Time	Topic	Briefer
7:45am	Doors Open/Registration, Food/Coffee available	
8:00	Networking	
8:30	NAMC Welcome Remarks - Events & Opportunities	Warren
8:40	Velocity Welcome Remarks	Paula
8:45	BAE Networks	Eric Castiglia
9:05	W.L. Gore AMPEX Data Systems Gambit Defense Inc. ICAT Logistics Intrepid Control Systems Michigan Israel Business Accelerator Synergistic Volcanic Engineering WITTENSTEIN Motion Control ThinkDigits	Business Representatives
9:45	Closing & Networking	Warren
10:00	End of Program	

VELOCITY

NAMC

This Presentation is Unclassified

The National Advanced Mobility Consortium (NAMC)

The National Advanced Mobility Consortium (NAMC) is a 501(c)(3) Non-Profit Corporation that is comprised of U.S. innovators dedicated to the development of ground manned and unmanned autonomy-enabled military technologies for the U.S. warfighter.

Primary Customers:

DEVCOM GROUND VEHICLE SYSTEMS CENTER

PROGRAM EXECUTIVE OFFICE COMBAT SUPPORT & COMBAT SERVICE SUPPORT

PROGRAM EXECUTIVE OFFICE GROUND COMBAT SYSTEMS

Maneuver CDID

MARINE CORPS SYSTEMS COMMAND

524 member organizations from across the USA

2 in 3 members are small businesses

400+ projects competed only through NAMC

$1.5B obligated funds

15 years of OTA experience

73% of funding to Non-Traditional Defense Contractors

Trusted Partner

OTA Based

Industry Led

INNOVATION
Creative problem solving thru mission-focused, experienced, multi-functional staff

COLLABORATION
Lead collaboration efforts to embrace an ecosystem of experienced members

EDUCATION
Develop the industrial base to deliver best-fit capabilities meeting critical demands.

Detroit Arsenal of Innovation (DAI) Other Transaction Agreement

- 5 Year Base Period of Performance
- 5 Option Years
- $2.5 B Ceiling ($250M Annual)

Broad Scope and potential Customers

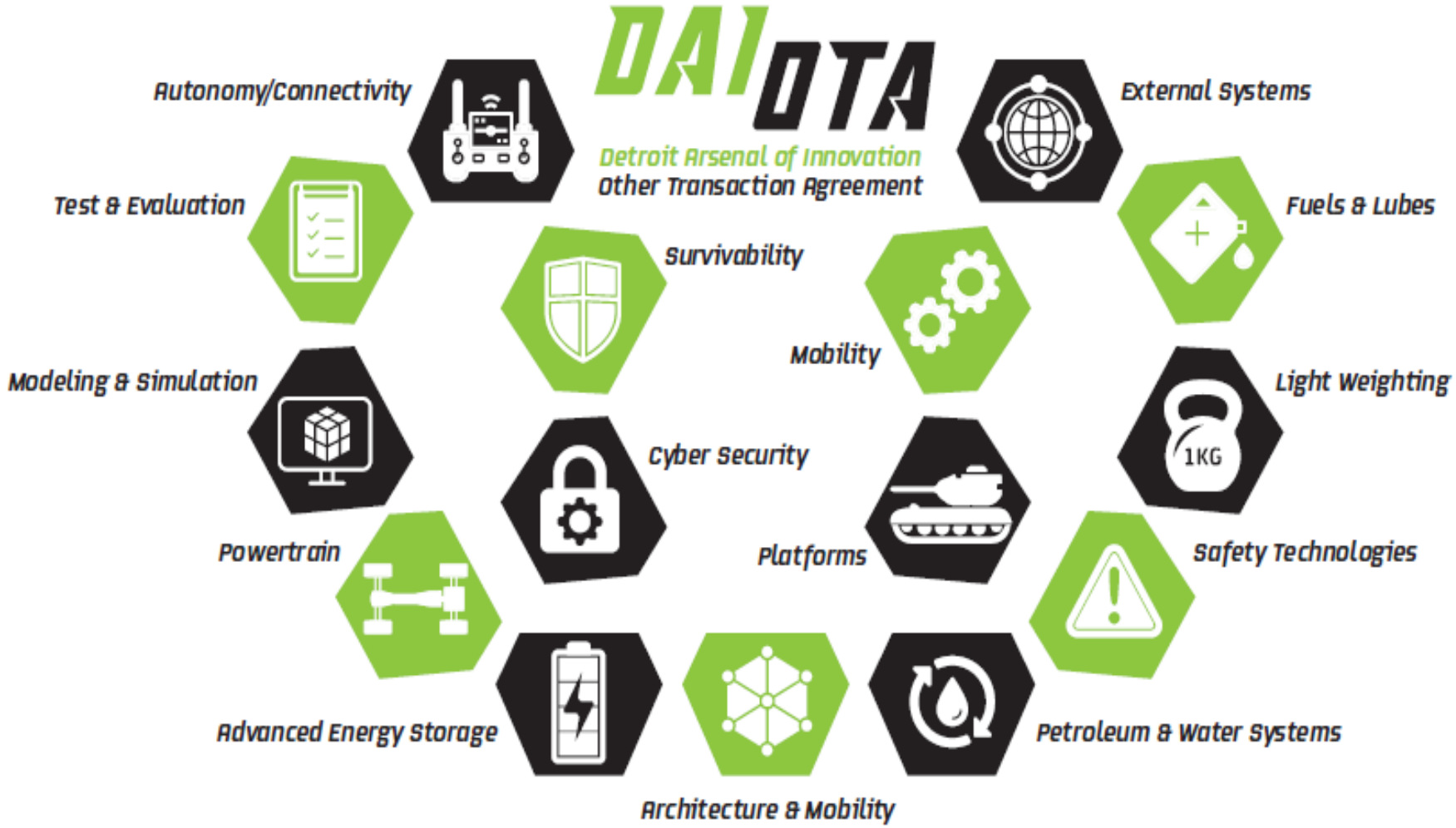
New “Collaboration” options for Government Customers (Demos, Defense Innovation Workshops, Industry Days, Tech Scouting, etc.)

Revised processes and thresholds to improve efficiency.

Increased ability to develop efforts with Government OTA Users.

3 New Technical Areas (Safety Tech, Lightweighting, Advanced Energy Storage)

Awarded 1 September 2023
“Detroit Arsenal’s Prototyping OTA”



NAMC | Upcoming Events

4-5 Feb: GVSC Industry Days (CUI) (Warren, MI) (*Registration Closed*)

4 Feb: NAMC Networking Social (Sterling Heights, MI)

6 Feb: NAMC General Membership Meeting and Annual Plan Industry Day (Sterling Heights, MI)

11-12 Feb: Army Futures Command Autonomy VERTEX (Austin, TX)

13 Feb: NDIA Young Professionals "Battle of the Primes" Bocci Ball (Auburn Hills, MI)

24-26 Feb: NDIA Tactical Wheel Vehicles Conference (Reston, VA)

25-27 Mar: AUSA Global Force Symposium (Huntsville, AL)

26 Mar: Metro Detroit Business to Gov Connect APEX (Warren, MI)

5 Apr: NDIA's ROTC Awards Banquet (Auburn Hills, MI)

8-10 Apr: Michigan Defense Expo MDEX (Warren, MI)

15 Apr: Defense on Tap (Orlando, FL)

19-22 May: AUVSI Xponential (Houston, TX)

13 Jun: AUSA 250th Army Birthday Ball (Detroit, MI)

25 Jun: Defense IQ Armored Vehicles USA Conference (Detroit, MI)

11 Aug: NAMC Annual Membership Meeting (Novi, MI)

12-15 Aug: NDIA GVSETS Exposition (Novi, MI)

13-15 Oct: AUSA Annual Meeting & Expo (Washington DC)

VELOCITY

INCUBATOR
ACCELERATOR
&
COWORKING SPACE

MIVELOCITY.COM

Velocity Year to DATE

New Companies Started
31

Companies Relocated to Macomb County
15

New Client Intakes
203

Accelerator Clients Served
101

Incubator Clients Served
155

Total Grants Awarded
$535K

Investments Attracted to Macomb County Businesses
19.2M

Total Events Hosted
96

Total Event Attendees
7k

Total Businesses in Velocity
42

Total $$$ Saved Annual
$66k

Press Releases
18

Live News Coverage
6

Podcast Coverage
9

The Dark Web -201

PRESENTED BY ERIC CASTIGLIA, CGO BAE NETWORKS

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BAE NETWORKS

How Many Times have you heard this?

Being compliant can be a lot like a game of chess — you need the right strategy to succeed.

There’s a common saying that one of the only constants in life is change but that doesn't mean it has to be difficult!

Compliance isn’t just a nice-to-have; it’s a must-have. Although it may sound daunting, a good plan will help you every step of the way.

Compliance is a team effort — it's important to work closely with your team, partners and subcontractors to make sure everyone is pulling in the same direction.

CYBERSECURITY IS NOT SOLELY THE RESPONSIBILITY OF THE IT DEPARTMENT OR A SPECIFIC GROUP OF INDIVIDUALS;

IT IS A SHARED RESPONSIBILITY ACROSS THE ENTIRE ORGANIZATION. EVERYONE PLAYS A CRUCIAL ROLE IN SECURITY:

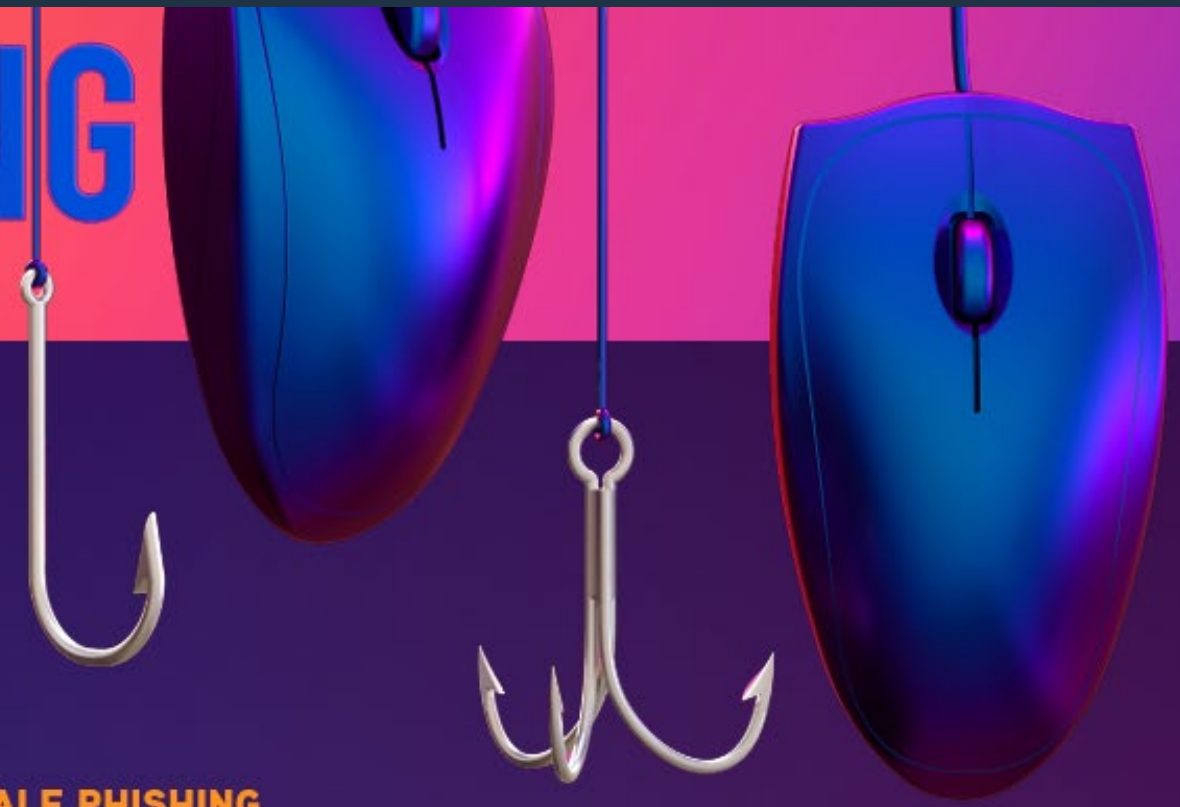
- **Human Element**: People are often the weakest link in cybersecurity. Employees interact with technology daily, making them susceptible to human errors, social engineering attacks, and phishing attempts.
- **Protecting Company Assets**: All employees have access to sensitive data, company systems, and resources. By actively participating in cybersecurity practices, they help safeguard the organization's assets.
- **Early Detection**: Employees are often the first to notice suspicious activities or potential security breaches. Reporting incidents promptly can prevent further damage.

PHISHING

- **Phishing**: Phishing is a deceptive technique used by cybercriminals to trick individuals into revealing sensitive information, such as passwords or financial data, often through emails, messages, or fake websites.

- **Social Engineering**: Social engineering involves manipulating individuals into divulging sensitive information or performing actions that compromise security.

PHISHING



SMALL BUSINESSES ARE UNDER THREAT FROM A VARIETY OF SOURCES, BOTH INTERNAL AND EXTERNAL. BUT PHISHING IS THE MOST PRESSING.

STANDARD PHISHING

Standard phishing is the most common type of phishing. These attacks typically involve mass emails sent to large groups of people.

SPEAR PHISHING

A targeted attack aimed at a specific individual or organization, often involving the use of personal information to make the email seem more credible.

WHALE PHISHING

Targets high-ranking executives or other individuals who have access to sensitive information. This kind of attack is more sophisticated as the victims are often tech-savvy.

VISHING

This attack uses phone calls or VoIP (Voice over IP) messages to trick victims into revealing sensitive information.

Use a mix of alphabetical and numeric, a mixture of upper and lowercase, and special characters when creating your unique passphrase.

Use unique passwords or passphrases: You should have a unique password for each of your accounts. This way, if one of your accounts is compromised, your other accounts remain secure.

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	Instantly	Instantly	Instantly
6	Instantly	Instantly	Instantly	Instantly	Instantly
7	Instantly	Instantly	2 secs	7 secs	31 secs
8	Instantly	Instantly	2 mins	7 mins	39 mins
9	Instantly	10 secs	1 hour	7 hours	2 days
10	Instantly	4 mins	3 days	3 weeks	5 months
11	Instantly	2 hours	5 months	3 years	34 years

- Cybercriminals have multiple methods to exploit your business' vulnerabilities. Business email compromise are very common where email credentials get hacked and used for impersonation.
  - After mirroring your business identity, criminals can commit multiple frauds, including money laundering. The scary part is that your company's credentials may already be out there on the Dark Web.

- A Google survey found that about 65% of internet users use the same passwords for multiple services. Such poor password hygiene provides an easy passageway for cybercriminals.

- Once your password is stolen or becomes decoded by cybercriminals, they can access your accounts on other services with the same login credentials. The password being leaked on the Dark Web amplifies the problem.

- Your business safety can become compromised if your critical data leaks on the Dark Web. Many companies do not realize their data is compromised until a breach occurs, which can happen at any moment.

ACKNOWLEDGING

THE DARK WEB

(SURFACE) WEB

The level where data is PUBLIC
Only 4% of the web consists of indexed public websites that are visible to all web users through ordinary search engines such Google and Bing.

DEEP WEB

The level where data is PRIVATE
The largest part of the internet is made of protected information and is only located and accessed by a direct URL or IP address, that may require a password or other security access to get past public pages. That includes: email, online banking, social media pages & profiles, services such as video on demand, etc. It's used for legit purposes. Most of us access the Deep Web every day.

DARK WEB

The level where data is ANONYMOUS
Within the Deep Web is the part of the internet called the Dark Web. A complex encrypted system not visible to traditional search engines that can only be accessed by a special browser called Tor. Transactions, IPs, profiles, locations, etc. are totally anonymous, making it the perfect place for many illegal activities to happen. It's not illegal by itself but that's where criminal sites live.

IS IT ALL BAD? *NO. BUT IT'S QUITE BAD.*

There are several legit businesses operating on the Dark Web. Companies like Facebook and The New York Times are present on the Dark Web. It doesn't mean it's safe to do business there. The anonymity of the place attracts criminals trading illegal artifacts like guns, drugs and stolen data.

EVERYTHING HAS A PRICE

Dark Web businesses have the same structure as any legit e-commerce business does, including ratings & reviews, shopping carts, and forums. Kits for scamming and phishing are sold for as little as a $100 and stolen credentials to bank accounts can be found starting at $200 per account. The larger the available balance of an account, the higher its selling price. Credit card details are sold in bulk at reduced prices. Among the most valuable stolen credentials are keys that unlock privileged access to corporate networks, going for as much as $10,000.

