CRITICAL SCOUT:

We May Not Own The Night, But We CAN Deny The Use Of It

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Contents:

3. Introduction
5. Problem: The Proliferation Of Battlefield Optics
7. Robotic Platforms: The Perfect Geolocation & Detection Tool
9. Optic Detection Principles
12. TPL BEAM: Modern Battlefield Optic Detection System Capability
16. Future Development Path Incorporating Robotic Autonomy
19. Conclusions
20. Recommendations
21. Credits

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Critical Scout:

Introduction…

AIMEE, Red Planet (2000)

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Critical Scout:

Introduction…

- Optics For Visible, IR And Thermal Imaging Devices On The Modern Battlefield Have Proliferated For Small Arms, Rockets And Missiles…
- Optics For Observation, Cameras And Remote Sensor Devices Pose A Threat To Friendly Forces Even When Not Mounted To A Weapon…
- There Is Therefore A Need To Detect These Threats And To Geolocate Them For Application Of Appropriate Fires Without Endangering Friendly Forces.

"If You Can No Longer Own The Night, You ***Can*** Deny Anyone The Use Of It"

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Critical Scout:

Problem: The Proliferation Of Battlefield Optics

USMC 1903 Springfield / Unertl Scope Wikipedia

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Critical Scout:

The Proliferation Of Battlefield Optics:

Binoculars, Scopes, Cameras, Rangefinders And Designators Everywhere…











Above Clockwise From Upper Left: Chinese ATGM, RPG-7 With Optical Sight, US Army Sniper Team Photo, DPReview Blog Camera, Russian Tank, Russian BMP, Unusual Chinese Sniping Position Which One Hopes They All Use, Chinese Tank, SkySapience Tethered Drone, Chinese DLI Quadcopter, US Army Rifleman Photo, Bertin Instruments Remote Cameras, Israeli SPOTLIGHT System.

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Critical Scout:

Robotic Platforms; The Perfect Detection & Geolocation Tool

Find All Hostile Observers, Geolocate And Characterize Them For Targeting…

File Match:
RPG
Rifle/MGO

Sweep 70 Deg
Targets: 22

Wikipedia Small Arms, MartinVFXDeviantart Battle Scene, iRobot Warrior By Howard Kent, TPL Beam System

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Critical Scout:

Send The Target Geolocation Scout Forward

Existing Robotic Platforms Can Provide Mobility For Force Multiplication Sensors…

Clockwise From Upper Left: What Was In 2012 And Still Candidates; Former iRobot Robotic Systems Family, QinetiQ Armed Talon, NGIC EOD Robotics, Textron Howe & Howe Ripsaw Modified, GD SMSS, HDT Global Hunter, GD MUTT Ground Robotic System.

