



Data-Centric Security for National Security
A versatile next gen technology

Yoon Auh 312-805-8032
yoon@nutstechnologies.com

Executive Summary

We are a deep tech applied cryptography startup with next generation technologies for national security and commercial enterprise.

- | | | |
|-------------|------|---|
| Fundraising | 24Q1 | • Raising bridge round of \$500K via SAFE |
| Highlights | 24Q1 | • NUTS cryptographic access controls being researched for US Air Force for <u>Insider Threat Defense</u> under AFWERX SBIR Phase I. |
| | | • DoD Tradewinds Marketplace – awardable solutions : |
| | 24Q1 | ➤ NUTS Insider Threat Defense (ITD) |
| | 23Q4 | ➤ NUTS Generative AI eNcryption at the Edge (GAINE) |
| | 23Q4 | • Granted 19 th patent on our core technologies |
| | 23Q1 | • Launched commercial NUTS ecosystem with paying clients. |



Market Discovery - Focus on Defense

In June of 2023, NUTS pivoted to defense markets after the Air National Guard Insider Threat incident in April and the ongoing uncertainties of the VC environment.

The DoD continues to be a consistent supporter of small business innovation in technologies with dual-use potential in the US.

In December of 2023, NUTS won a US Air Force SBIR Phase I award to research “Insider Threat Defense” using NUTS data-centric security technologies.

...and we are finding many more opportunities to apply for.



What we do today



Stop Insider Threats like IT Admins from accessing sensitive data.

E.g., ANG Teixeira, Snowden, Manning.

AFWERX SBIR Phase I Awarded



Deemed "awardable" by the CDAO – 24Q1



Secure generative AI (GAINE) session data at the edge

Deemed "awardable" by the CDAO – 23Q4



What we want to build for tomorrow, today

- Data mesh/ Cross Domain solutions
- Data Defined Networking
- Data of Things (DoT) & IoT
- Solutions for JADC2



Defense Opportunities

| Problem | NUTS Solution | Defense Need |
|---|---|---|
| Insider Threat Defense | Portable cryptographic access controls (nut) | Stop IT admins from leaking sensitive data |
| Migration to Post Quantum Cryptography | Structure Data Folding with Transmutations (SDFT) | Not enough developers for the transition and a national security deadline---2035. This is a critical national security issue. |
| Cross Domain Solutions | NUTS Ecosystem | New resilient data architectures for a unified framework across all DoD Departments. Joint All Domain Command and Control (JADC2) |
| Protection for Generative AI sessions across networks | Generative AI eNcryption at the Edge (GAINE) | AI systems trained on sensitive data need end-to-end encryption and secure data management for easy sharing. |



Initial Target Market

| | |
|---------------------|---|
| Target market: | Department of Defense (DoD) |
| Pain point: | Insider data leakage by admins |
| Urgency | On June 30, 2023, SecDef Austin directed DoD for “immediate improvements to physical security data management and information sharing practices” |
| Current approach | No effective <u>technical controls</u> beyond the current security model of stratified clearance levels which fails to effectively block data access to admins who have no NTK |
| Value proposition | A breakthrough technology capability that can block IT admins from sensitive data in any environment |
| Customers | <ul style="list-style-type: none">• AIR Force (AFWERX) |
| Potential Customers | <ul style="list-style-type: none">• AIR FORCE Cryptologic and Cyber Systems Division• ARMY DEVCOM research laboratory• Naval Information Warfare Center• AIR FORCE (AFLCMC) Life Cycle Management Unit |
| Academic research | ACDC Project at MIT Lincoln Laboratory |