HOW ALL THIS DATA ENDED UP HERE

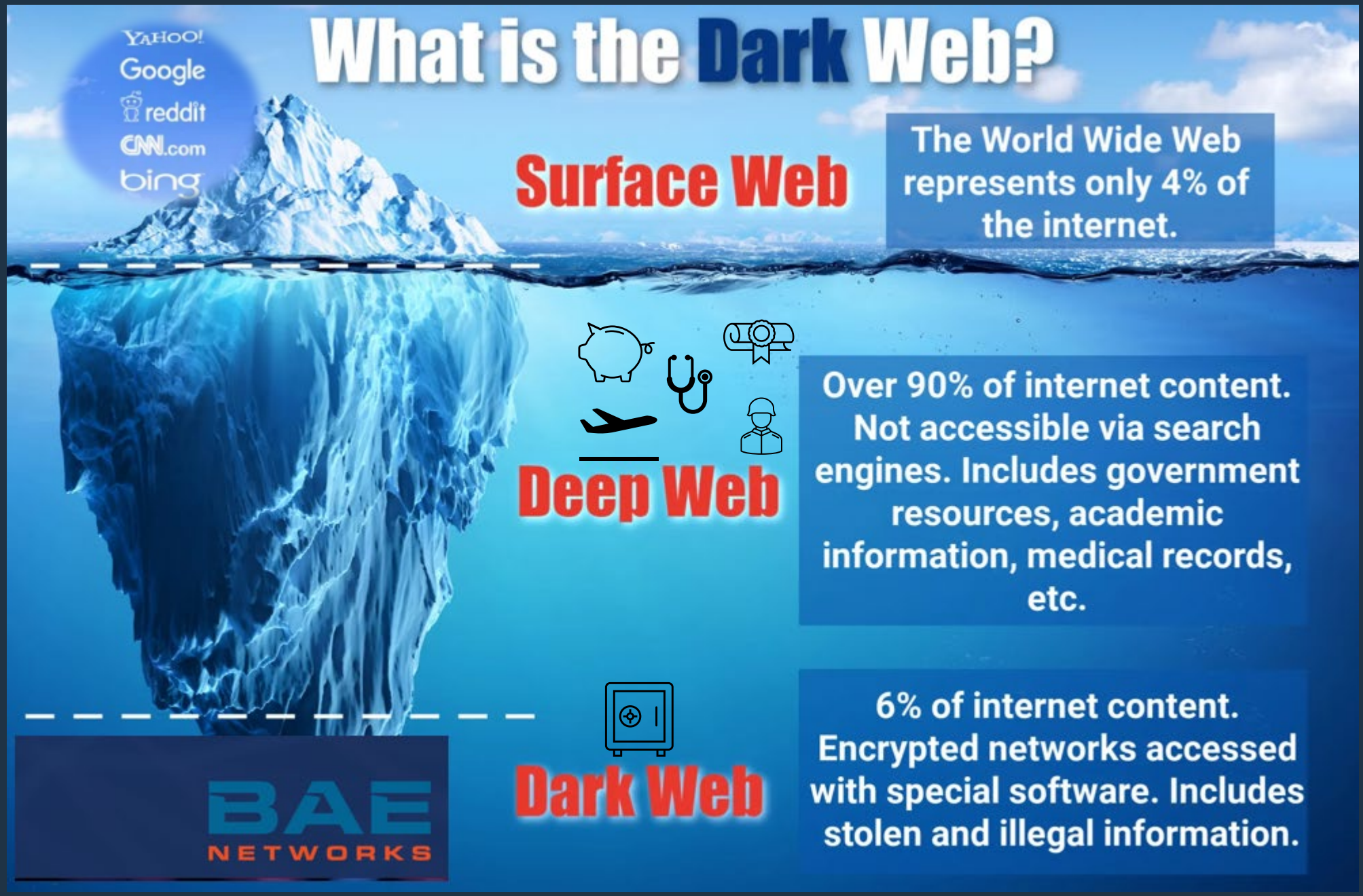
The Verizon 2021 DBIR SMB study found that 85% of breaches involved the human element. Phishing was present in 36% of breaches. Furthermore, 61% of breaches involved credential data. 95% of organizations suffering credential-stuffing attacks had between 67 and 3.3 billion malicious login attempts through the year. The median for incidents with an impact was $21,659, with 95% of incidents falling between $826 and $653,587. The takeaway? Prevention is still the best plan.

WHAT YOUR DATA IS WORTH*

TV On Demand Credentials	$1
Scamming & Phishing Kits	Starting at $100
Bank Account Credentials	Starting at $200
Credit Card Information	Bulk sales available
Access to Corporate Network	$10,000

*Average prices based on recent Dark Web studies

61%
OF DATA BREACHES INVOLVED CREDENTIAL DATA


What is the Dark Web?
YAHOO!
Google
reddit
CNN.com
bing
Surface Web
The World Wide Web represents only 4% of the internet.
Deep Web
Over 90% of internet content. Not accessible via search engines. Includes government resources, academic information, medical records, etc.
Dark Web
6% of internet content. Encrypted networks accessed with special software. Includes stolen and illegal information.
BAE
NETWORKS

WHY MONITORING FOR EXPOSED CREDENTIALS IS IMPORTANT

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HOW ARE CREDENTIALS COMPROMISED?

PHISHING

- Send e-mails disguised as legitimate messages
- Trick users into disclosing credentials
- Deliver malware that captures credentials

WATERING HOLES

- Target a popular site: social media, corporate intranet
- Inject malware into the code of the legitimate website
- Deliver malware to visitors that captures credentials

MALVERTISING

- Inject malware into legitimate online advertising networks
- Deliver malware to visitors that captures credentials

WEB ATTACKS

- Scan Internet-facing company assets for vulnerabilities
- Exploit discovered vulnerabilities to establish a foothold
- Move laterally through the network to discover credentials

Passwords are a twentieth-century solution to a modern-day problem. Unfortunately, user names and passwords are still the most common method for logging onto services including corporate networks, social media sites, e-commerce sites and others.

39%
Percentage of adults in the U.S. using the same or very similar passwords for multiple online services

28,500
Average number of breached data records, including credentials, per U.S.-based company

User names and passwords represent the keys to the kingdom for malicious attackers. Criminals who know how to penetrate a company's defenses can easily steal hundreds or even thousands of credentials at a time.

A criminal dealing in stolen credentials can make tens of thousands of dollars from buyers interested in purchasing credentials. And by selling those credentials to multiple buyers, organizations that experience a breach of credentials can easily be under digital assault from dozens or even hundreds of attackers.

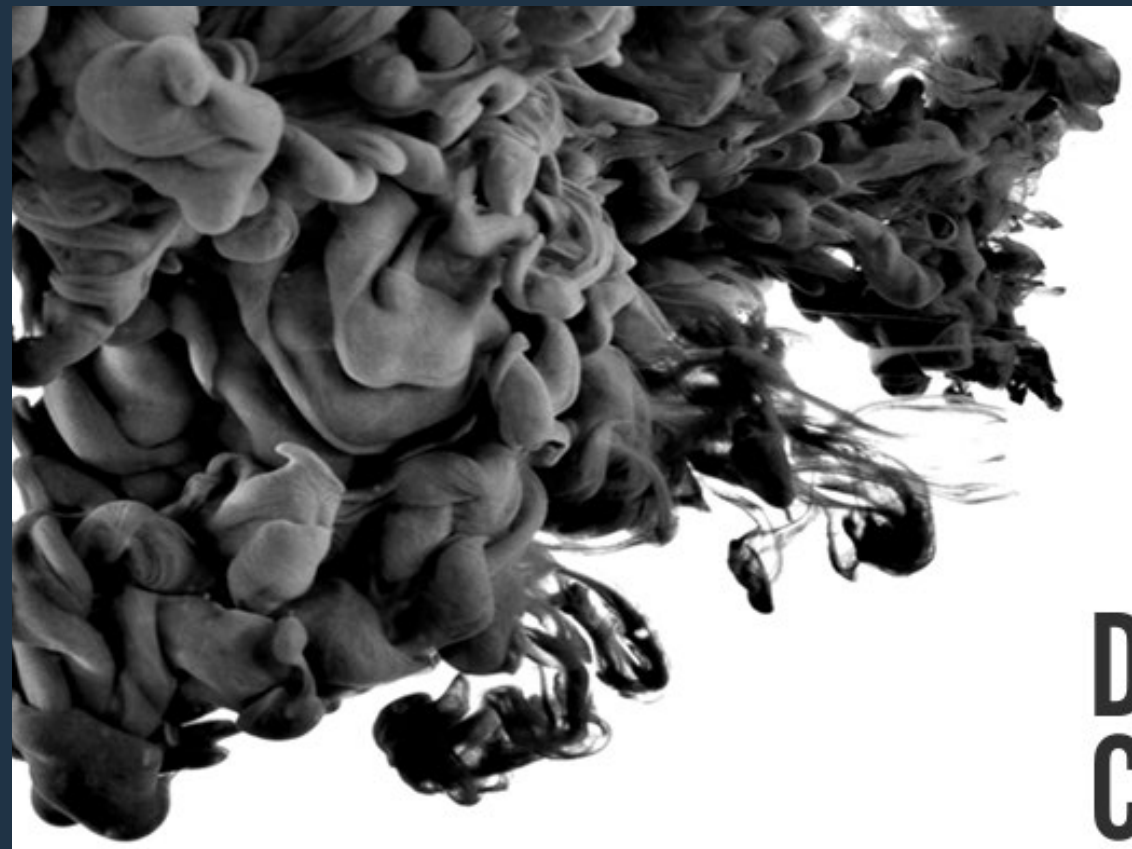
$1 - $8
Typical price range for individual compromised credentials

WHAT CAN AN ATTACKER DO WITH COMPROMISED CREDENTIALS?

- Send Spam from Compromised Email Accounts
- Deface Web Properties and Host Malicious Content
- Install Malware on Compromised Systems
- Compromise Other Accounts Using the Same Credentials
- Exfiltrate Sensitive Data (Data Breach)
- Identity Theft

PROTECTING AGAINST CREDENTIAL COMPROMISE

While there is always a risk that attackers will compromise a company's systems through advanced attacks, most data breaches exploit common vectors such as known vulnerabilities, unpatched systems and unaware employees. Only by implementing a suite of tools including monitoring, data leak prevention, multifactor authentication, employee security awareness training and others - can organizations protect their business from the perils of the dark web.



BAE NETWORKS

DARK WEB COMPROMISE REPORT

Prepared for @wanakahcc.com

Oct 21, 2024

Most Recent 44 Compromises

BAE NETWORKS

Date Found	Email	Password Hit	Source	Type	Origin	PII Hit
06/18/24	marks@wanakahcc.com	bed******	id theft forum	Phishing or Keylogging	Not Disclosed	1
06/07/24	marks@wanakahcc.com	Bed******	id theft forum	Phishing or Keylogging	Not Disclosed	1
01/30/24	jackiew@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
01/30/24	chefk@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
01/30/24	marinak@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
12/07/23	jackiew@wanakahcc.com	Eew******	id theft forum	Phishing or Keylogging	Not Disclosed	1
03/27/23	marcr@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
03/27/23	marcr@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
03/18/23	marks@wanakahcc.com	Bed******	id theft forum	combolist	Not Disclosed	None
03/18/23	marks@wanakahcc.com	Bed******	id theft forum	combolist	Not Disclosed	None
06/10/22	mikev@wanakahcc.com	P******	id theft forum	Not Disclosed	Not Disclosed	1
02/19/22	mikev@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	4
02/19/22	mikev@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	4
11/18/21	janicer@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	4
08/16/21	jackiew@wanakahcc.com	Eew******	id theft forum	combolist	Not Disclosed	None
07/14/21	marks@wanakahcc.com		id theft forum	Data Breach	Not Disclosed	3
06/11/21	mikek@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	3
06/11/21	galeh@wanakahcc.com		id theft forum	Not Disclosed	Not Disclosed	2
10/02/20	g.hultquist@wanakahcc.com	227******	id theft forum	combolist	Not Disclosed	None
10/02/20	stevep@wanakahcc.com	90c******	id theft forum	combolist	Not Disclosed	None

Live Data Search

Company Profile | Breach Descriptions | Export

Total Exposures	Password Hits	Earliest Compromise	Latest Compromise
44	26	04/06/2016	06/17/2024

PII Hits

First Names	Last Names	Addresses	Phone Numbers	Birth Dates	Usernames
13	10	4	8	2	8

Email	Date Found	Password Hit	PII Hits	Origins	Exposed Details
marks@wanakahcc.com	06/17/2024	bed********	1	N/A	Exposed Details
marks@wanakahcc.com	06/06/2024	Bed********	1	N/A	Exposed Details
jackiew@wanakahcc.com	01/29/2024	none	3	N/A	Exposed Details
chefk@wanakahcc.com	01/29/2024	none	3	N/A	Exposed Details
marinak@wanakahcc.com	01/29/2024	none	3	N/A	Exposed Details
jackiew@wanakahcc.com	12/06/2023	Eew********	1	N/A	Exposed Details
marcr@wanakahcc.com	03/26/2023	none	2	N/A	Exposed Details
marcr@wanakahcc.com	03/26/2023	none	2	N/A	Exposed Details
marks@wanakahcc.com	03/17/2023	Bed********	none	N/A	Exposed Details
marks@wanakahcc.com	03/17/2023	Bed********	none	N/A	Exposed Details
mikev@wanakahcc.com	06/09/2022	P**********.1	1	N/A	Exposed Details
mikev@wanakahcc.com	02/18/2022	none	5	N/A	Exposed Details
mikev@wanakahcc.com	02/18/2022	none	5	N/A	Exposed Details
janicer@wanakahcc.com	11/17/2021	none	5	N/A	Exposed Details
jackiew@wanakahcc.com	08/15/2021	Eew********	none	N/A	Exposed Details

Michigan Part of $20 Million Multistate Data Breach Enforcement Action Against Nation's Largest Nonbank Mortgage Servicing Company

January 08, 2025

Media Contact: DIFS-press@michigan.gov
CSBS Media Contact: Susanna Barnett, 202-608-3143
Consumer Hotline: 833-ASK-DIFS, AutoInsurance@michigan.gov
Consumer Hotline: 877-999-6442, Michigan.gov/DIFScomplaints

FOR IMMEDIATE RELEASE: January 8, 2025

(LANSING, MICH) Michigan joined 52 state financial regulatory agencies in a coordinated enforcement action against mortgage company Bayview Asset Management LLC, and three of its affiliates, Lakeview Loan Servicing, Community Loan Servicing, and Pingora Holdings (collectively the Bayview Companies), for failing to maintain sufficient cybersecurity practices and for not fully cooperating with state regulators following a data breach that impacted 5.8 million customers.

Thank You

ERIC CASTIGLIA

BAE NETWORKS

WWW.BAENETWORKS.COM

GORE® SOLUTIONS FOR AEROSPACE & DEFENSE

Marcel Bakx
Market Development
mbakx@wlgore.com

Rob Haywood
Market Development
rhaywood@wlgore.com

Bob Savitsky
Senior Field Sales
rsavitsky@wlgore.com

Together, improving life

GORE

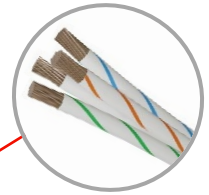
Courtesy of Rhenimetall © and Kongsberg Defense ©

Defense Vehicles

GORE® Microwave/RF Assemblies, 7 Series/General Purpose
(EW Systems, IFF, Active Protection Systems, SATCOM on the move)

GORE® USB Cables. 2.0/3.1 Versions
(Vetronics, Vetronics Integration)

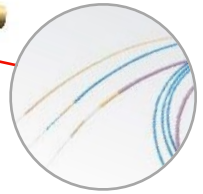
GORE® High Flex Cable Assemblies
(Telescopic masts)



