

SYSTEM DESIGN EVALUATION LTD SDE

**DEVELOPMENTS IN SIGHTING/FIRE
CONTROL SYSTEMS
FOR
SUPPORT WEAPON APPLICATIONS**

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Support Weapons

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-
- Light Cannon
 - Heavy Machine Guns
 - Automatic Grenade Launchers
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Presentation Outline

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- Introduction
 - UK Programmes
 - Current Technology
 - The Future
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Introduction

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- Shrinking Budgets
 - Legacy Equipment
 - Importance of Light Role and Air Manoeuvre (AM) Infantry
 - Importance of Organic Support Weapons
 - Improvements in Mission Effectiveness
 - Enhanced Surveillance & Target Acquisition (STA)
 - C4IS
 - Lethality
-

Surveillance & Target Acquisition

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- Detect
 - Recognise
 - Identify
 - Locate
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C4IS

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- Command
 - Control
 - Communications
 - Computation
 - Information Systems
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Current Shortcomings
Light Cannon, AGLs and HMGs

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- Iron Sights
 - STA
 - Separate Day and Night Sights
 - 24 Hour Capability
 - Conditions of Obscuration
 - Range Estimation
 - Fire Co-ordination
 - Time into Action
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The Goal

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- Improved Mission Effectiveness Through The Realisation of the Full Potential of Legacy Equipment
 - The Co-ordinated Application of That Improvement in Capability
 - Ensuring The Capability Is Brought to Bear With the Minimum of Delay
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Development Programmes

Latest Developments

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- FIST
 - OICW
 - OCSW
 - Striker
 - Oerlikon Contraves
 - FN Modular Assault Rifle
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UK Programmes

FIST

Future Integrated Soldier Technology

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Technology Demonstrator Programme

