Gordon, BAE Systems
Phone: +44 (0) 1252 384719
Mobile: + (0) 7793423682
Email: rachael.gordon@baesystems.com

Issued by: BAE Systems, Farnborough, Hampshire GU14 6YU, UK
Phone: +44 (0) 1252 384719
Fax: +44 (0) 1252 383947
24hr media hotline: + 44 (0) 7801 717739
Website: www.baesystems-dsei2011.co.uk

© Copyright 2011 DefenseReview.com. All rights reserved. This material may not be published, broadcast,

rewritten or redistributed without receiving permission and providing proper credit and appropriate links.

Related Articles:

ELTICS Black Fox Active, Adaptive IR Stealth System / Electronic Thermal Infrared Countermeasure System: Multi-Spectral Thermal/IR (Infrared) Adaptive Camouflage/Cloaking System for Combat Vehicles, Helicopters, and Warships Coming soon to a Battlespace/Theator of Operations Near You!

DR Exclusive Interview!: HyperStealth Quantum Stealth (QS) Passive Adaptive Camouflage (Camo)/Visual Cloaking Technology for the 21st Century Future Soldier/Warfighter: Beyond SMARTCAMO Color-Changing Hybrid Camouflage, Beyond Fictional Alien Predator's Active Electro-Optical Camouflage/Invisibility Cloaking Tech!

Blucher Systems Ghost Soldier Camouflage and Spectralflage Vehicle Camo: Multispectral Combat Camouflage Fabric Technology that Provides Anti-Thermal/IR (Infrared) Camo for 21st Century Special Warfare (SPECWAR)

Vectronix/Optics 1 COTI (Clip On Thermal Imager) Thermal/IR (Infared) Monocular Helmet Mounted Display (HMD)/Weapons Sight for Infantry Warfighters

DR Video and Interview!: BAE Systems OASYS SkeetIR and StalkIR Universal Thermal Monocular (UTM) Thermal/IR (Infrared) Weapon Sights with Cantilevered Universal Weapons Mount (UWM) and Modular Night Vision (NV)/IR Fusion HMD Capability!: Operator/Sniper-Developed Electro-Optics for the 21st-Century Future Soldier/Warfighter

STS Arms Advanced Ceramic Coatings for Tactical Firearms: Tactical AR Rifle/Carbines Go Super-Slick and Anti-Night Vision (NV)/Near Infrared (IR) Detection

Intermat Stealth Anti-Thermal/IR Camouflage Tech for Infantry and Special Operations Forces

Infrared/Night Vision Fusion HMD Developed for Future Force Warrior (FFW)

Metaflex Flexible Metamaterial (Flexible MM): The Future of Adaptive Camouflage / Visual Cloaking Technology? The quest for invisible infantry soldiers continues.

Is 'Invisibility Cloak' for Combat Uniforms/BDUs Here Right Now?

Company claims optical camouflage could have protected Israeli warfighters.