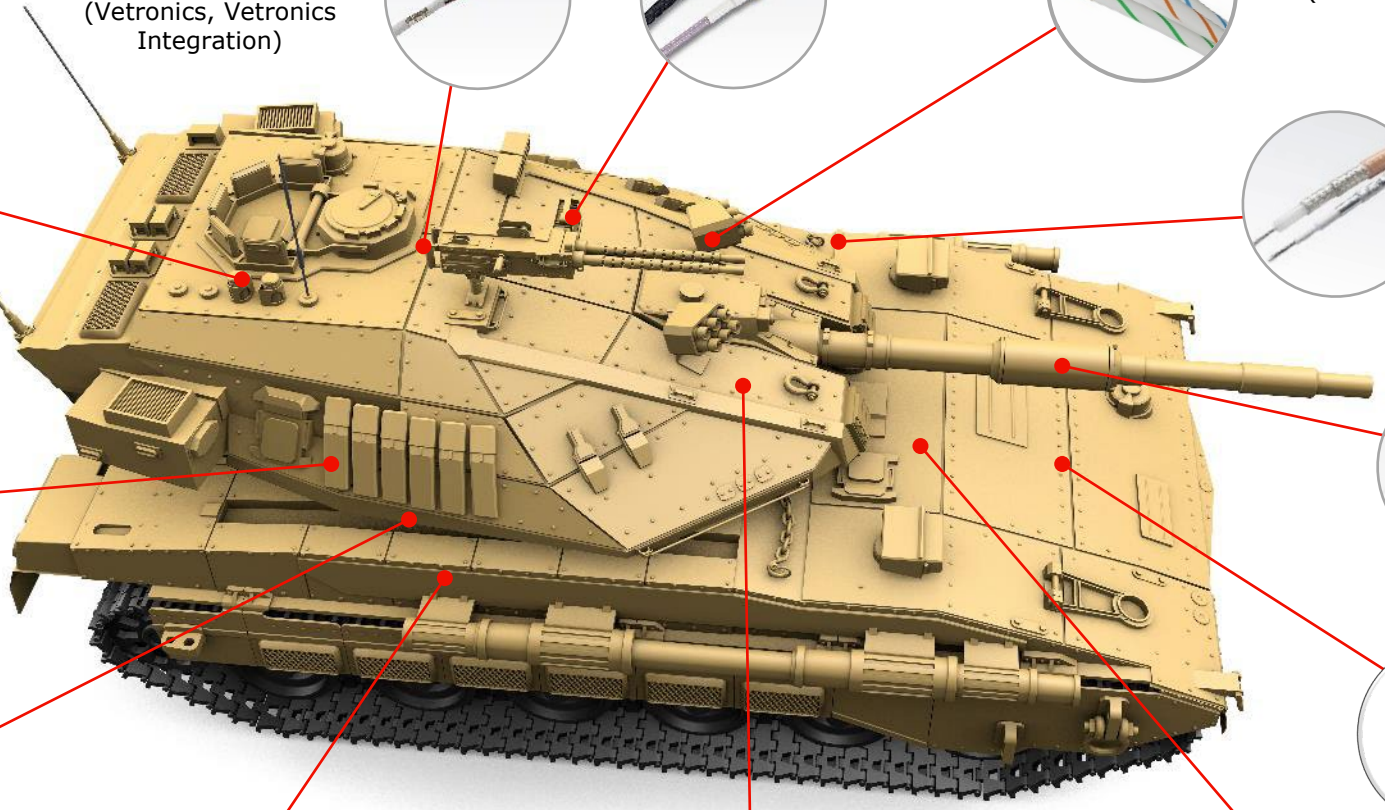
GORE® High Performance Aerospace Wires
(Electrification, Hybrid Propulsion)

GORE® Coaxial Cables
(4K Camera Video Links)

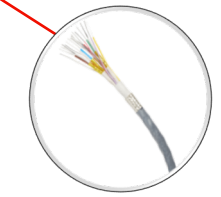
GORE® Ethernet Cables, Cat6a Version
(Vehicle Backbone, Hi-Res video streaming, Vectronics, Active Protection Systems)



GORE® Fiber Optic Cables
(Vehicle Backbone, Vetronics)



GORE® Cableband Systems
(Optronic Turrets, Elevation Systems, Elevation, Azimuth)



GORE® HDMI/DVI/DP Cables
(Screens, Vetronics and consolles Integration)

GORE® CAN Bus Cables
(Vehicle Control & Monitoring, Motion Control)

GORE® High Flex Cable Assemblies
(Headsets, Intercoms)

GORE® Round Cables
(Dynamic Components, Automation)

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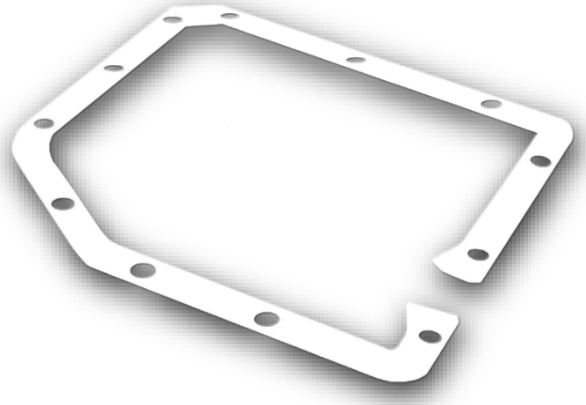
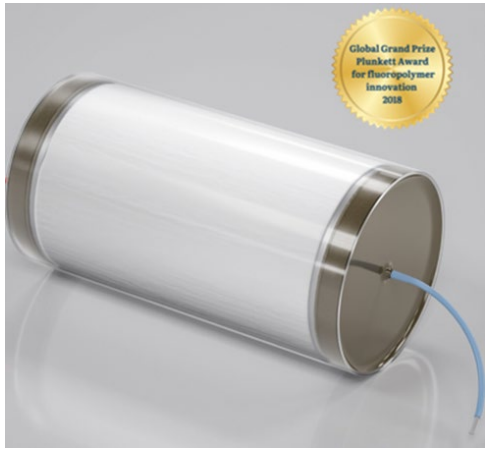
Aerospace & Defense

Solutions

- Smaller, thinner, **lighter weight** designs
- Easier **routing** with tight bend capability
- Proven **performance** after installation and over time
- Increased defense vehicle **availability**
- Lower lifecycle **costs** with longer service life
- Meets **next-gen system** technology requirements





Gore is a trusted partner delivering high-performance solutions that push the boundaries of **reliable system performance** in the harshest environments.

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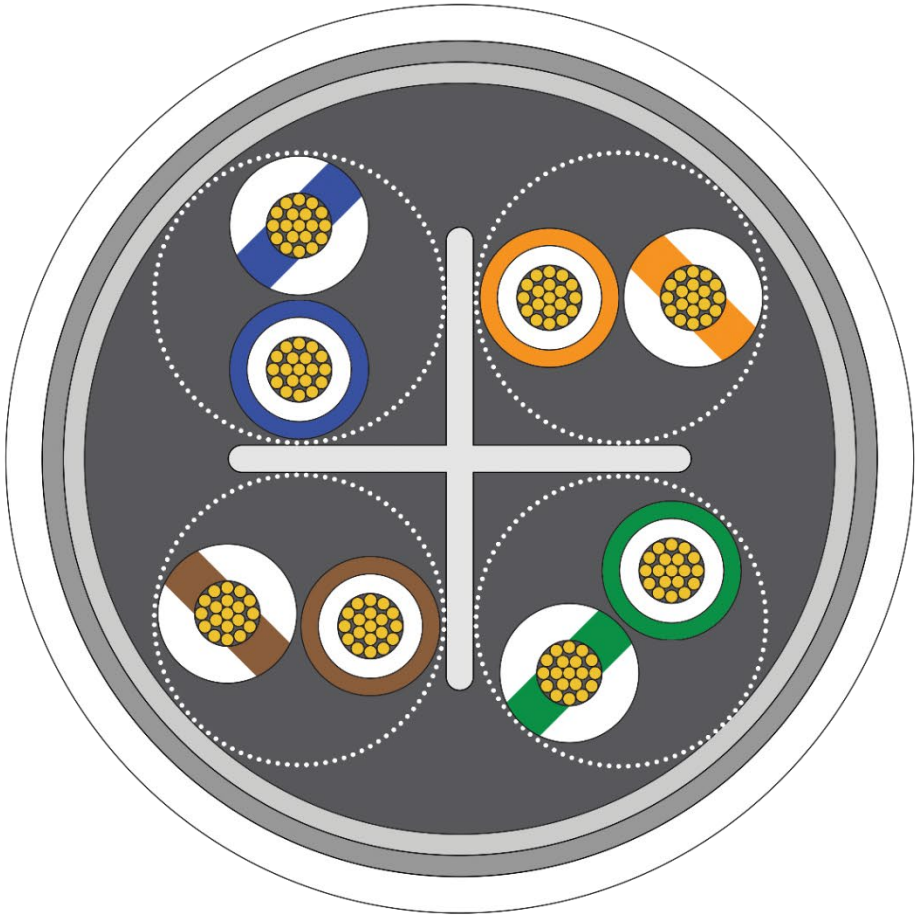
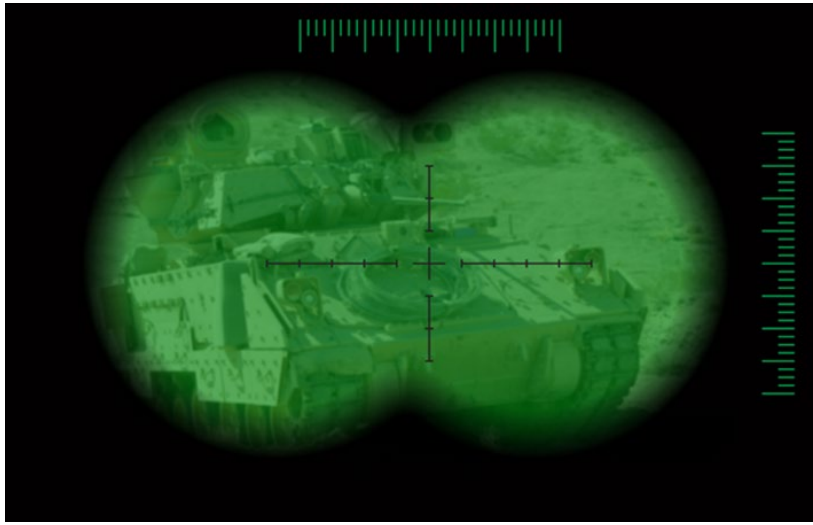
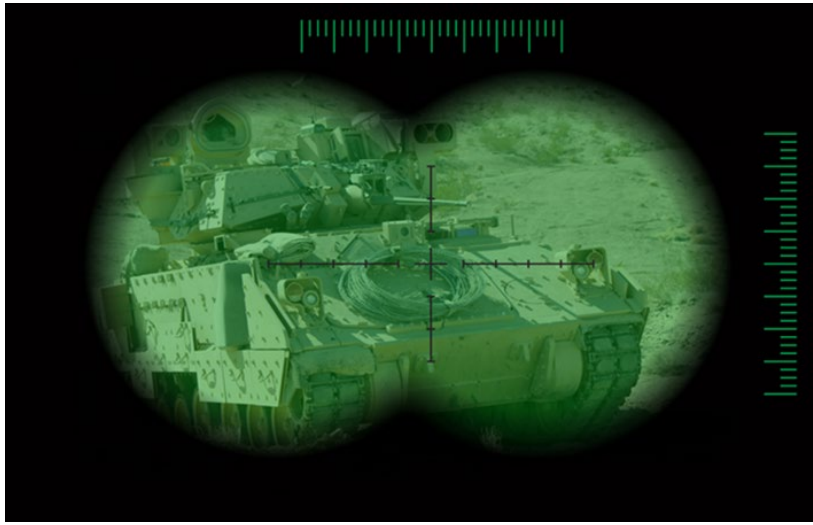
Increasing Under-Armor Volume and Reducing Weight While Increasing Effectiveness

GORE® Ethernet Cables (4 Pairs)



Standard Cables





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GORE® Cables, Apollo 11

We spearhead transformations that overcome extreme system challenges, on Earth and beyond, to protect and connect society

A DELTA INFORMATION SYSTEMS COMPANY

AMPEX

Ampex Data Systems

Defense and Donuts 1/22/2025

CAPTURE | PROCESS | STORE | HOST | SECURE

Ampex Overview

Mission

Capture, process, store, host, and secure high-value data for our nation's defense and beyond by offering the lowest-risk combination of hardware and software solutions and best-in-class support.

- U.S. Owned and Operated
- Full Life-Cycle Support
- ISO 9001
- Facility clearance and multiple TS/SCI cleared personnel
- Employee-Owned Small Business
- Recent Facility Expansion

Capabilities

Ruggedization

- MIL-STD 810
- MIL-STD 461
- MIL-STD 704
- Gun Fire, Radiation Tolerant, and others

Encryption

- NSA High Assurance ('Type-1')
- Commercial Solutions for Classified (CSfC)
- FIPS 140, etc.

SWaP-C

- Designed for optimized SWaP-C

Open Architecture

- Non-proprietary, no vendor lock
- Ampex Common Compute Environment (ACCE)

Edge Performance

- Collect data at speeds ranging from hundreds of Mb/s to hundreds of Gb/s
- Storage capacities of hundreds of TBs

Tailored Solutions

- COTS, MCOTS, and fully customized solutions to meet customer requirements

Off the Shelf Solutions

BASE

Our most economical option. Mission required capabilities.

FLIGHT TEST

Where every pulse, signal, and sensor detail matters.

PLUS

Most popular solution. The “sweet spot” between cost & capabilities.

RACK MOUNT

Where industry-leading design meets peak operational performance.

MAX

The fastest thing flying. Fully capable. Completely rugged.

Cyber Security

NSA Type-1

- High assurance encryption for classified data

CSfC

- NSA-endorsed encryption scheme for classified data utilizing two COTS layers

FIPS 140

- Government approved cryptographic module security

AES 256/FIPS 197

- Government validated 256-bit encryption protocol

STIG Compliant OS

- Enhances system security and integrity

US-Based Supply Chain

- Controlled, Class-A supply chain for hardware and software security

Open Architecture

- Ensures cybersecurity adaptability and resilience

Program Support

- DoD Programs of Record
  - U.S. Army M-SHORAD
  - USAF B-52H
  - NAVAIR PMA-231 E-2D
  - NAVAIR PMA 262 MQ-4C Triton
- Procurement Schedule Capabilities
  - Ampex production facility can manufacture 350+ units annually
- Turnaround time to respond to delivery orders
  - Acknowledgement of order within 5 days
  - Delivery of hardware within 60-120 days

THANK YOU

Liam Ehlermann

Email: lehlermann@ampex.com
Cell: 279-230-1232
Office:

AMPEX DATA SYSTEMS CORPORATION
26460 Corporate Ave.
Hayward CA 94545 USA
+1.650.367.2011
www.ampex.com

Scaling Teams
Human + Machine

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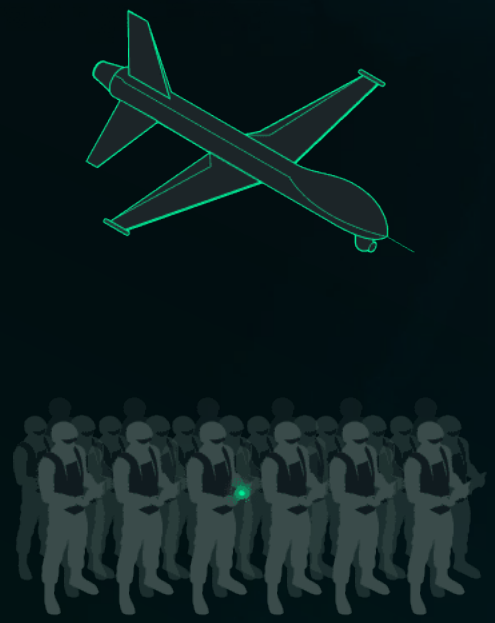
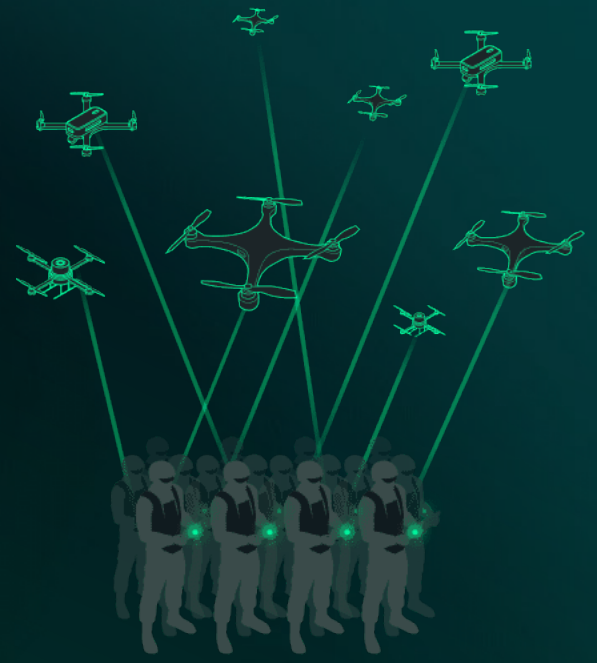
2000



First Wave

Expensive, Exquisite
Many Operators
Platform Specific C2

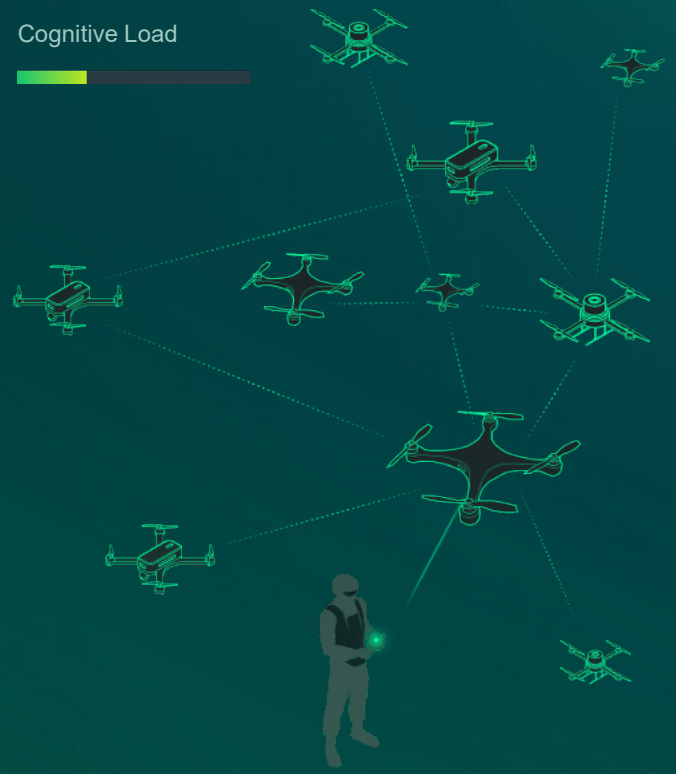
2012



Second Wave

Semi-autonomous, Low-cost
One to One Control
Platform Specific Training

2024



Third Wave

AI enabled orchestration, C2, Comms
Minimal Trained Operators
Heterogeneous, multi-domain platforms

