

Garo 2012 Annual Report

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The New Kid on the Block

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MESSAGE FROM THE PRESIDENT

I would like to take this opportunity to thank you all for your support this year. It has been our first year as a contractor for the D.O.D



DARPA Information Innovation Office. During 2012, we've procured over \$200,000 in the Cyber Fast Track contract vehicle and we have started to expand into doing some client oriented work with App Development and IT architecture.

In addition, Warden Systems used the profits from 2012 to purchase property and invest in assets that are sure to help us procure more contracts, provide more employment and meet clients' demands. We've made many connections this past year, working with partners in Saudi Arabia, Chile, and Jordan. One of our partners from the KSA, Hard Electronics, also a small business, just signed a half-million dollar contract with Warden Systems to ship electronic components to the Gulf for academic research. We are extremely anxious to start working with them and other businesses in formal joint venture operating agreements and we will announce the final executions by press release when the time comes.

2013 will be an exciting year for Warden and I am looking forward to considerable progress being made in our technological divisions. Thank you again to all of our investors for your support. The staff and 1 wish you all the best for 2013.

Sincerely,

Muneeb Akhter President & Founder

FINANCIAL SUMMARY

Year	2012	2011	Change
Assets Current assets Noncurrent assets	\$186,237 \$27,601	\$ 23,000 \$ 0,000	\$163,237 \$27,601
Total assets	\$213,838	\$23,000	\$190,838
Liabilities: Current liabilities Long-term liabilities Total liabilities	\$ 0,000 \$ 0,000 \$ 0,000	\$ 0,000 \$ 0,000 \$ 0,000	\$ 0,000 \$ 0,000 \$ 0,000
Equity: Net assets	\$213,838	\$23,000	\$190,838
Operating Revenue: Contracts and Grants Client Work	\$230,021 \$ 4,000	\$ 0,000 \$ 0,000	\$230,021 \$ 4,000
Total revenue	\$234,021	\$ 0,000	\$234,021
Operating Expenses Unspecific Expenses Taxes Total Profit	\$ 6,200 \$10,000 \$217,821	\$ 0,000 \$ 0,000 \$ 0,000	\$ 6,200 \$10,000 \$217,821

Warden Systems is a liability free company; we have not taken a loan for a location nor deal with debt in business. We also have no investors so there are no investor liabilities. This is an ideal situation as it is ourfirst year in business and will most likely change.

Most of the profit for Warden Systems was obtained from the DARPA CFT contract.

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TECHNOLOGY SECTORS



Cybersecurity and IT

Cybersecurity is Warden System's original focus. It has the greatest efficiency ratio relying on cloud processing and no material costs. In the fiscal year 2012, most of the work done in this sector was exploratory.



Embedded Security

This sector procured the \$200,000 contract from the DARPA IIO, and though there might have been some overhead, the BAA Agency puting forth the RFP took care of the cost of materials.



App Development

Warden Systems sent submissions to app development challenges online and won \$4000 in one of the challenges. There was no client requests for app development in the 2012 fiscal year.

PROJECT SUMMARY

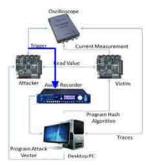
SCATEboard: Side Channel Attack Test Evaluation

3 Months: 1st August 2012 – 2nd November 2012

Prototype

Executive Summary

Hardware Platform to Reverse Engineer and Crack Cryptographic Algorithms in Embedded Systems using Side Channels Attacks (SCAs)



Project Summary

We wish to provide a platform that provides users the ability to fully instrument SCAs against embedded systems including mobile phones, USB dongles and smart cards. This allows defenders to design less vulnerable hardware, and attackers the ability to clone and reverse engineer the embedded system without looking at code.

Technical Details

Side Channels, discovered in 1994 by Paul Kocher, have been found as a very simple technique to crack cryptographic functions through inherent physical properties of the hardware. This includes the Power, Sound Heat and EM emissions, etc. However, these have not yet led to more secure hardware designs against side channels. SCATEboard aims to be the first platform that industry can use to test their own systems for side-channels and develop strategies on mitigating them.

Performance Specs

Keys from most cryptographic functions in use today should take no more than a few hours (< 4 hours) to be obtained from traces.

Deliverables

- User and Developer API documentation and Setup Video
- Open Source Codes for Targets, Attacker, GUI, Key Retrieval and Correlation Algorithms
- Papers on attacking different target devices, using different and less costly tools, and advancing the platform

Integration

Customer must purchase the tools required by SCATEboard platform including an Oscilloscope that can obtain around 3 Giga-samples per second and 250MHz bandwidth, and at least one FPGA device (Preferred Nexys 2). Microsoft Windows Operating System is necessary to run GUI however Linux may be used in command-line applications. Target device must be a CE certified device.

Envisioned Uses

- Cracking Cryptographic Algorithms and Retrieving Keys
- Reverse Engineering Software-protected Embedded Systems
- Cloning or Masquerading Embedded Systems
- Testing The Embedded System Design on how vulnerable they are to Side-Channels



Cyber Fast Track <u>http://cft.usma.edu/</u> Contact: Peiter.Zatko@darpa.mil

CONTACT INFORMATION



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