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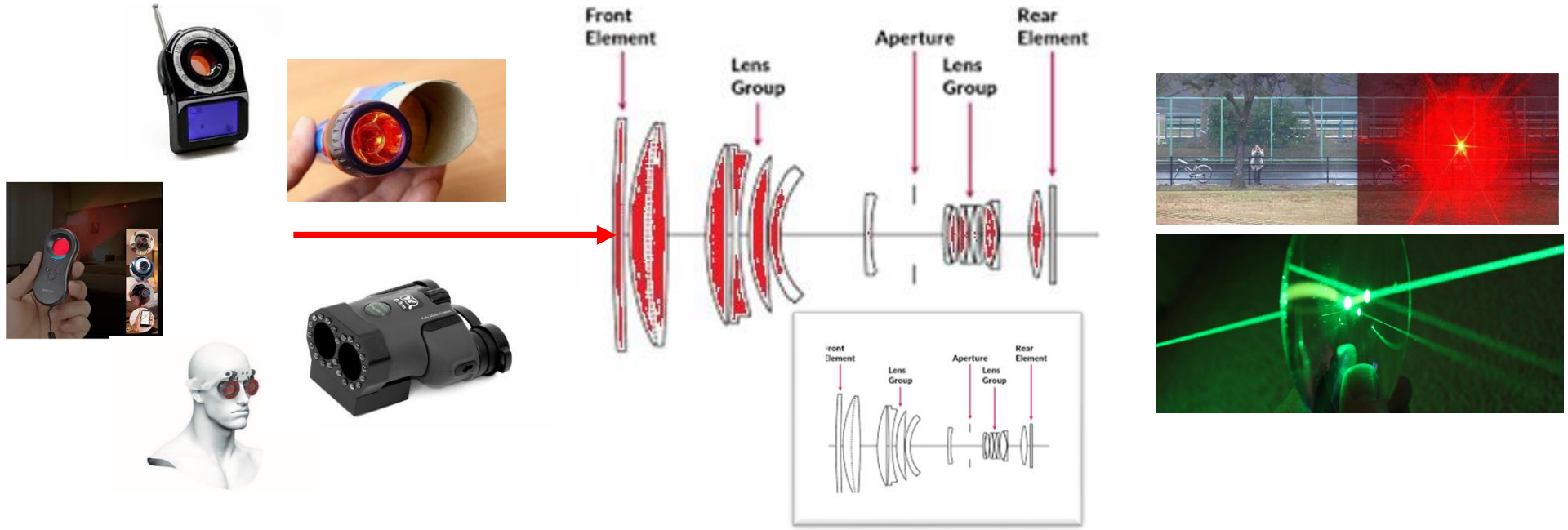
Critical Scout:

Optic Detection Principles: How It Works

Shine A Bright Light Into The Lens And Spot The Reflection…



From Left To Right Above: Multiple Amazon "Pinhole Camera Detectors", Wikipedia Lens Graphic & Graphic Modified, Quora Laser On Lens, Michael Naimark Laser Photo.

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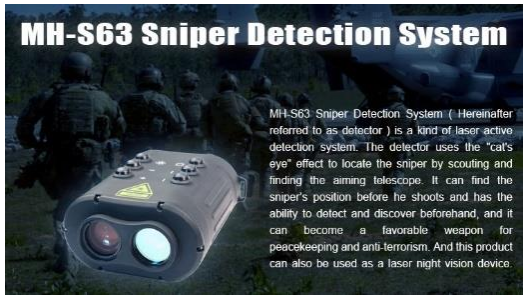
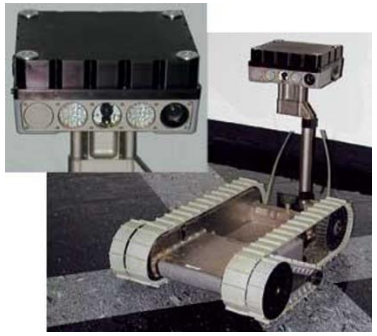
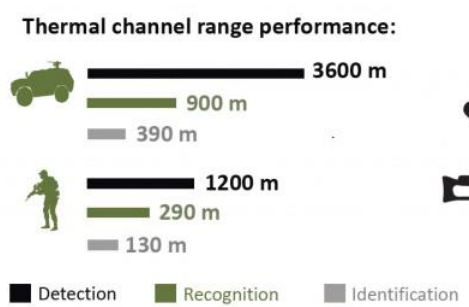
Critical Scout:

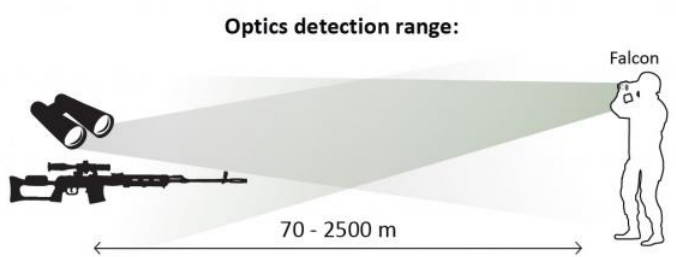
Optic Detection Principles: Early Battlefield Optical Detection Integration