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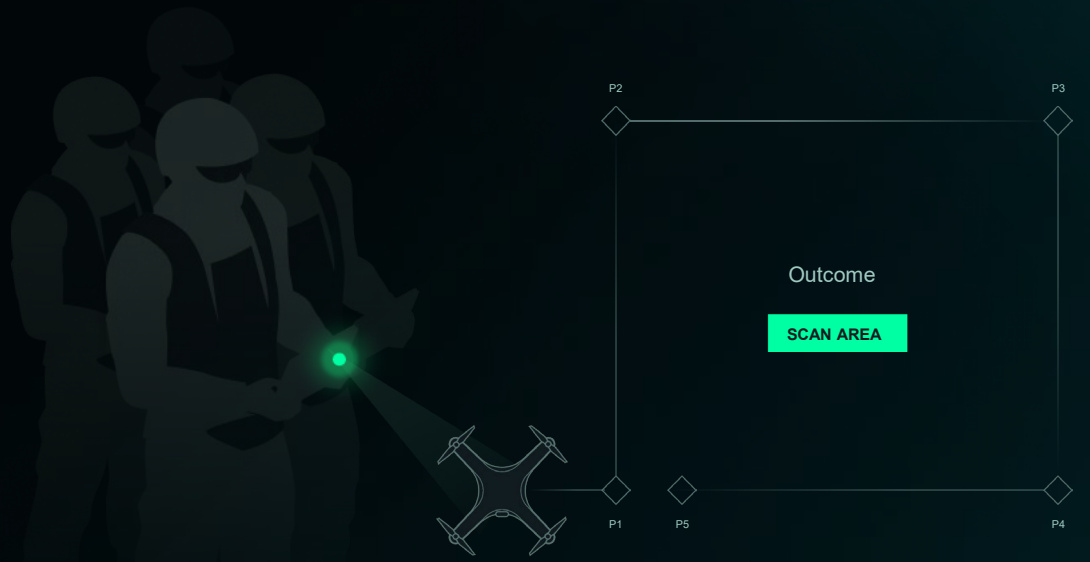
Legacy: Task driven systems

Cognitive Load



Tasks

MOVE TO P1 | MOVE TO P2 | MOVE TO P3 | MOVE TO P5 | MOVE TO P6 | RTB

Parameters to follow

TARGET | POSITION | JAMING | RANGE | SURROUNDINGS

Gambit's Approach: OOS Outcome Oriented System

Cognitive Load

Tasks

AI AUTOMATED

Parameters to follow

AI AUTOMATED

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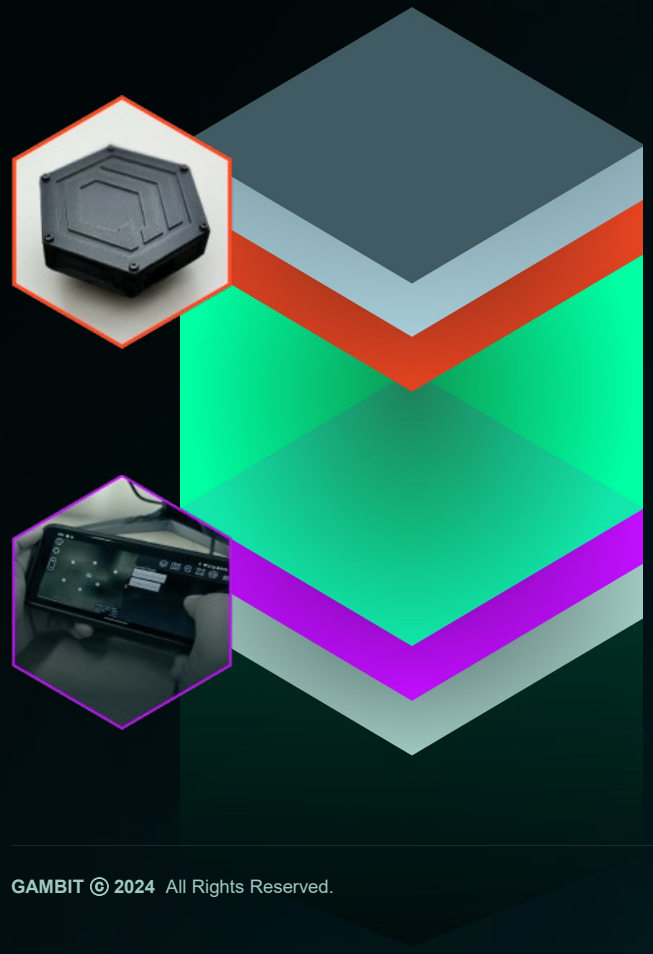
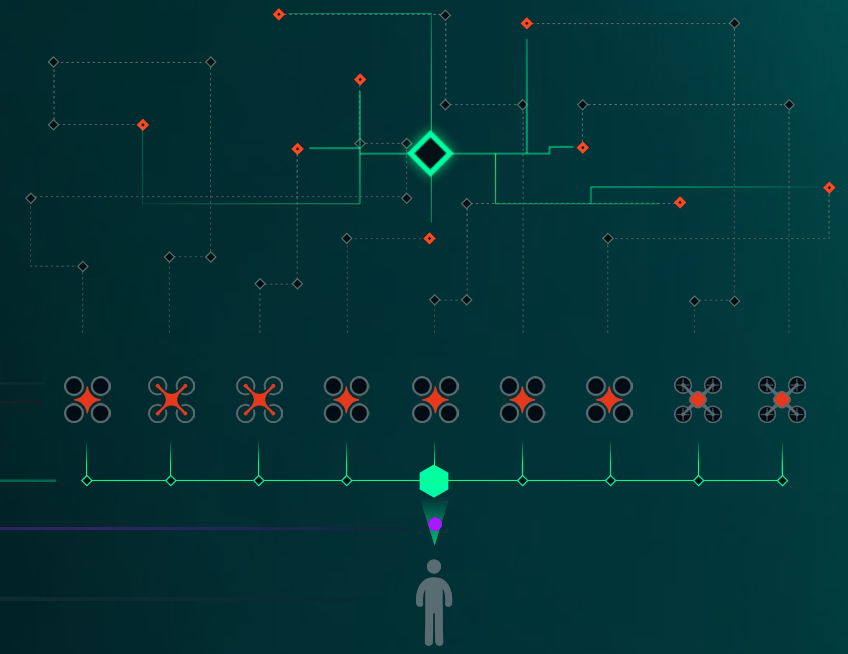
Gambit: OOS

Gambit's Approach: OOS
Outcome Oriented System

Cognitive Load



Hardware
Neuron
Cortex
Axon - Outcome GUI
Human



Human Output
AI Outputs
AI Tasks

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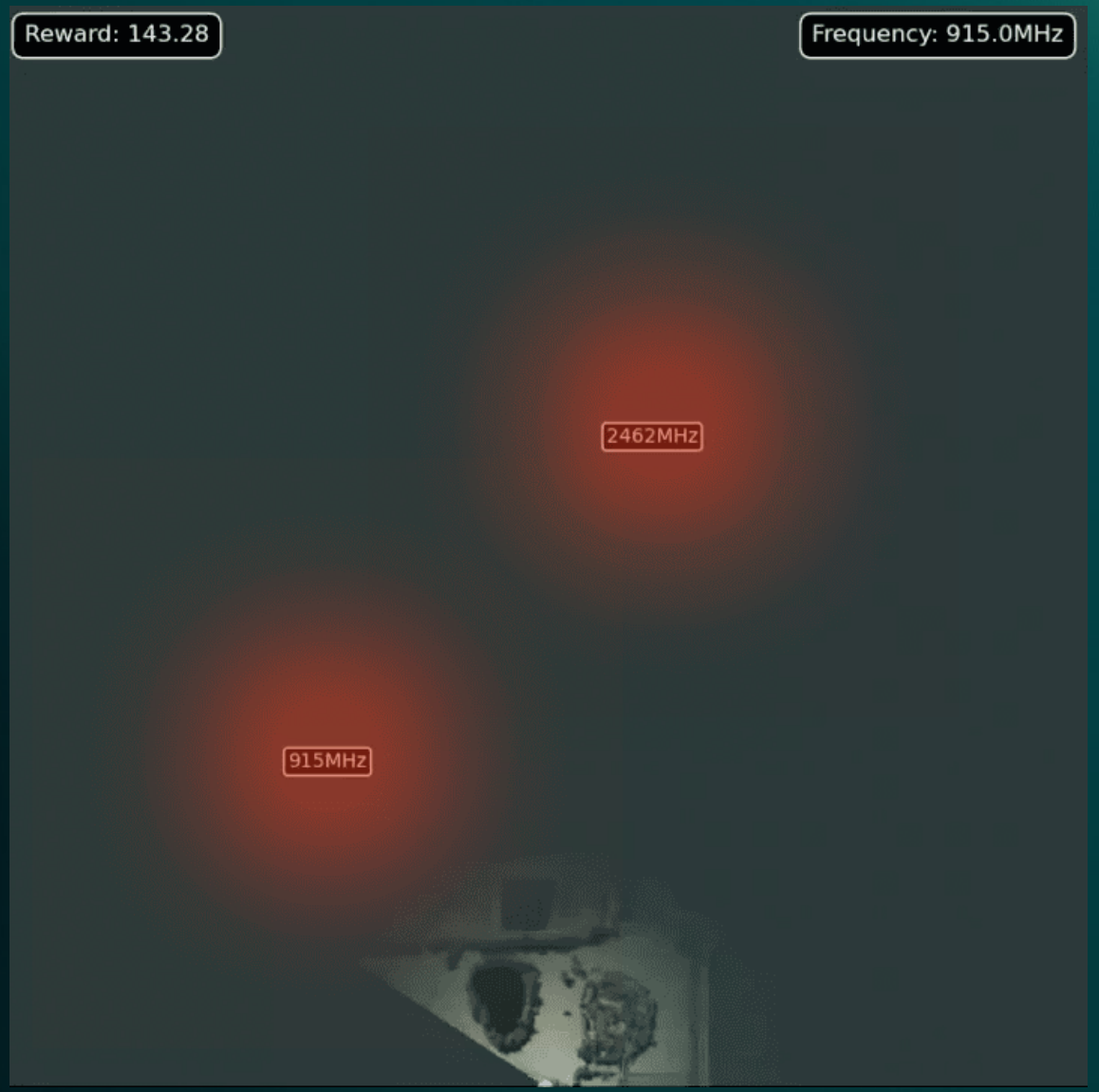
True Autonomy in contested environments

Outcome	Search and find all objects of interest in 300m x 300m w/ 10 nodes
Contested environment	Two jammers, 915 & 2462MHz, limit the ability of system to communicate with operator
Foundational AI Models	Behaviors/policies developed in simulation then deployed in off-policy learning and over time moving to on-policy for improved situational performance



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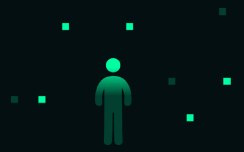
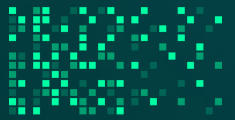
Value Proposition: Reducing Operational and Opportunity Costs

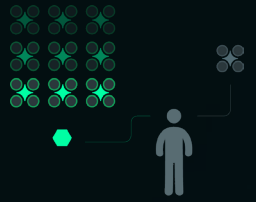


Manages the cognitive load

Coordinates heterogeneous drones across all domains



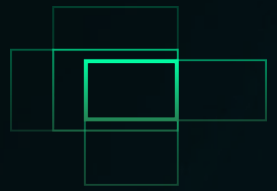
Collects tactical data at scale



Dramatically increases productivity.
1 person controlling 1 UxS vs.
1 person monitoring >100 is a massive productivity increase.

Allows user to use any UxS or payload to meet an outcome.

Optimizing O&M by allowing you to select the right platform for the right job at the right time.



No need to learn different interfaces for different system - one intuitive interface to control all domain heterogeneous platforms.

No requirement to define all subtasks of the system in the planning phase.

Operate with significantly lower costs and optimize resource allocation to achieve desired outcomes.

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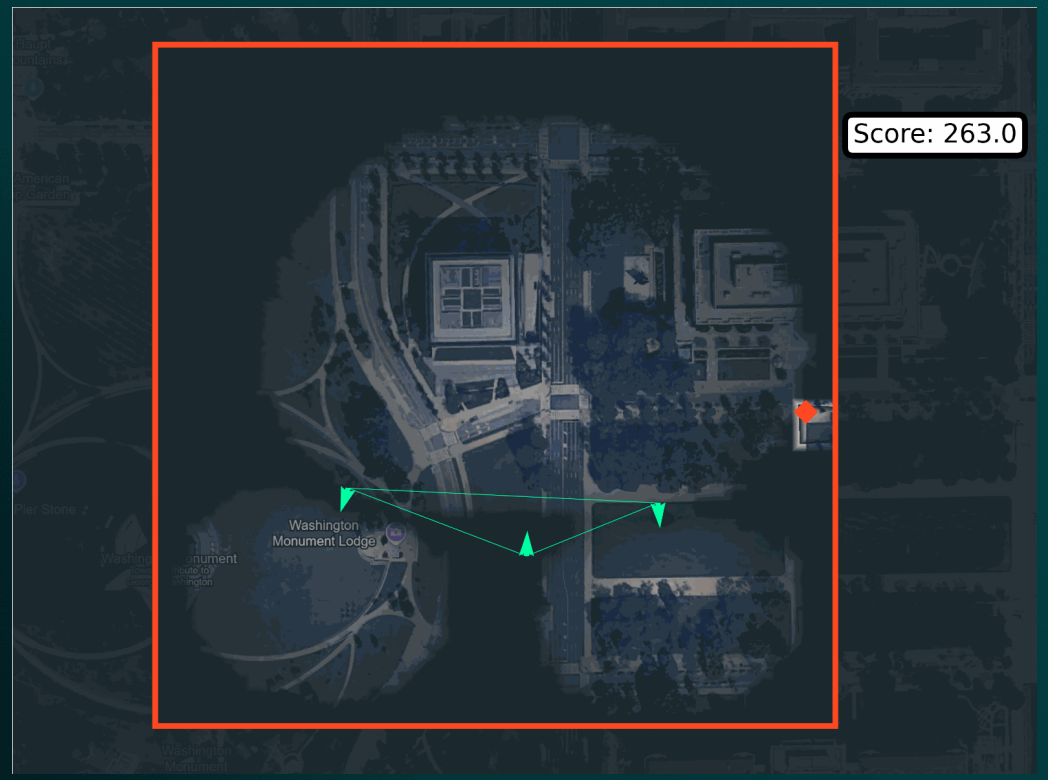
Relevant Capabilities: Dynamic Tracking

- Gambit Dynamic Tracking is more than just following a TOI
  - This level of myopic pursuit strains limited resources
  - Gambit focuses on increased tracking of high TOIs while still maximizing total situational awareness
  - Platforms dynamically reposition to compensate

Baseline Follow Video



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Relevant Capabilities: Dynamic Tracking Self Healing

- Gambit Dynamic Tracking is more than just following a TOI
  - This level of myopic pursuit strains limited resources
  - Gambit focuses on increased tracking of high TOIs while still maximizing total situational awareness
  - Platforms dynamically reposition to compensate
- Mission healing if platform lost mid operation

[Follow With Tracking Platform Loss]

Gambit: TE 24-3 Evaluation

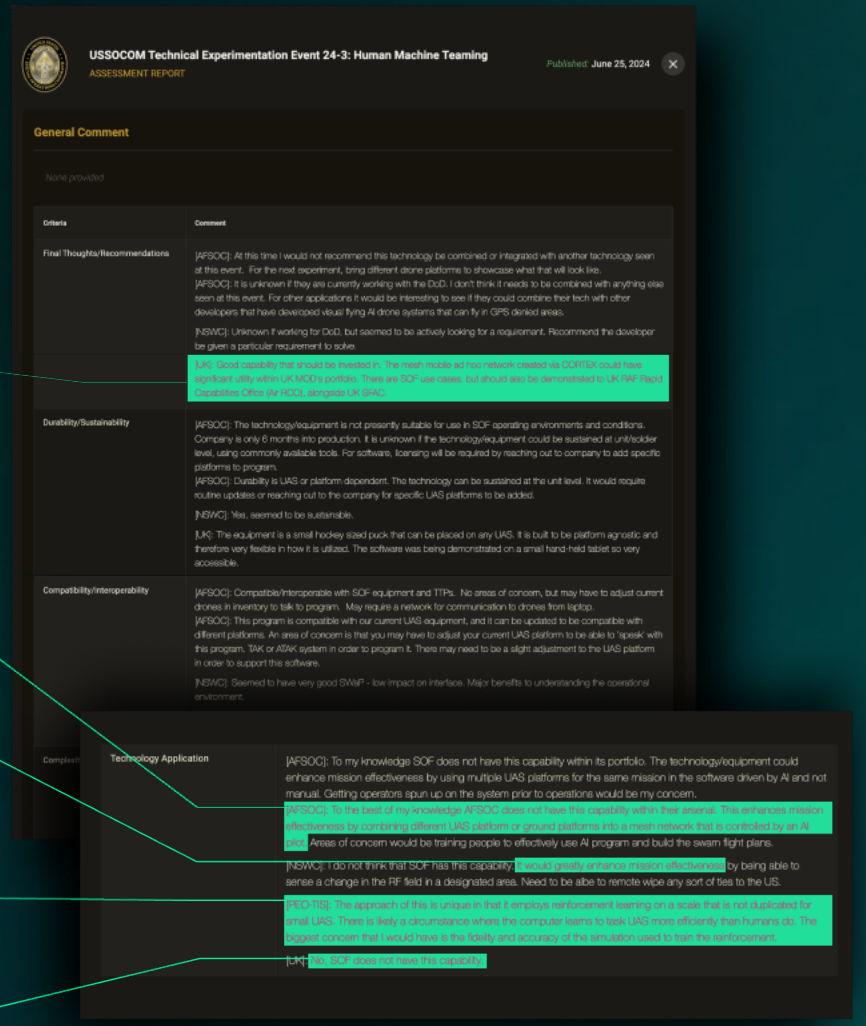
“ Good capability that should be invested in. The mesh mobile ad hoc network created via CORTEX could have significant utility within UK MOD's portfolio. There are SOF use cases, but should also be demonstrated to UK RAF Rapid Capablities Office (Air ROO), alongside UK SFAC.