MOD UK

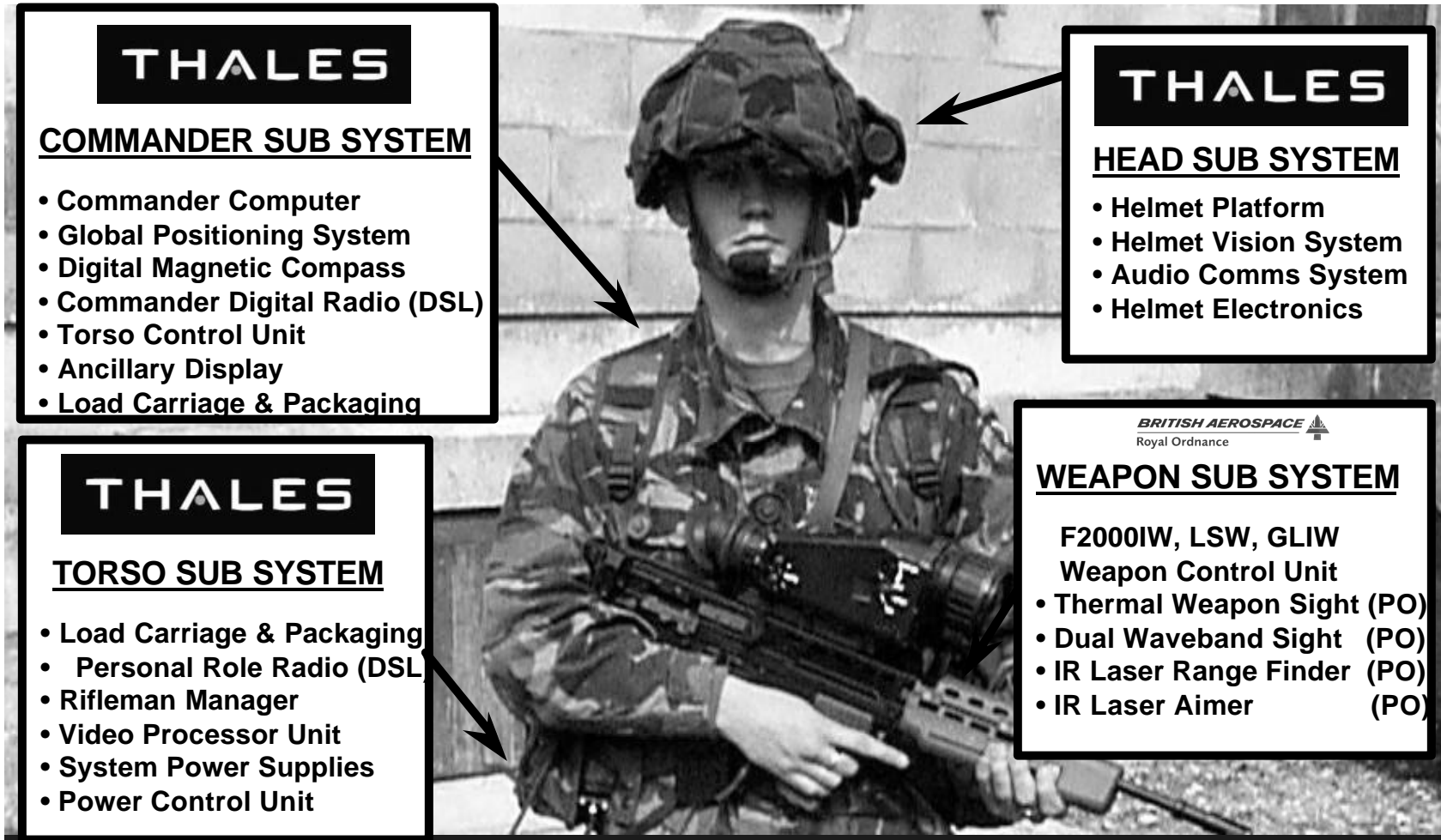
DERA

BAE Sys

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FIST

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FIST Sights

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Dual Wave Band
Sight (DWS)



Thermal Imaging
Sight



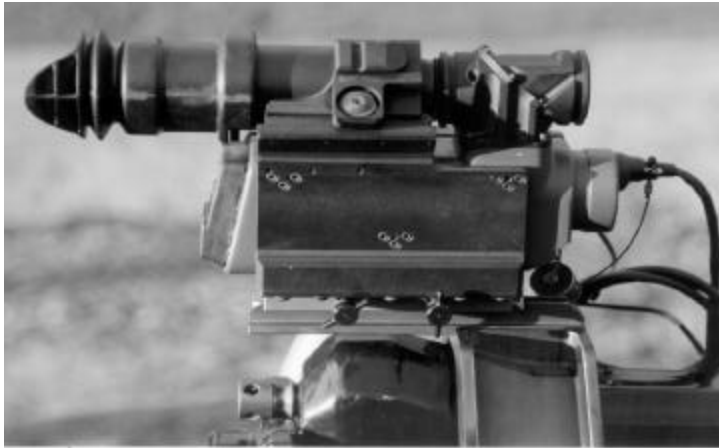
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FIST Sight Capabilities SDE

- Optical day sight combined with Night sight (II)
 - Linked Ballistic computer
 - Laser range finder
 - Laser designator
 - Laser Aimer
 - Video camera (Day/Night)
 - Supports a head up display
 - Data communications module
 - Linked Digital Magnetic Compass (DMC)
 - Link to GPS
-

RCS Programme

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Simrad 2000

Simrad II Module



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**Current UK Sights
for
Light Cannon, HMGs and
AGLs**

WMIK
(Weapon Mount Installation Kit)