Defense Go-To Market



Overall Project Status: **Green**

Why: robust pipeline with revenue in 2024



*USSOCOM Innovation Foundry (IF 14) deemed eligible for sole source award



*Deemed "awardable" by the DoD Chief Digital Artificial Intelligence Office

AIR FORCE: AFWERX



AIR FORCE: AFLCMC



ARMY: XTech8



ARMY: XTech AI



ARMY: ERDC



NAVY: NAVAL WARFARE



NIST



SPACE FORCE



DARPA



FEDERAL: DOE



Identify Leads

Submitted

Convert to Opportunities/
SBIR Phase I

Convert to Customer/
SBIR Phase II

Implement Solution/
SBIR Phase III

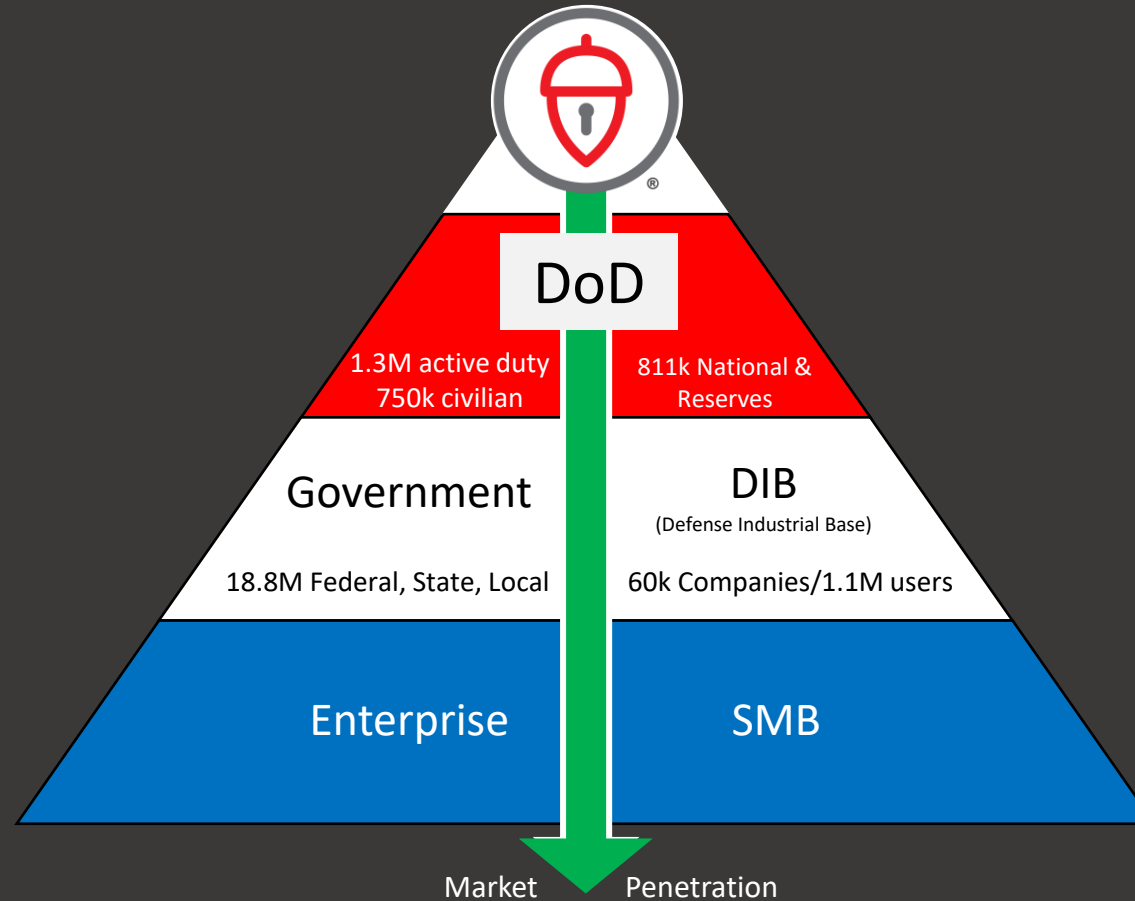
Receive Annual
Recurring Revenue



Dual-Use Markets for NUTS

| | Users (million) | ARR (billion) |
|-----------------------|-----------------|---------------|
| SAM \$5.3B | 2 | \$0.5 |
| | 20 | \$4.8 |
| TAM \$19.7B | 60 | \$14.4 |

at \$20/user/month



Focus

- Protect National Security
- Highest Level of Technology Validation
- Promotes a data security standard
- Protect National Secrets
- Supply chain security
- Efficient and Cost Effective
- Protect IP and Trade Secrets
- Comply with CUI / ITAR / EAR
- Ease of use

*<https://trumpadministration.archives.performance.gov/defense/>

**<https://crsreports.congress.gov/product/pdf/IF/IF10548>

**<https://www.statista.com/statistics/204535/number-of-governmental-employees-in-the-us/#:~:text=In%202021%2C%20around%2018.28%20million,million%20people%20in%20that%20year.>



Academic Validation & Research



Automatic Cryptography for Data Centric Security (ACDC)

MIT Lincoln Laboratory Research funded by DoD contract No. FA8702-15-D-0001

* NUTS' approach has been academically validated by MIT research by their ACDC project.

* NUTS' Insider Threat features is not available in ACDC.

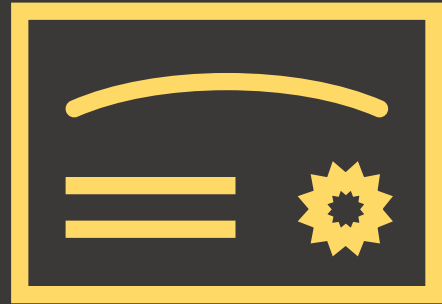
Unified Data Reference Architecture (UDRA)

ARMY implementation of data-centric security. UDRA architecture intended to implement data sharing using a decentralized "data mesh" approach.