“To the best of my knowledge AFSOC does not have this capability within their arsenal. This enhances mission effectiveness by combining different UAS platform or ground platforms into a mesh network that is controlled by an AI pilot.”

“It would greatly enhance mission effectiveness”

“The approach of this is unique in that it employs reinforcement learning on a scale that is not duplicated for small UAS. There is likely a circumstance where the computer learns to task UAS more efficiently than humans do. The biggest concern that I would have is the fidelity and accuracy of the simulation used to train the reinforcement.”

“No, SOF does not have this capability”



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Scaling Teams
Human + Machine

Point of contact:
Benjamin Richardson
Chief Commercial Officer
(858) 736-5474
ben@gambit.us

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U.S. Army Example

$25M Army announcement to purchase commercial drones for its 31 Brigade Combat Teams

2500 Drones

$10,000 Per drone

Without Gambit

= 8x

With Gambit

30X

Improving the operational effectiveness while decreasing the cognitive load on the individual soldier.

240 Operators out of 4000 people in one BCT

6%

8 Operators control 80 drones for entire BCT

0.02%

1 Drone

3 Operators

10 Drones

1 Operator

DHS Example

2023

2000 Operators

330 Drones

2024

1030 Operators

170 Drones

Without Gambit

= 8x

With Gambit

2,980

Operators Decreased by Gambit with the same outcome.

3030 Operators total.

50 Operators to control 500 drones.

60X More effective

1 Drone

6 Operators

10 Drones

1 Operator

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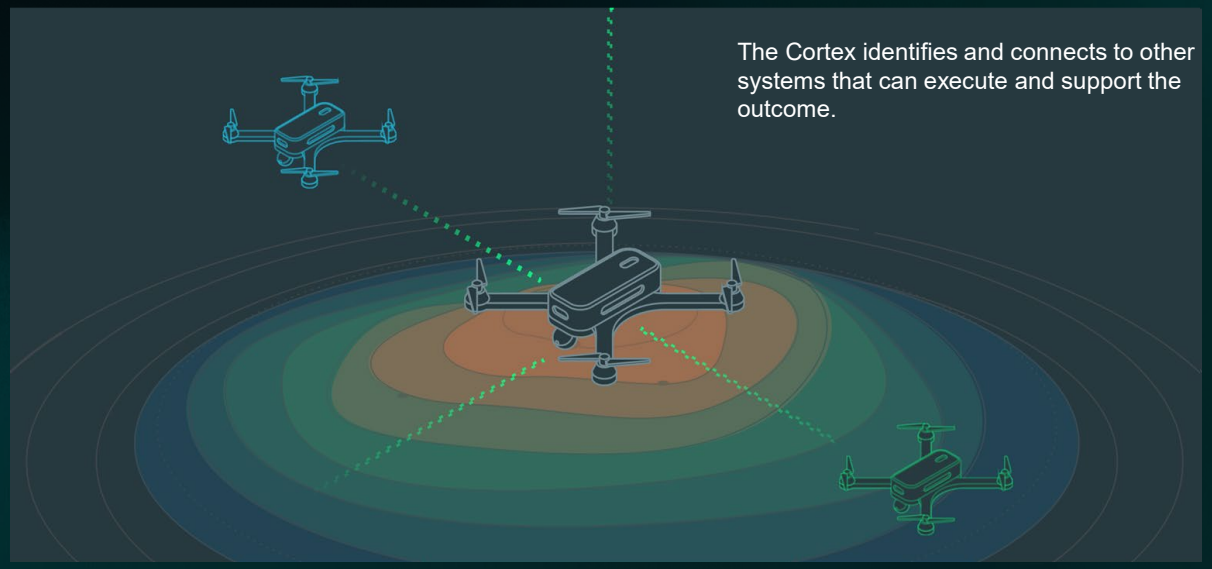
Operator selects an area on the map and issues outcome command to cortex.

Scan Selected Area for Jammers



The Cortex identifies and connects to other systems that can execute and support the outcome.

Executing behaviours

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Product roadmap

R1

5x M500 drones

Search/Map

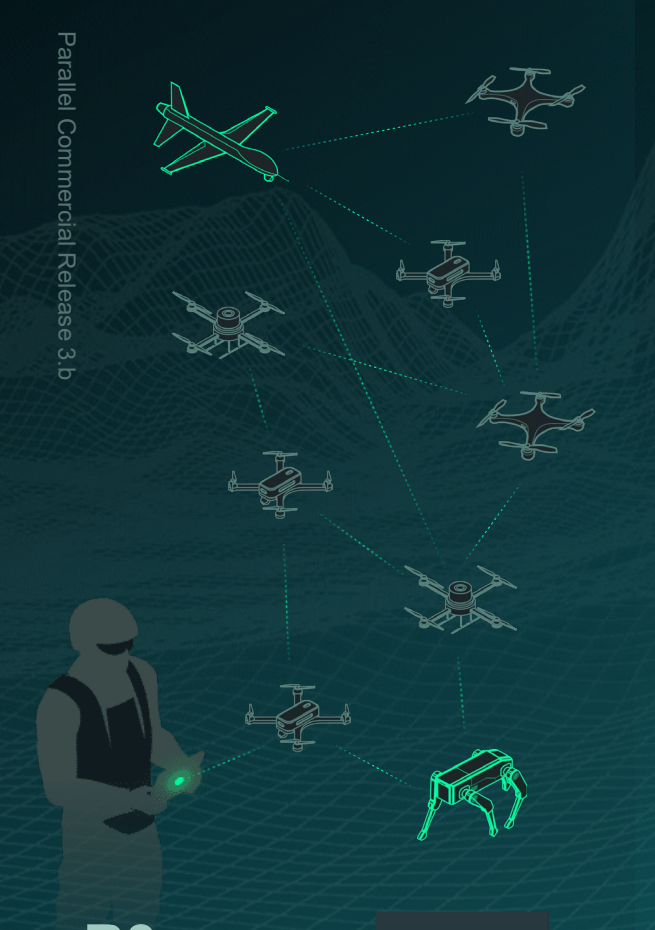
R2

3 Blue UAS Platforms

Search/Map

Find/Follow

Parallel Commercial Release 3.b



R3a

Fixed Wing, UGV

Search/Map

Find/Follow

Actuate

Learn

Parallel Commercial Release 4.b

R4a

Legacy Systems, UxS

Search/Map

Find/Follow

Actuate

Learn

Orchestrate

Target

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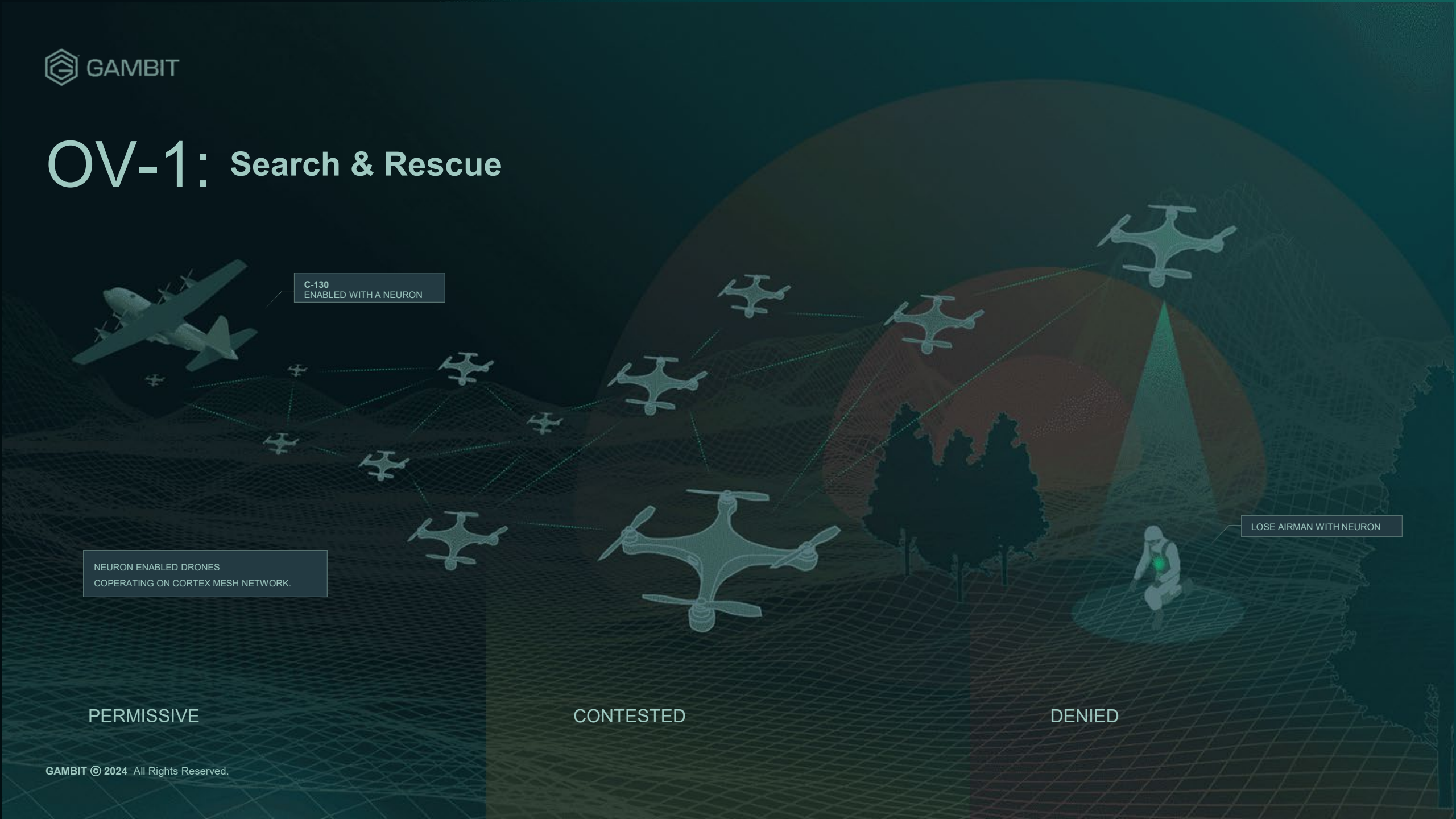
OV-1: Search & Rescue



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OV-1: **Humanitarian Assistant Disaster Relief** (HADR)

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OV-1: **Intelligence Surveillance Reconnaissance** (ISR)

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ICAT LOGISTICS

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logistics, inc.

With over 30 years of expertise, we specialize in shipping goods, vehicles, and gear for defense and government operations across the globe

123 military vehicles on a cargo vessel going to the Phillipines

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ICAT’s team of experts ensure your cargo remains secure and compliant door to door.

Missile Defense Systems,
Northrop Grumman

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From transporting military vehicles to handling sensitive gear, we navigate challenging territories across the globe.

130 Armored Personnel Vehicles to Ukraine - Foreign Military Sales

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BAE Hawk Aircraft Project

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Chartered Antonov from Poland to USA Shipping Predator Drone System

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CHRIS CSER

chris.cser@icatlogistics.com

RENEE SARB

renee.sarb@icatlogistics.com

INTREPID CONTROL SYSTEMS, INC.

- Supplier of Automotive Network and Data Logging systems for 29 years
- Product focused company

- Global support network to react to customer needs quickly
- Investing in new technology
- Automotive Ethernet, CAN FD, Cybersecurity, Autonomy

Versatile Product Family

Software compatible with all hardware

Software for
Network Analysis
Simulation
Data Logger Setup
Automation QA

Remote Wireless Data Logging

Standalone Data Loggers

Vehicle Network Interfaces

Education

Data Analytics

Accessories

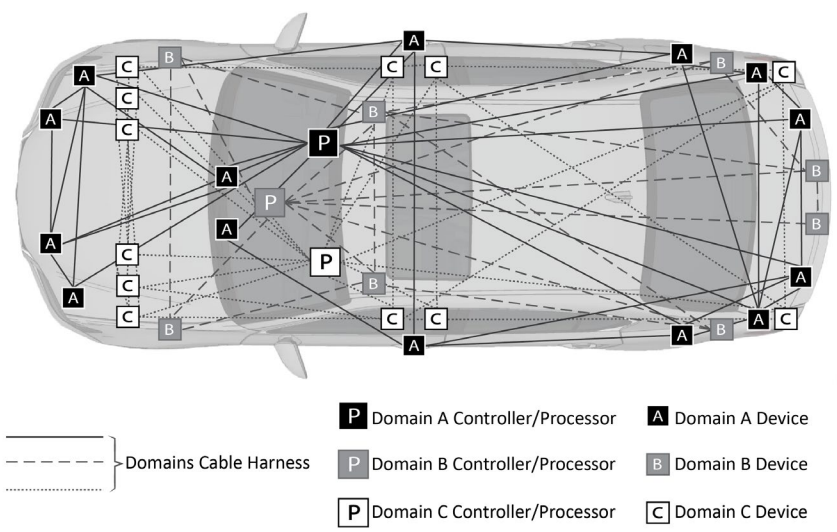
SerDes Products

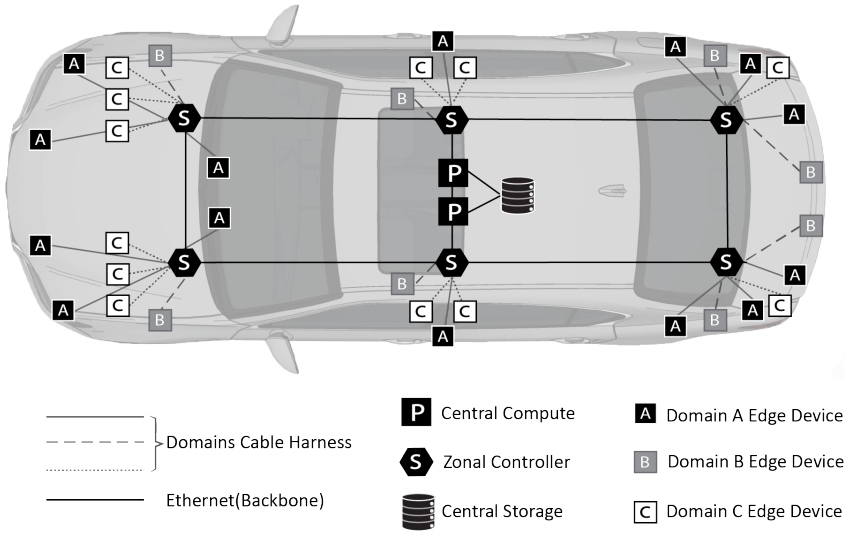
Gateway / Node SIM

Analog I/O & Digital I/O

Automotive Ethernet Tools

Domain to Zonal Transformation





DOMAIN

- Domain Architectures were an improvement from previous architectures
- Domains segregated by network
- Advances in technology have made this this suboptimal
  - Cost
  - Weight
  - Manufacturing