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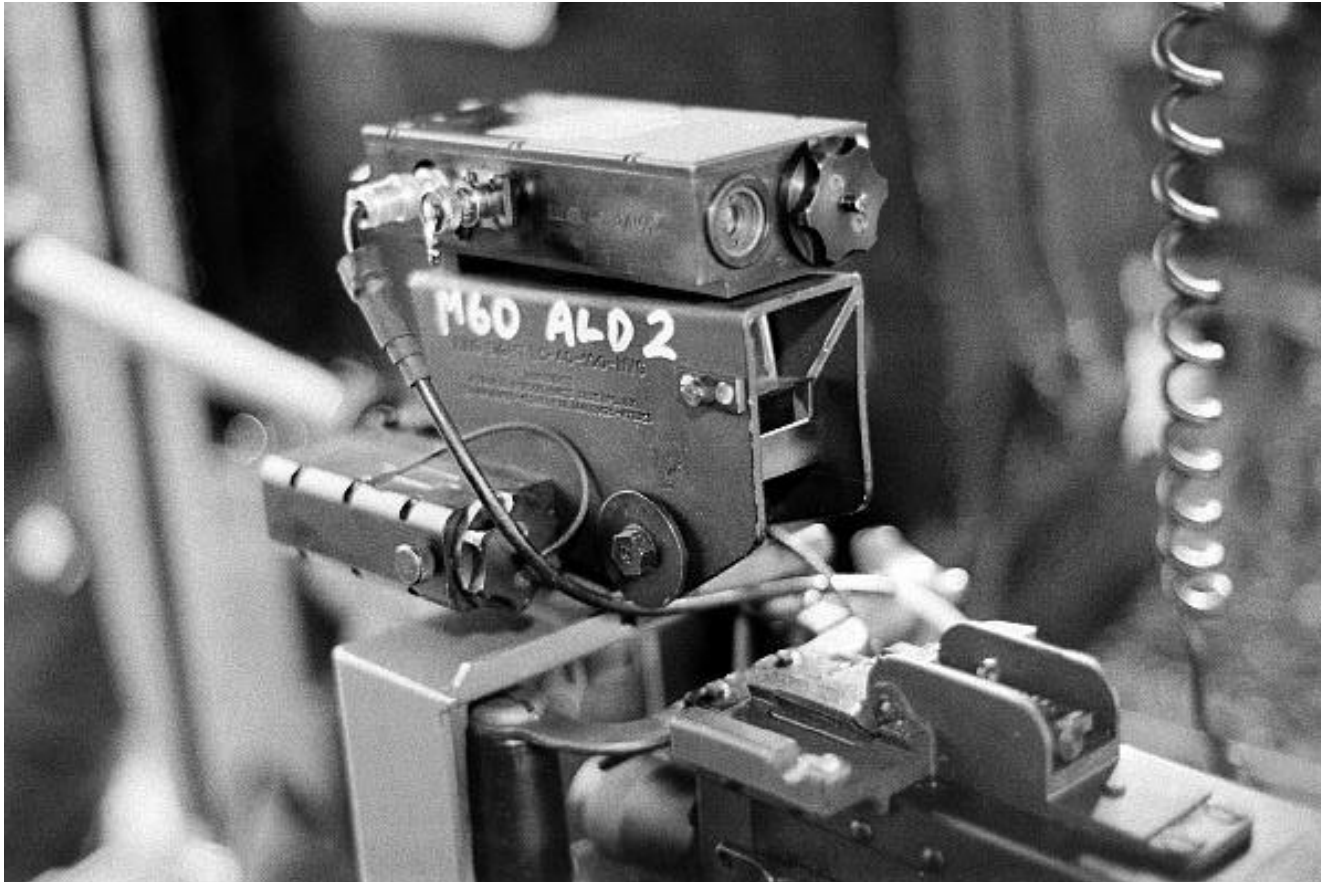
*SUSAT &
ISTECÔ Interface*

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*Helicopter HMG Door Gun
Reflex Sight and Laser Illuminator*

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The Future

Modular Sighting Systems

Definition of Modularity

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“A flexible sighting **system** in which each major capability is contained within a discrete module”

Why Modularity?

