JOSTALY

Technologies

Patent pending design for Cybersecurity and reliability in systems software
July 2024

Problem

    * Cybercrime is expected to cost the world $10.5T year-over-year by 2025 with an expected growth rate of 15%[1]. Operational software failures costs the United States $2.08T in damages a year with a growth rate of 22% over 2 years in 2020[2].

              * Buffer Attacks   * Use-after-free

              * Zero-page / Null-pointer attacks

              * Testing and reliability

1: Cybersecurity Ventures (Cybersecurity Report: Steve Morgan)
2: Consortium for Information & Software Quality (The Cost of Poor Software Quality)

Solution

Novel patent pending design for Cybersecurity and reliability in bare-metal Operating and POSIX systems. Designed with a radically different foundation for enhanced security and rapid agile software development.

Our security solution is based upon paired address/ size vectors, address verification, and memory shredding. Reliability is addressed by unit tests that can be run within the system itself or broken down into components.

Market Opportunity

The worldwide security and risk management spending is expected to exceed $215B growing at 14% in 2024[1], embedded systems is valued at $110.3B with a CAGR of over 5%[2] our beachhead is the Embedded Systems Software segment valued at $15B with a CAGR of 9%.

1: Gartner
2: Global Market Insights

Business Model and Marketing

License patent pending (PPA: #63/602/715 NPPA: #18/429/008) Intellectual Property to customers with a flat purchase price and a varying percentage on the production units sold.

Social media, digital advertising, and footwork campaigns to get the company name and service visible to potential customers.

Roadmap

Est. Revenue: $1.37B
Series-A: $50M
ARR: 2758

Est. Revenue: $10.6M
Seed Investment: $1M
ARR: 1060

First 100 customers
Est. Revenue: $52,000
Investment: $80,000
ARR: 65

* 2024

Equidam: 268%
Fastcapital: 200%
Eleken: 144%

* 2025

Baremetrics (Corp): 45%
Fastercapital: 200%
Equidiam: 200%

* 2026

Team Members

John Seth Thielemann
Founder, Lead Programmer

Wrote 3 Operating Systems, awarded 3rd place at Intel's International Science and Engineering Fair at 17. Linux kernel development and escalation teams experience. Educational focus is in embedded programming.

"I enjoy learning from the success and failures of others and myself as if they are just different sides of the same coin."

Competitors

Constrained Operating Systems:
  Sel4, Zephyr, eChronos

Libraries:
  Boost, libc, libstdc++, ulibc

Operating Systems:
  Microsoft, Google, Apple

Competitive Advantages

* Not all embedded devices require full OS or standard library, we can provide a component based solution to target the largest segment in embedded: standalone[1].
* OS entry point is Hardware constrained devices, including the second largest segment: realtime[1].
* Augment existing legacy software.

1: Fortune Business Insights

Competitive Advantages (continued)

* Runtime failure and build time detection for modification.
* OS level works in userspace allowing rapid prototyping of standalone or kernel components.
* Reduce complexity of choice between vendors, libraries, and dependencies.
* Fundamental programming techniques are enhanced for security, unit test coverage includes architectural behavior.

Why now?

* Ubiquitous computing continues to grow, this trend will continue and it's powered by embedded devices (Smart TVs, Appliances, Homes, etc.)
* Robotics and AI are on a meteoric rise in Computing. Expected growth @36.6% by 2030, with a current market size of $196.63B$_1$. Money is pouring into these fields. The impulse wave is the embedded devices that power this movement: machine vision, DSP, sensors, and comms.

1: Grand View Research