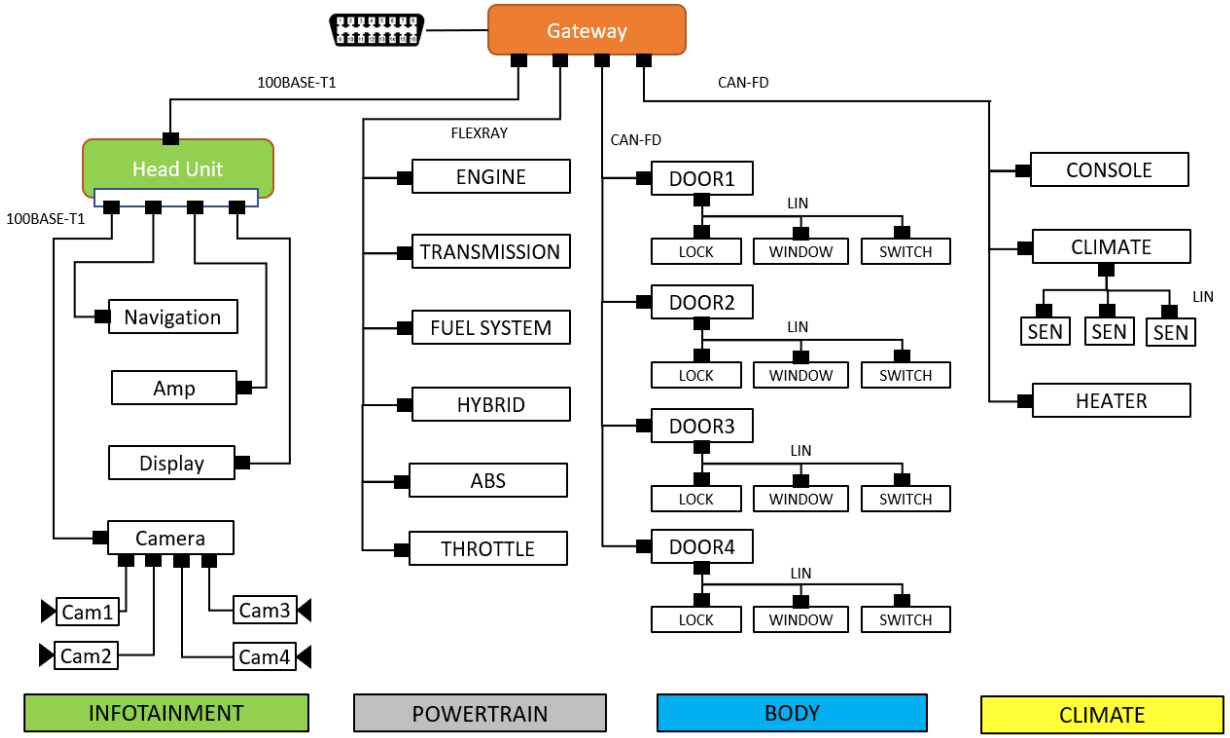
ZONAL

- Supports Software Defined Vehicle (SDV)
  - Abstract as much as possible hardware from software
- Optimize Power and Signal Distribution System
  - Fewer network connections
    - Less cost
    - Less weight
    - Simpler assembly
    - Higher reliability (mechanically speaking)

Domain vs Zonal Architecture

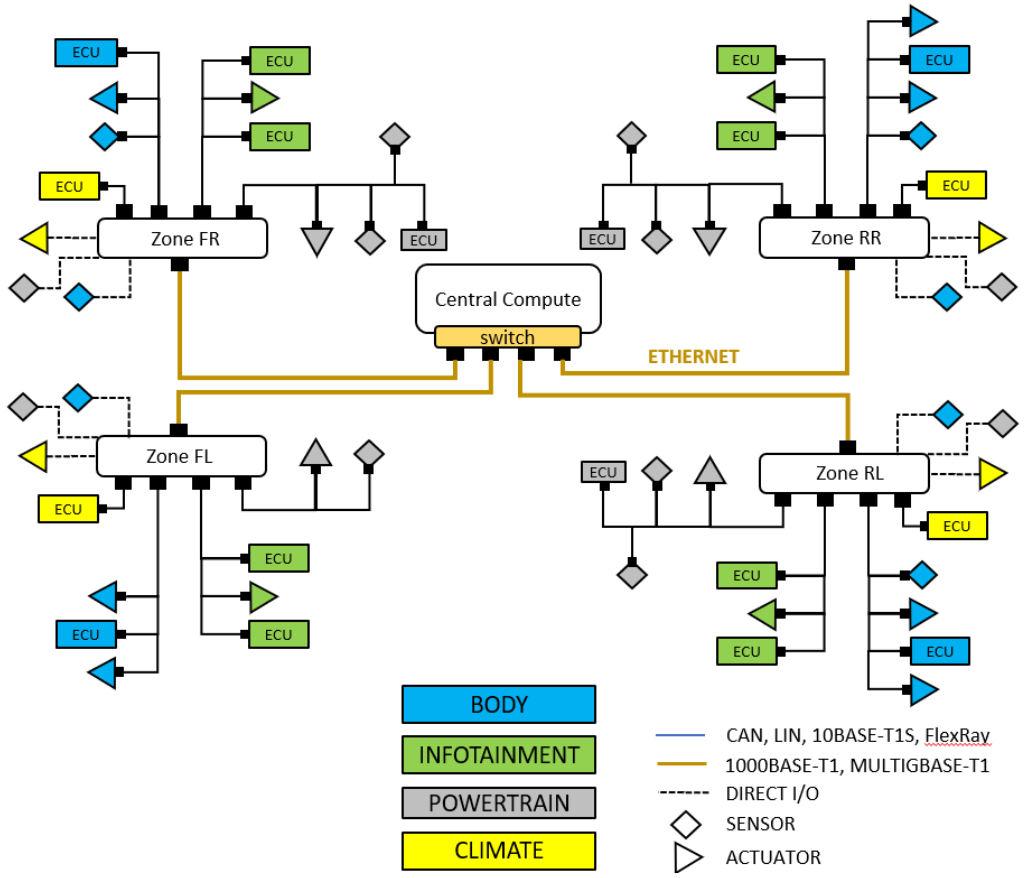
DOMAIN

Many variants depending on OEM. Many legacy and proprietary networks employed including CAN-FD, FlexRay, Ethernet, A2B, SENT, LIN, etc.



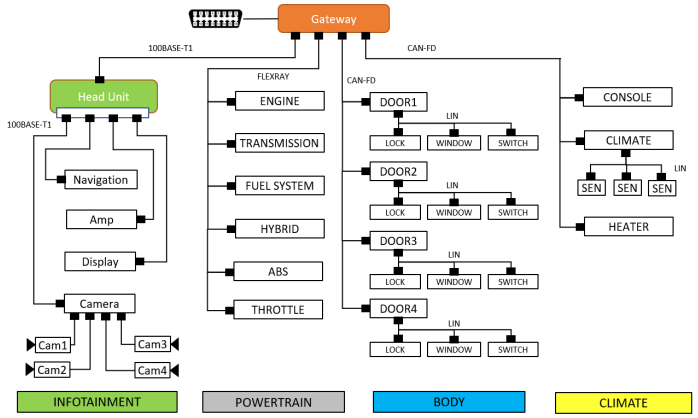
ZONAL

Many variants that include “Ethernet only” Zonal, and hybrid versions that include CAN-FD, LIN, FlexRay, etc. Backbone is always Ethernet.

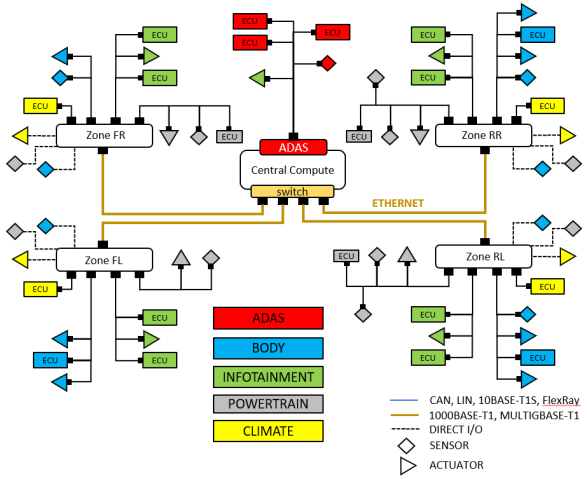


Drive Toward Zonal Model

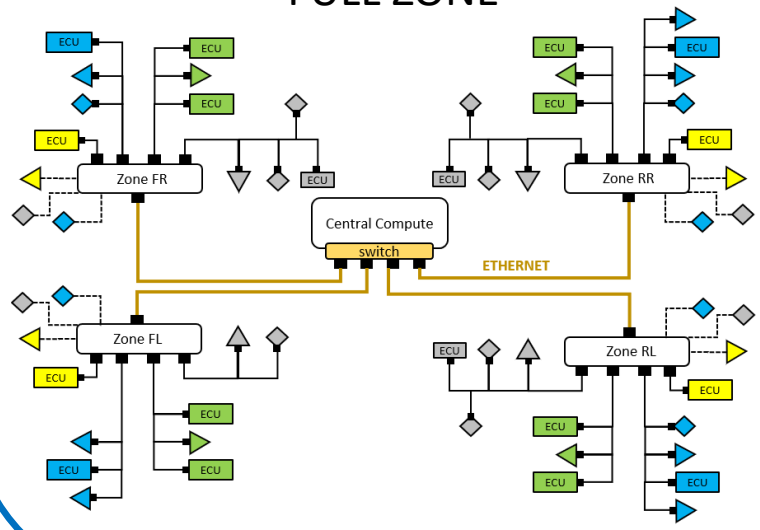
DOMAIN



PARTIAL ZONE

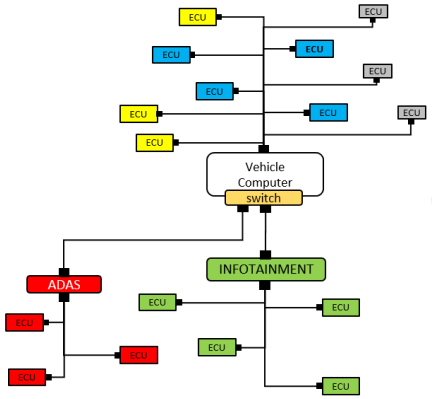


FULL ZONE



Legacy edge networks
(CAN, LIN)

CLUSTERD DOMAIN



OEM A

OEM B

OEM C

Ethernet Only Zonal

Zonal / SDV – Enabling Technologies

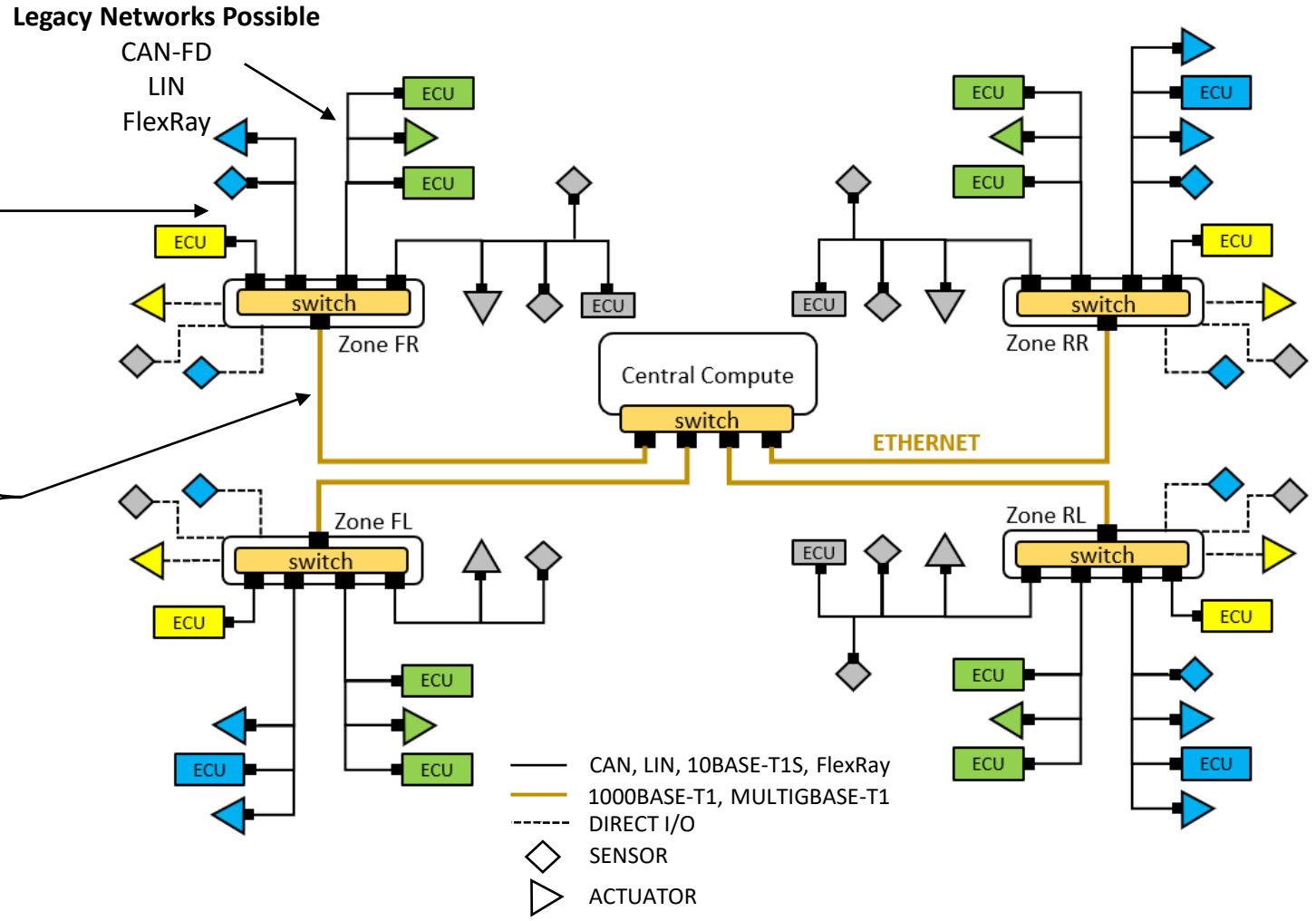
10BASE-T1S
Edge node BUS

1000BASE-T1
MultiGBASE-T1
Zone-to-Zone and Central Compute / Vehicle Computer communication

802.1AS gPTP
Time Synchronization

IEEE 1722
Transport layer for:
Audio/Video
CAN, LIN, Flexray

AVB / TSN
Real-time communication with safety critical features like redundancy



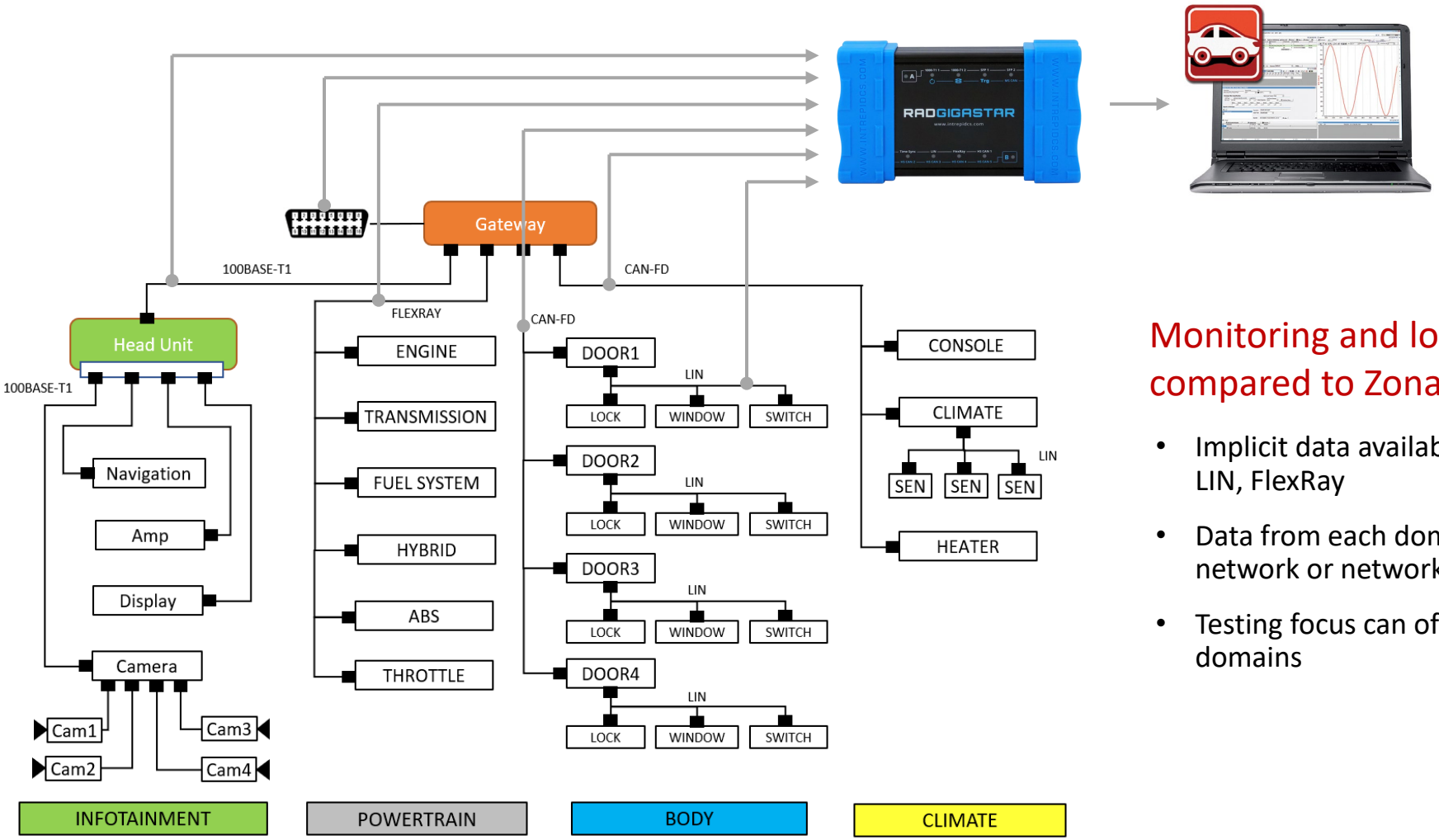
TC10
Sleep / Wakeup
Power management for Ethernet