Hand-Held, Clamped On, No Turret Scanning, No Geolocation…









Clockwise From Top Left: Chinese Optic Detection System From Amazon, Jetprotect Counter-Sniper System, Popular Mechanics Russian Weapon Mount, FALCON Handheld Detector, iRobot + Photonics Center Photos

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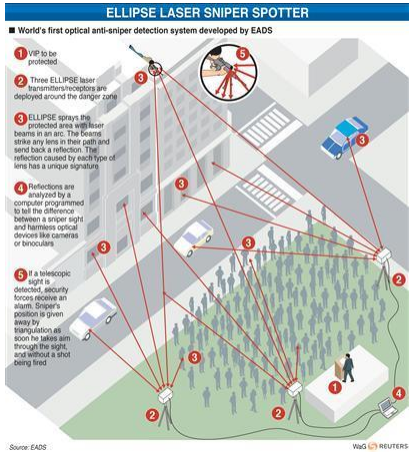
Critical Scout:

Optic Detection Principles: Early Battlefield Optic Detection Integration

Fixed Site Observation, Low Mobility, Narrow Field, Multiple Units Required…



Let To Right Above: AES Vision System, EADS Eclipse System, Israeli Elbit Counter Sniper System

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Critical Scout:

TPL BEAM; Modern Battlefield Optic Detection System Capability:

Small, Lightweight, Scanning, Wide Area Coverage, Highly Mobile, Geolocation…

Horizontal

Vertical Over

[Beam™ 230 – Torrey Pines Logic (tplogic.com)]

[Campanile™ 233 – Torrey Pines Logic (tplogic.com)]

Torrey Pines Logic Photos Beam System

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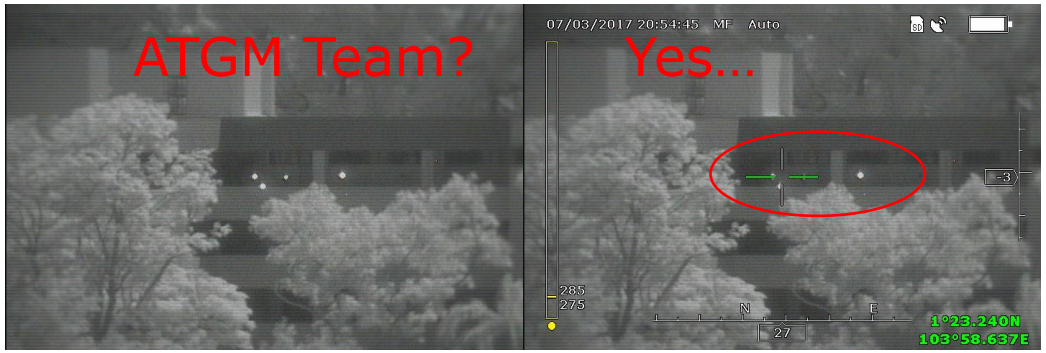
Critical Scout:

Torrey Pines Logic Optic Detector Technology In Action…



Torrey Pines Logic Photos BEAM System

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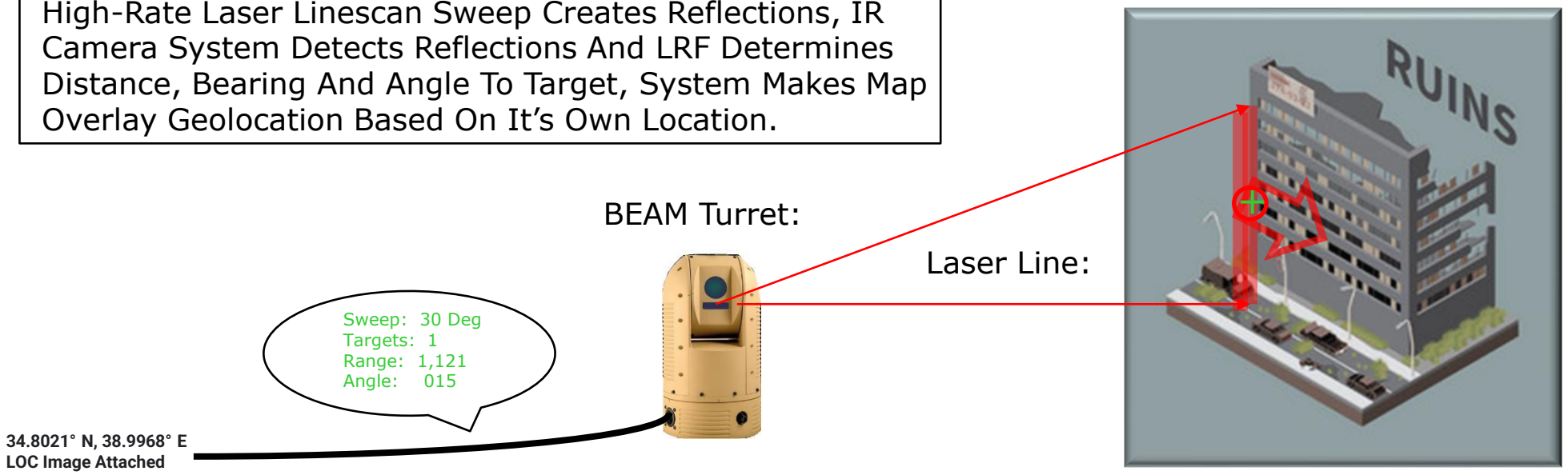
Torrey Pines Logic Optic Detector Technology Scenario…

"Small Robot Goes Forward With BEAM System And Locates Enemy Formation In Ruins"

High-Rate Laser Linescan Sweep Creates Reflections, IR Camera System Detects Reflections And LRF Determines Distance, Bearing And Angle To Target, System Makes Map Overlay Geolocation Based On It's Own Location.



Vectorstock Ruins

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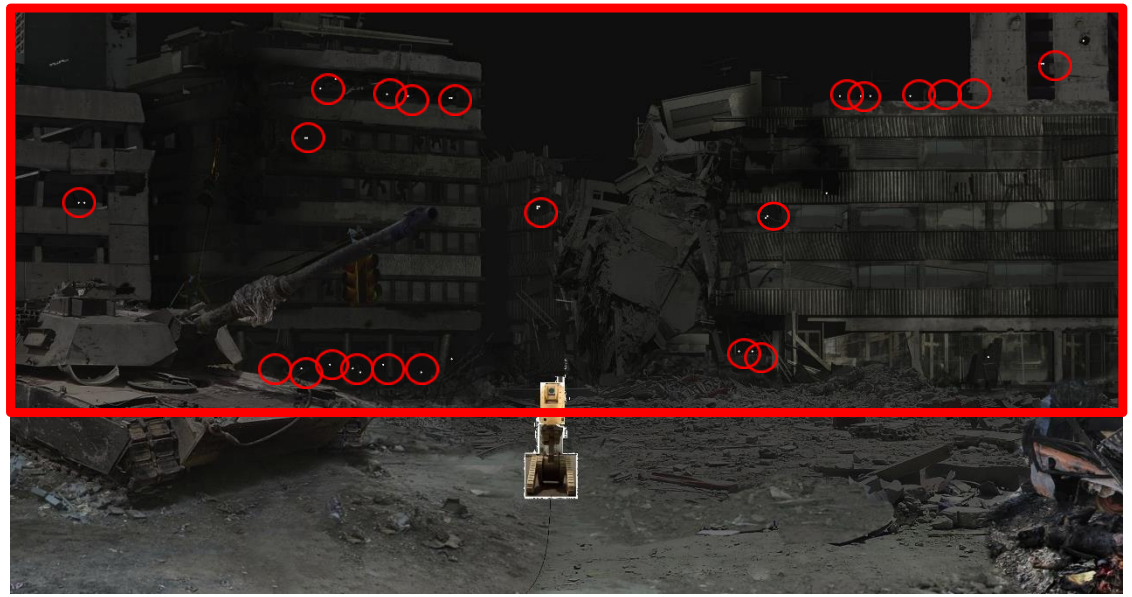
Critical Scout:

Torrey Pines Logic Optic Detector Technology Scenario…

"Small Robot Goes Forward With BEAM System And Locates Enemy Formation In Ruins"

BEAM Detects All Optical Devices: Scopes, RPGs, ATGM, Binoculars, Rangefinders, Designators, Etc.