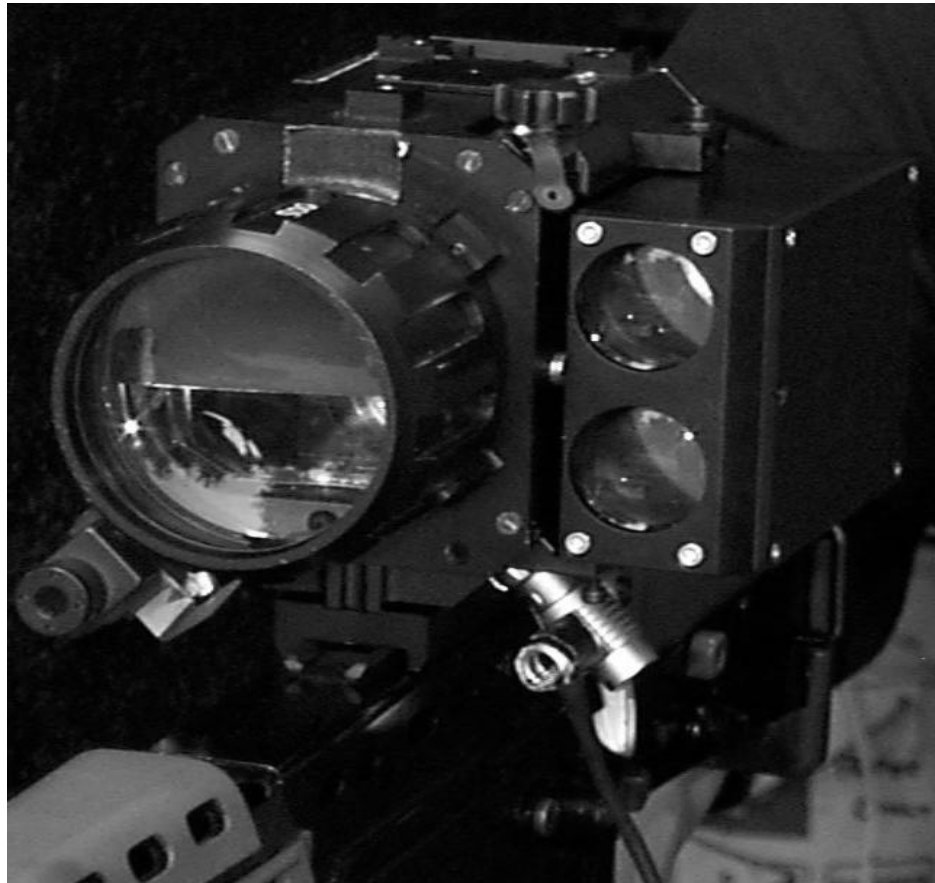
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- Technology Insertions (Future Proofing)
 - Graduated Acquisition
 - Weapon System Adaptable
 - Commonality
 - Role / Mission Tailoring
 - Module Migration From Legacy to Future Equipment
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Modular Sight

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Potential Modules

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- Basic Sight Module
 - Video
 - Communications
 - Laser Module
 - Location (GPS)
 - Computer
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Basic Sight Module

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- **DWS capabilities**

- Day
- Dusk
- Night

- **TWS capabilities:**

- Day
 - Dusk
 - Night
 - TI
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Laser Module

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- Laser Range Finder
 - Designator
 - Illuminator
 - Aimer
 - Simulator (Training)
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Computer

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- Ballistics
 - Weapon Control
 - Storage Of Maintenance Data
 - Fuzing
 - Fire Control
 - Embedded Training
 - Built In Test Equipment
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Communications

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- Control of Other Fire Support Assets
 - Real Time Intelligence/Target Data
 - Meteorological Information
 - Tactical Reports
 - Automated Logistics (Ammunition Re-supply)
 - Fire Co-Ordination
 - IFF
 - Video Up Link
-

Displays

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- Screen
- Head Up Display (HUD)



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Final Thoughts

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- All the technologies needed to significantly enhance the capabilities offered by legacy support weapons already exist
 - Much of the hardware is immediately available for export from light weapon development programmes
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Questions ?