TC14
10BASE-T1S Sleep/Wake-up Specification

Network Management

ARXML
Database Description for Networks

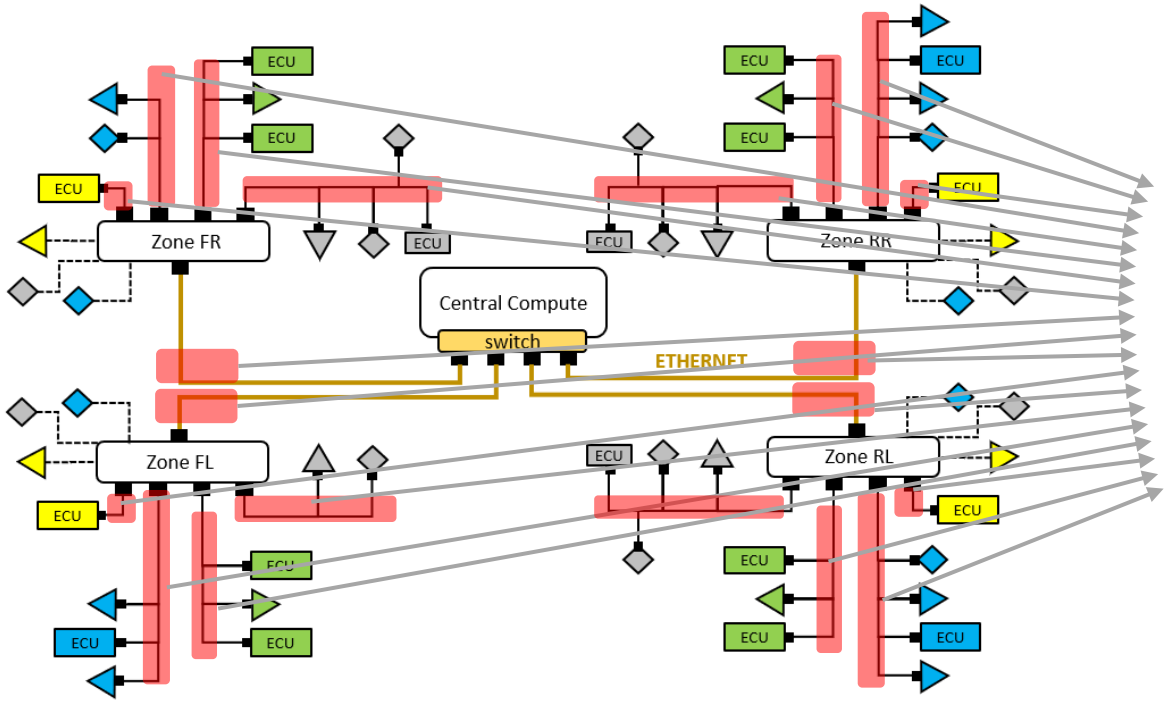
Domain Architecture Testing



Monitoring and logging data is less complex compared to Zonal Architectures:

- Implicit data availability with BUS networks including CAN, LIN, FlexRay
- Data from each domain can be generally separated by network or network groups
- Testing focus can often be separated inside of functional domains

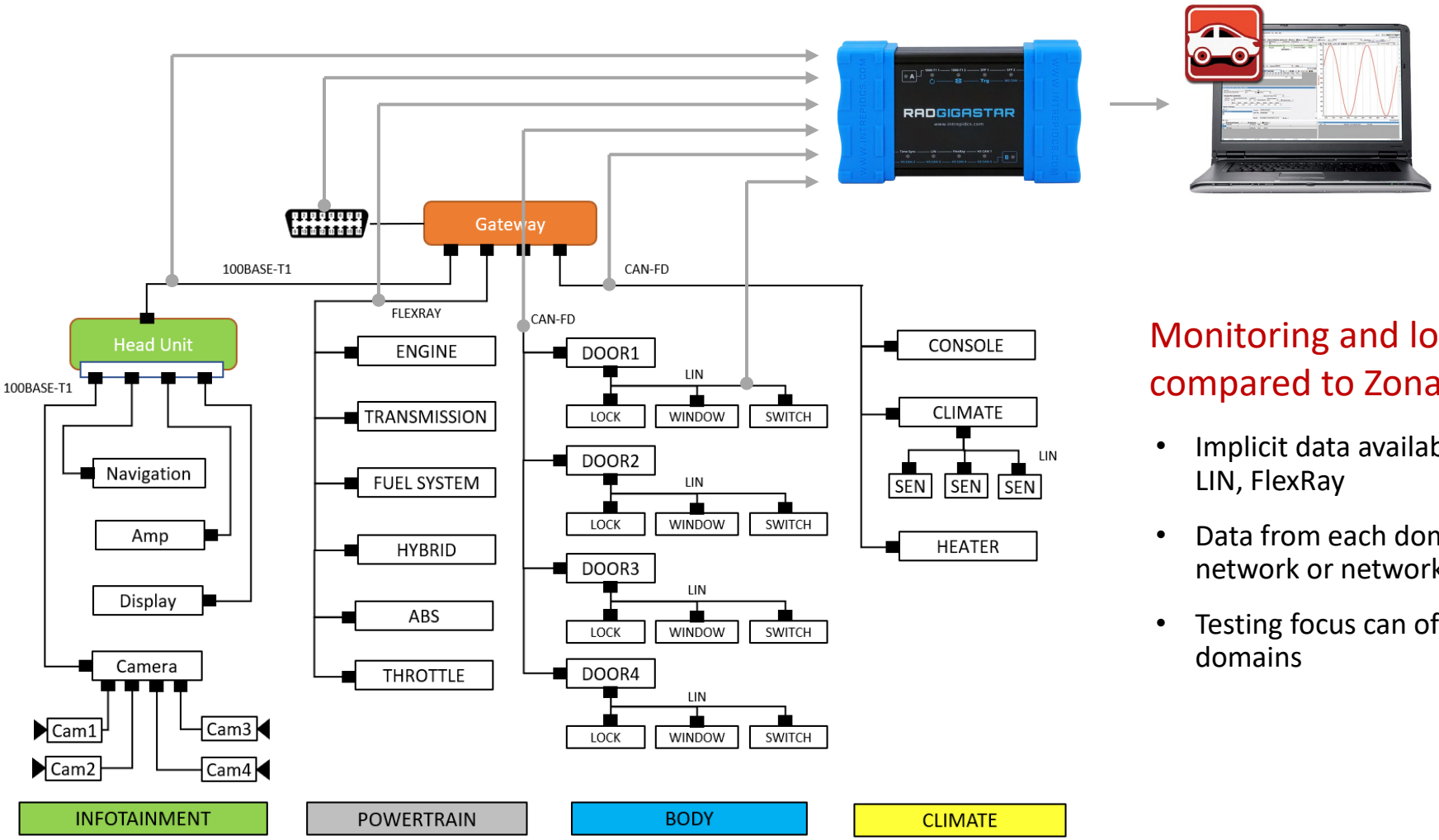
Zonal Architecture Testing



Monitoring all legs of all networks becomes difficult

- Due to aggregation of bandwith with multiple 1000BASE-T1 networks, monitoring or data logging becomes complex and more-difficult.
- Selective channel monitoring is likely.
- Each leg of the 1000BASE-T1 backbone carries aggregated data from multiple domains.

Domain Architecture Testing



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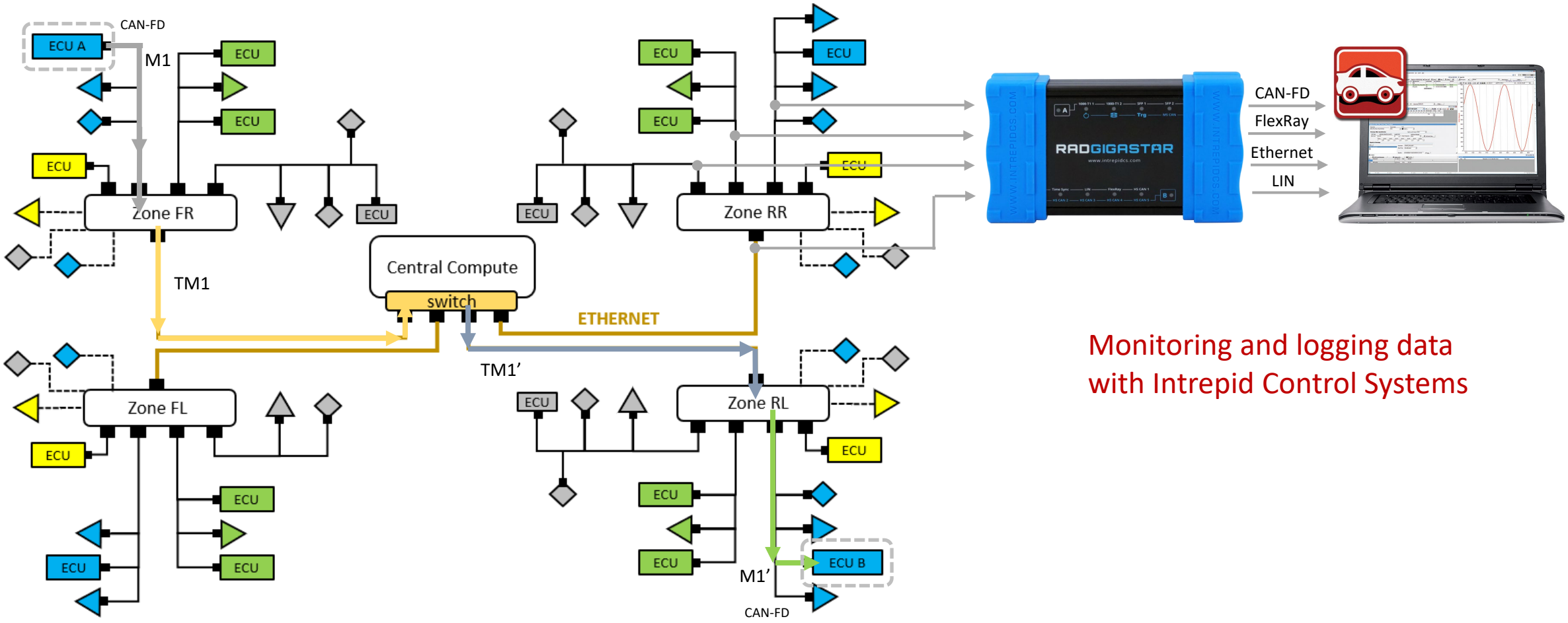
Zonal Architecture Testing



Monitoring and logging data with Intrepid Control Systems

Questions?

Discover more at www.intrepidcs.com

Dave McCabe contact information:
dmccabe@intrepidcs.com
Call my cell ANYTIME:586-871-3660

MICHIGAN ISRAEL
BUSINESS ACCELERATOR

PARTNERSHIPS FOR MICHIGAN GROWTH

MIBA's History

The Michigan Israel Business Accelerator (MIBA) **connects Israeli innovation** to **Michigan businesses**, enhancing their **competitive edge** to drive **positive economic impact** across both regions.

2017

The MIBA is established as an economic development organization supported by the state of Michigan. The MIBB agrees to sunset and transfer all assets to the new entity. This initiative emerged in direct response to the state leaders of Michigan and Israel emphasizing coordinated economic development policies to facilitate the exchange of innovative technologies and products. *

2019

The MIBA defines its mission, vision, values and success metrics while mobilizing a team to support the mission.

2023

The Elevator launches as the first US landing zone dedicated to Israeli startups & companies, expanding the MIBA's reach and contributing to a remarkable $7M in economic growth in Michigan.

2024

Programming & team continue to grow to meet the needs of Israeli businesses looking to scale in the US. Exciting times are ahead for the MIBA!

* Our predecessor, the Michigan Israel Business Bridge, was established in 2007 and laid the foundation for fostering collaboration between Michigan and Israel.

MIBA's Mission & Vision

Mission

Accelerating Michigan's economic growth,
One Israeli innovation at a time

Vision

Positioning Michigan as the premier partner
for Israeli innovation in the US

Why Israel
By the Numbers

9,000+ startups - #1 in startups per capita

#1 in R&D Expenditures (as % of GDP)

270 active VC funds & 71 international VC firms

2nd most foreign companies listed on NASDAQ, behind only China

500+ multinational corporations from 35 countries are active in Israel

1st in per capita VC funding globally & 2nd in startup investment

Israel for Defense

Israel Defense Forces (IDF) ranks among the **most battle-tested armed forces globally**

Hosts the annual "**New Technology Military Defense Exhibition**" demonstrating Israel as a global military technology leader

$3.8B Received in **military aid per year** - the largest recipient of Foreign Military Financing (FMF) - much of which is **required to be spent in the US**

Has **strong governmental partnerships with the US to develop new military technologies**, and is seen as a **pioneering, operationally proven defense power** that delivers advanced capabilities to meet today's increasingly sophisticated threats

Why it Matters: *As one of the world's most technologically advanced militaries in the world, Israeli defense companies are at the forefront of innovative solutions.*

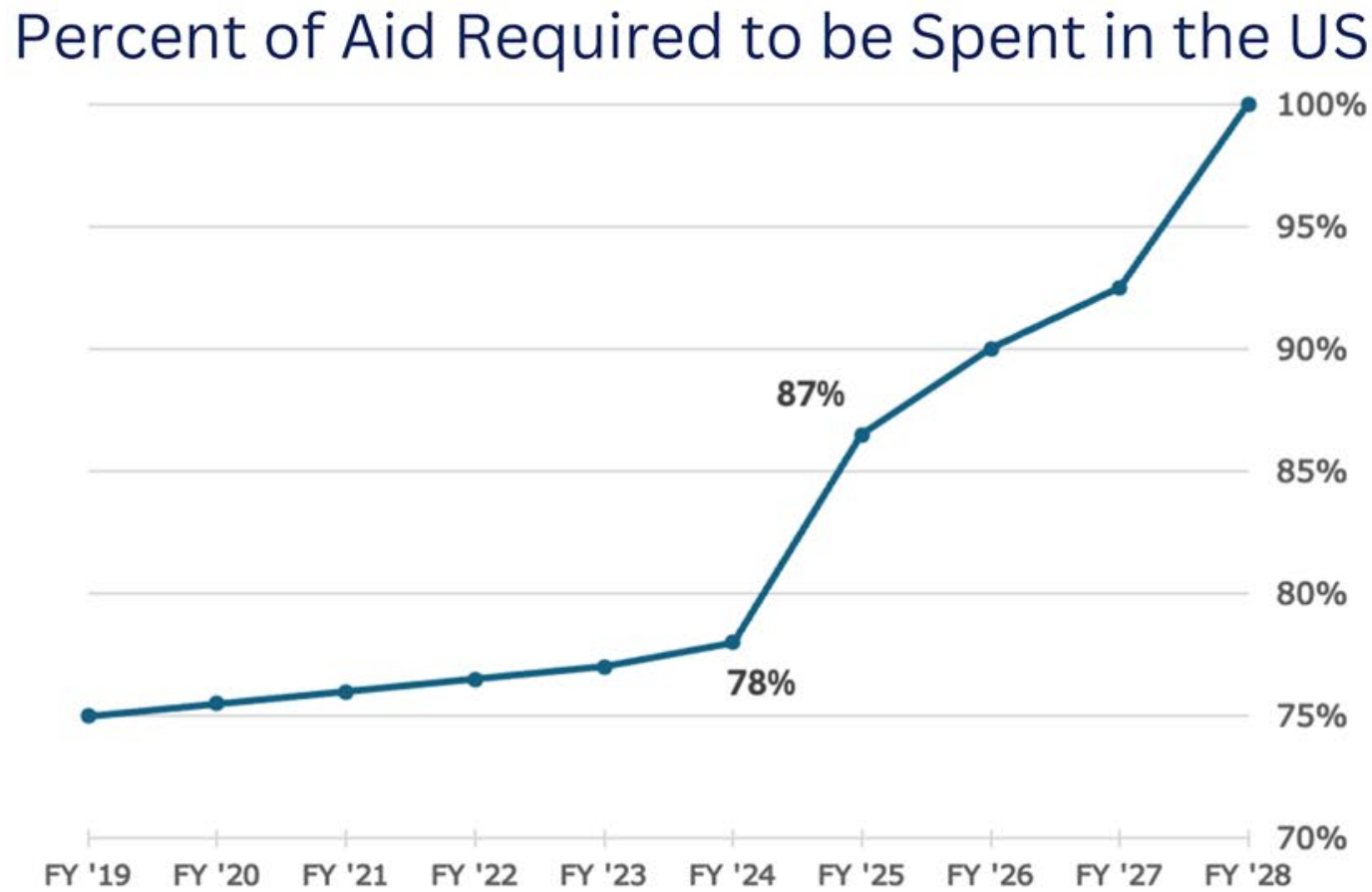
Foreign Military Financing
The Opportunity

Current Agreement

- $3.8B per year
- Runs through 2028
- Required to spend 87% in US, ramping to 100% by end of agreement

Opportunity

- Israeli Primes *(IAI, Elbit, Rafael)* look for US based suppliers
- Smaller companies look for US opportunities
- Partnerships, Tech Transfer/licensing, M&A



Get the latest on **Israeli tech** entering Michigan, **innovation ecosystem events**, and Michigan-Israel **trade delegations** by joining the conversation with us!