MartinVFXDeviantart Battle Scene, iRobot Warrior By Howard Kent, TPL Beam System

May Not See All Enemy Troops, Just The Most Dangerous Ones With Optics On Their Weapons.

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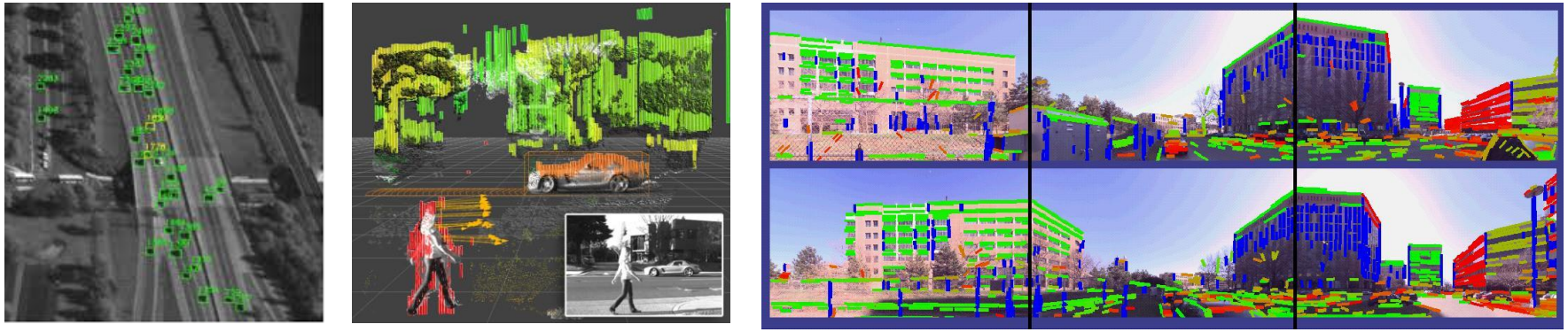
Critical Scout:

Torrey Pines Logic Optic Detector Future Development Path:

"Small Robot Goes Forward Autonomously With BEAM System And Locates Enemy Formations"

Future Developments: Incorporation Of Self-Driving Car Technology



From Left To Right Above: SightLine Applications MTI, Google Autonomous Vehicle Sensor Data, MIT LIDAR Digital Scene Matching Area Correlation

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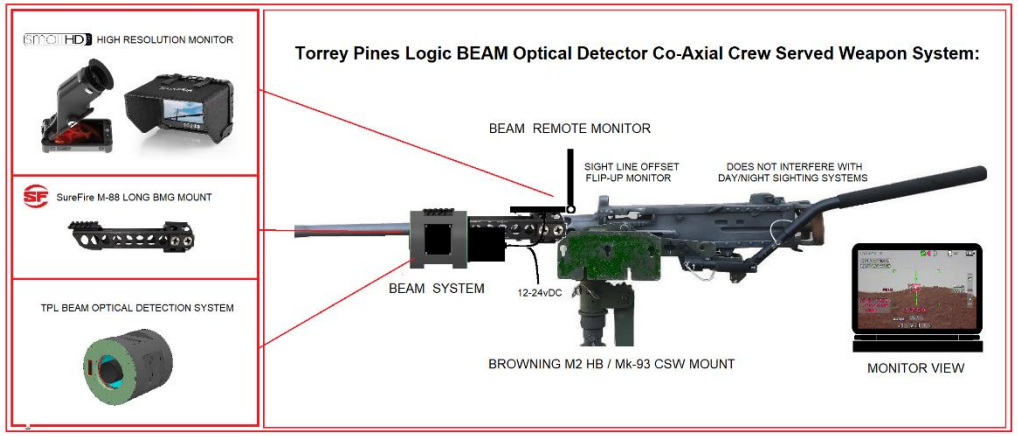
Critical Scout:

Torrey Pines Logic Optic Detector Future Development Path:

"Small Robot Goes Forward Autonomously With BEAM System And Locates Enemy Formations"

Future Developments: Coaxial Weapons Integration For BEAM System



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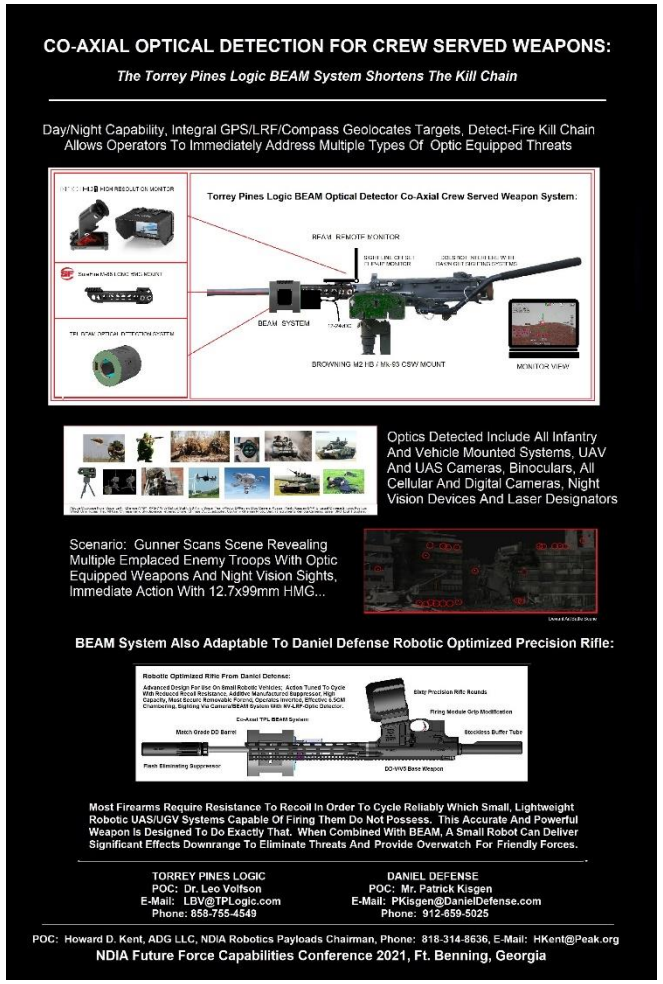
See **Co-Axial Optical Detection For Crew Served Weapons** Poster

In The Exhibit Hall



Featuring **Torrey Pines Logic** & **Daniel Defense** Robotic Payloads For Future Unmanned Ground Combat Systems

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Conclusions:

- The Proliferation Of Optics On The Battlefield Creates Both A Threat And Opportunity.
- Locating Optic Equipped Observers And Weapons Is A Proven Military Technology.
- Enemy Forces Possess Optic Detection Capabilities Which Will Be Used Against Us.
- Placing The BEAM System With Geolocation On A Mobile Platform Is A Leap Ahead Enabling US Forces To Find Threats Without Endangering Friendly Forces.
- Once Identified And Located, Concealed Enemy Forces May Then Be Eliminated…

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Recommendations:

- Develop Robotic Applications Of The BEAM System, Including Stand Alone And Coaxial Mounting To Weapons Mounts For Immediate Response To Enemy Detection.

- Develop Tactics And Weapons For The Use Of Optic Detection In Robotic And Combined Manned-Robotic Operations Teaming To Reduce Friendly Casualties.

*"We May No Longer Own The Night, But We **CAN** Deny Others The Ability To Use It"*

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Credits:

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Torrey Pines Logic – Welcome (tplogic.com)

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Credits:

The Testing And Demonstration Facilities Of:

Mr. Joby Hawkins

LTC Steve Brown, USA-Ret.

Secure Confidential Research And Development Location
For Defense Applications In Laurens, South Carolina

nP TECHNOLOGY

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