Patent Portfolio

19
Patents



Inventions Claimed

NUTS: eNcrypted Userdata Transit & Storage

SDFT: Structured Data Folding with Transmutation

FHOG: Flexible Hierarchy Object Graphs

Jurisdictions

USA

Israel

Australia

Japan

Taiwan

Eurasia

South Korea

Mexico

China

Strategic industrial quality global patent portfolio prepared and prosecuted by DLA Piper worldwide.



Team



Yoon Auh, CISSP, CDPSE

Inventor/Founder
yoon@nutstechnologies.com

Expert in data-centric design and structured cryptographic programming and multi-patented inventor. Prior, financial industry veteran in Trading System design and development, management and executions.



Nick Bennig

Lead Developer
nick@nutstechnologies.com

Extensive industry experience in software architecture, design, and development client, server, and networks. A proven manager of high-level, high-functioning IT teams on complex projects. Granted a NUTS patent.



Soto Triantafillou, CISSP

Business and Operations
soto@nutstechnologies.com

Data privacy and security solutions expert with experience in Enterprise Infrastructure, packaging, and distribution systems. Prior, managing complex trading technology projects in fintech. Granted a NUTS patent



COL (Ret) Robert Banks, Ph.D.

Former Deputy Director,
US CYBERCOMMAND

<https://www.linkedin.com/in/robert-banks-phd-ciissp-aws-ccp-azure-ai-psdgp-itil-183a3b28/>



Dale Lazar

Adjunct Professor of Patent Law
IP & Technology, DLA Piper (Retired)

<https://www.linkedin.com/in/dale-lazar-595841/>



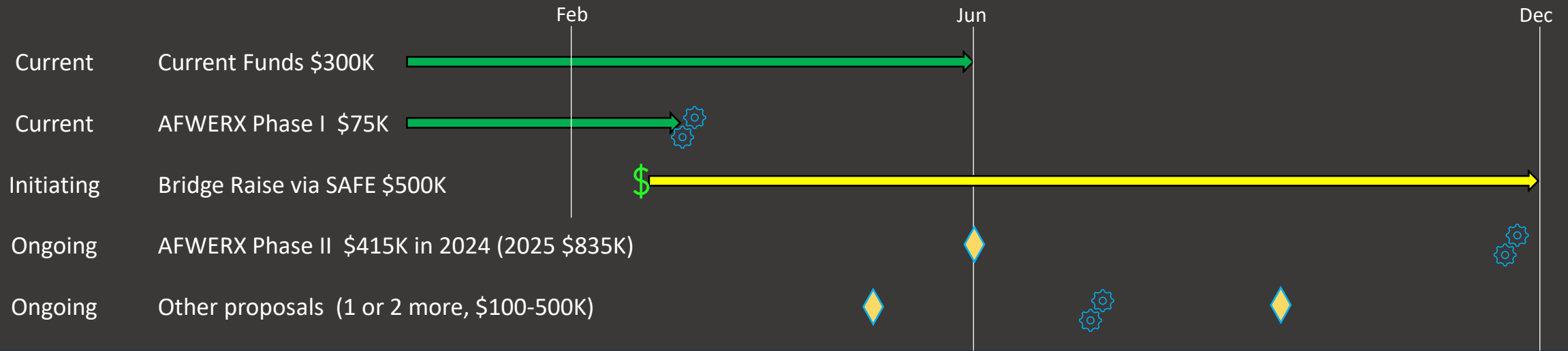
Peter Triantafillou, CISSP, GCCC

Managing Director
Cybersecurity for Major Bank





<https://www.linkedin.com/in/petersecurity/>



Goals and Funding in the Year of Validation



Main goals for 2024

-  Raise \$500K bridge to support second half of 2024.
-  Successfully perform DoD contract, gain validation, market to defense industrial base (DIB) and commercial enterprise (CE).
-  Win additional DoD contracts for our growth through 2025.
-  Grow revenues in DIB/CE.

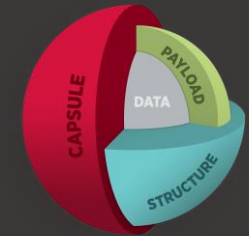
Use of Funds

- Payroll
- IP work
- Proposals & Outreach
- Marketing & Partnerships
- Conferences & Events



About NUTS

A nut capsule is body armor for data.



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Yoon Auh
312-805-8032
<https://nutstechnologies.com>
yoona@nutstechnologies.com