MichiganIsrael.com

@Michigan-Israel-Business-Accelerator

@MIBA_Innovation

Bernard@MichiganIsrael.com

SYNERGISTIC

Business Development, Sales & Marketing Team

Synergistic

Company Overview

- ***Synergistic*** is a Small Business Administration (SBA) Certified Service-Disabled Veteran-Owned Small Business (SDVOSB) that is a full-service provider of Business Development, Sales & Marketing expertise for the DoD & Federal Government markets
- Clientele ranges from Small Businesses to Large Businesses; including Offshore & International.
- ***Synergistic*** offers Consulting Services & Sales to the DoD, and Federal Government, specializing in High Tech & AI
- Confederacy of 11 Consultants; 36 on Email Distro List
- On ALL OTAs as a Prime: NAMC, C5, NSTIC, SOSSEC, CMG, Cornerstone, Tradewinds AI, etc. And SAM, of course.
- ITAR & EAR Certified; JCP DD 2345 Cert in Processing at DLA for CUI & FCI Data for OTAs, expected end of Jan 25.

Synergistic

Company Overview

Synergistic Inc.
We are committed to your success.

- ***Sales & Marketing Consulting on an Hourly basis***
- Only pay for what you need; Prop Writing & Sales Strategy; assisting in CMMC Paperwork and Processing; CMMC Level 2 Self Certified-Pending Ind 3rd Party Certification. ITAR & EAR System.
- Consultants at TACOM, Redstone Arsenal, SOCOM, USMC, DHS, APG, Wash DC, Canada, Israel & India
- Walk the halls at US Army TACOM and Redstone Arsenal, HSV, Alabama; Set up Teams of Companies to Bid & Win RFPs & RWPs.
- 6 Former General Officers (GOs) available for Strategy Sessions
- Clients Included: Cybernet Systems, ThinkDigits AI, Maris Technologies, IBM Federal Services, Fincantieri Marine Group, Davidson Technologies, Mobius Blast Protected Seats, Magam Safety, Beth El Industries, CopterPIX Drones, SIMLAT, Twist Robotics
- Pricing Ranges from $1500 to $5000 per month based on hours

Synergistic Business Development Team

For More Information Please Contact:

- Andy Stass, PMP
  - astass@teamsynergistic.com
  - Cell: (586) 381-8520
  - www.teamsynergistic.com
  - Twitter: @AStassPMP

Volcanic
ENGINEERING

Who We Are

We are a ***Small, Economically Dis-advantaged, Minority (SBA 8A Certified) company*** that has grown through Covid (established 2018). DUNS: 117124796 / CAGE: 9YVT4 / UEI: S5JV56SK1K6.

We are a team of 10 diversified, highly skilled individuals, who create and refine advanced technologies, able to develop new advanced materials and processes that outperform current technological capabilities.

We operate as a one stop, specialty tool/machine shop with unique capabilities including, Design, Engineering, Machining and Fabrication with traditional techniques, coupled with cutting edge technologies including 5-Axis 3D Metal Printing, Cold Spray Technology, 3D scanning and Advanced R&D/Patent Capabilities. We are also classified as an ***Emerging Technology Company*** because of our unique Patent work.

We are located in Sterling Heights in close proximity to many in the room here today, looking to grow in a Hub-zone later this year.

Mission

Our mission at Volcanic Engineering Inc. is to harness the power of innovation, experience, and dedication to provide innovative, top-tier Mechanical Engineering, Machining, and Manufacturing Services/Solutions in Michigan. We believe in building *lasting* partnerships and contributing to the technological advancement and economic prosperity of our region and the nation.

Volcanic has prime contracted for multiple OEM's, suppliers, testing facilities, food manufacturers and entertainment companies spanning a wide variety of industries and bringing forward our unique expertise in servicing not only large Fortune 500 companies but smaller entities, and one of a kind special projects meeting customers' needs.

An overview of our capabilities include:

NAICS Codes

541330 - Engineering Services
333514 - Special Die & Tool, Die Set, Jig & Fixture Mfg.
541420 - Industrial Design Services
332710 - Machine Shop
332812 - Laser Engraving
238190 - Welding On Site Contractors
325220 - Artificial and Synthetic Fibers and Filaments Manufacturing
332813 - Electroplating, Plating, Polishing, Anodizing, and Coloring
332994 - Small Arms, Ordnance, and Ordnance Accessories Manufacturing
332999 - All Other Miscellaneous Fabricated Metal Product Manufacturing
333998 - All Other Miscellaneous General Purpose Machinery Manufacturing
336413 - Other Aircraft Parts and Auxiliary Equipment Manufacturing
336414 - Guided Missile and Space Vehicle Manufacturing
336419 - Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
336611 - Ship Building and Repairing
336992 - Military Armored Vehicle, Tank, and Tank Component Manufacturing
336999 - All Other Transportation Equipment Manufacturing
541690 - Other Scientific and Technical Consulting Services
541713 - Research & Development in Nanotechnology
541715 - R &D in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)

PSC Codes

3465 –Productions Jigs, Fixtures, and Templates
R425 –Support – Professional: Engineering/Technical
R408 – Program Management
9640 – Iron, Steel Primary & semi finished products
7690 – Miscellaneous printed matter

We have multiple Patents that have either been granted, filed provisionally, or are under development.

Granted Patents

	Description	*Date Granted*	*US Patent #*
1)	Adjustable Spool	May 5, 2020	US 10,640,324 B2
2)	Purge Filament for 3D printers	July 28, 2020	US 10,722,927 B2

Patents Filed Or Awaiting Provisional Filing

	Description	*Application*	*Status*	*Provisional Filing Date*
1)	Isolation Mount	- Reduces Kinetic Energy Transfer	Provisional filed	April 2024
2)	Impact Absorbing Anti-Ballistic Gel.	- Reduces Kinetic Energy Transfer*	Concept proven*	April 2024*
3)	Rail/Vehicle Axle / Drive Shaft	- Reduces weight of current axle 30%	Provisional filed	April 2024
4)	Next Gen Armor	- Superior protection, lightweight	Under development	September 2025
5)	Zero Weight Laminate	- Laminating material with zero weight.	Under development	September 2025
6)	Lightweight Crew Module	- Improved crew protection	Under development	September 2025
7)	Isolation Matrix	- Multi directional energy absorption	Prototype made	December 2025
8)	Advanced Helmet Design	- Reduces concussive forces	FEA work req'd	December 2025
9)	Acoustic Pneumatic Anti-Lock Brakes	- Compatible with current brakes	Under development	December 2026
10)	Hybrid Plating	- Ultra-fine 50 nm, self-healing & electrical properties, can be used to armor composites	Under development	March 2025
11)	Cold Spray Technology	- Mechanical bonding of powders to various Substrates including Composites/Plastic, Microchips, or Metal.	Concept proven. In use.	June 2025

*-Filing deferred and will likely be kept as proprietary and secret rather than patented.

** Filing may be accelerated.

An example of how robust our technology is.

A fighter jet weighing approx. 44,000 lbs for landing drops at a rate of 33-40 ft/second (or higher) in it's final approach at a speed of +180 mph. Landing Gear refurbished with Cold Spray Technology can be rebuilt, machined back to spec and meet the original performance requirements and has been doing so for +6-years. This equipment is now deployed to the fleets.

A more everyday application is in repairing damaged tools, dies, fixtures and molds *at a fraction of replacing the entire tool*. The advantage of this process is there is no heat distortion (as would be typical from welding) as the work is done at room temperature.

A three step process involves:

1) An assessment to determine extent of damage, best materials to use, prep part for processing.
2) Rebuilding the material depth and profile, and
3) Machining back to tolerance.

Damaged part

Rebuilding material depth

Machined part ready to go.

We'd be pleased to speak to you in private regarding our capabilities and technologies in detail.

We look forward to working with you, supporting your needs and advancing your technological capabilities.

Thank-you!

Presented by Mark Petro
January 22, 2025
MAPetro@aol.com

Volcanic Engineering | 6350 Wall St, Sterling Heights, MI 48312 | 734-934-4132 |www.VolcanicEngineering.com

WITTENSTEIN motion control, Inc.

Power Generation and Precise Motion Control

Electrifying Mechatronic Drive Systems for Military and Defense

| Craig Bernick

WITTENSTEIN

WITTENSTEIN motion control Who are we….

- Designated **Small Business** concern located in Bartlett, IL
- Mechatronic control technologies including:
  - **Gearboxes** (planetary and worm)
  - **Brushless DC motors**
  - Specialized integrated **Actuation** solutions
    - Power generation (motor/generator + inverter)
    - Electromechanical actuation
    - Ruggedized actuators and gearboxes
    - Space rated systems
    - Undersea systems --- 3000+ meter application depth
  - Vertically integrated design and manufacturing

WITTENSTEIN motion control We are ….. Power Generation

- Fully implemented solutions
  - Motor/Generator
    - Efficiency -- > 95%
    - Active cooling
    - Full algorithmic torque/speed control for starting and power
  - Inverter
    - Efficiency -- > 95%
  - Mature prototype testing ongoing

Precision
Performance
Power

WITTENSTEIN | motion control

Power Generation Systems
Electric Powertrain Solutions for HEV and BEV

Since 2006, WITTENSTEIN has set benchmarks in power-to-weight ratio, efficiency and intelligence for powertrains of electric and hybrid vehicles. Our unique engineering solutions and serial products are a perfect fit for space-restricted applications with small serial quantities. WITTENSTEIN is your global partner for highly customized solutions from a few hundred to 10,000 vehicles per year.

Technical Data

Motor

	Prototype Platform	Customized Solution Range
Available solutions	Broad portfolio available upon request	Frameless Cartridge Fully housed
Stator outer diameter		Up to 500mm
Active part length		Up to 500mm
Voltage		48 - 1,000 V_{DC}
Current (peak)		Up to 1,000 A
Power (peak)		Up to 900 kW
Speed		Up to 200,000 rpm (E-Turbo)
IP protection class		Up to IP69K
Special options		Direct in-slot oil cooling High sophisticated material selections
Customized design available We customize up to 100% of the electric motor design for the best possible integration into existing package requirements.		

Inverter

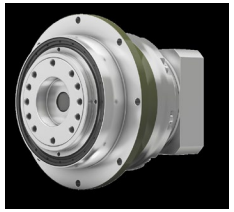
	Prototype Platform	Customized Solution Range
Power	Up to 250 kW	5 - 900 kW (more upon request)
Voltage	100 - 400 V_{DC} or 400 - 800 V_{DC}	48 - 1,000 V_{DC}
Current	UP to 600 A_{eff}	Up to 1,000 A
IP protection class	Up to IP67	Up to IP69k
Switching frequency	Up to 48 kHZ	
Communication interface	CAN Open, CAN J 1939 (others upon request)	
Special options	HF & back-EMF sensorless control EMC filter integration Maximum torque at standstill SIC power module technology	

WITTENSTEIN motion control

We are …. Turret and Autoloader

Electromechanical Actuation

- Fully implemented EM actuation solutions
  - Industry leading compact size
    - Vertically integrated design, control and manufacturing of motor and gearbox -- Best in Class weight and size efficiency of performance
    - Planetary gearbox expertise and industry renown
  - Currently serial production on Lynx and PzH 2000 platforms; weapon stations and turrets



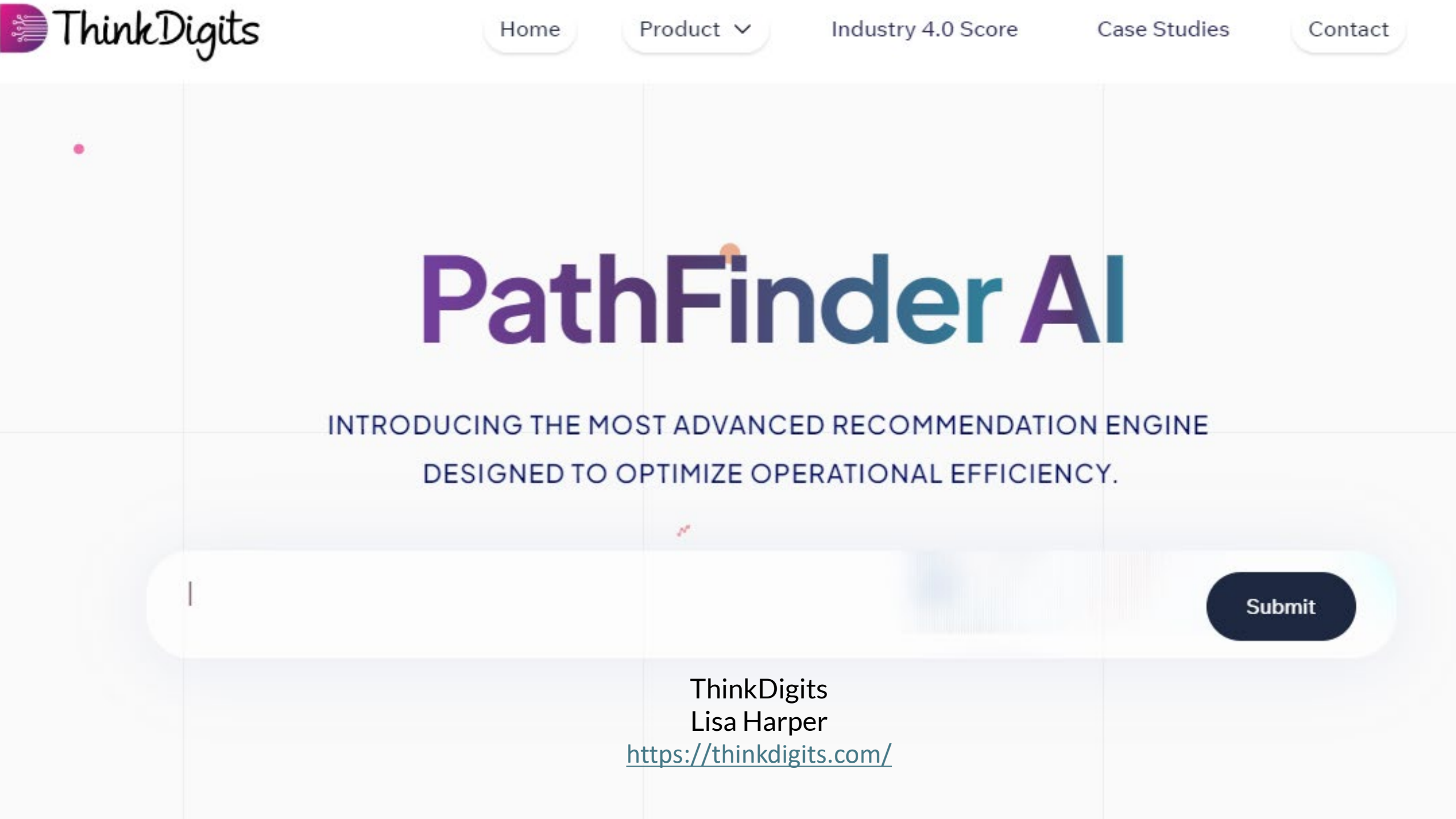
WITTENSTEIN motion control We are …… USA manufacturing

- Manufacturing and Design Support out of Bartlett, Illinois facility
- Newly constructed manufacturing area opening in 2025

Questions?

Craig Bernick

Business Development Manager – Defense
Tel: 1-313-236-4467
Email: craig.bernick@wittenstein-us.com



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