



# **Deep Sentinel: Lessons Learned Building, Operating and Scaling an Edge AI Computer Vision Company**

David Selinger

CEO

Deep Sentinel



# Overview

## What is Deep Sentinel

- A proactive crime-stopping (physical security) service built around Cameras + AI
- 5k customers, ~\$15M ARR

## Product development lessons learned

- Building our first product, iterating
- Supply chain/logistics/inventory/finance
- OEM/ODM/3rd party support

## Our vision: A better ecosystem

- Holy shit building stuff for the first time! (This ain't your father's Raspberry Pi)
- ODM
- Software support
- New business models (recurring revenue vs. volume)



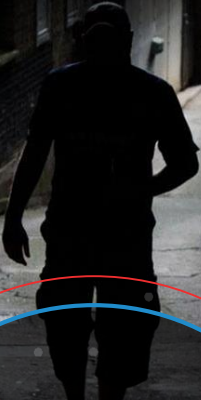
## Deep Sentinel

- Intelligent cameras
- ARM-based and x86-based AI edge compute devices (Qualcomm, nVidia, Intel, TPU)
- Human-in-the-loop (HITL) Cloud



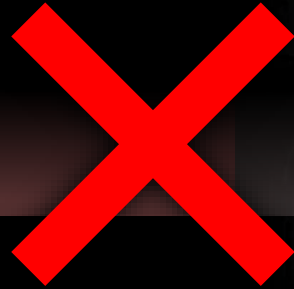
# AI is the Future of Next Gen Security

**CRIMINAL INTENT**



**Deep  
Sentinel**

**Proactive prevention  
in seconds**



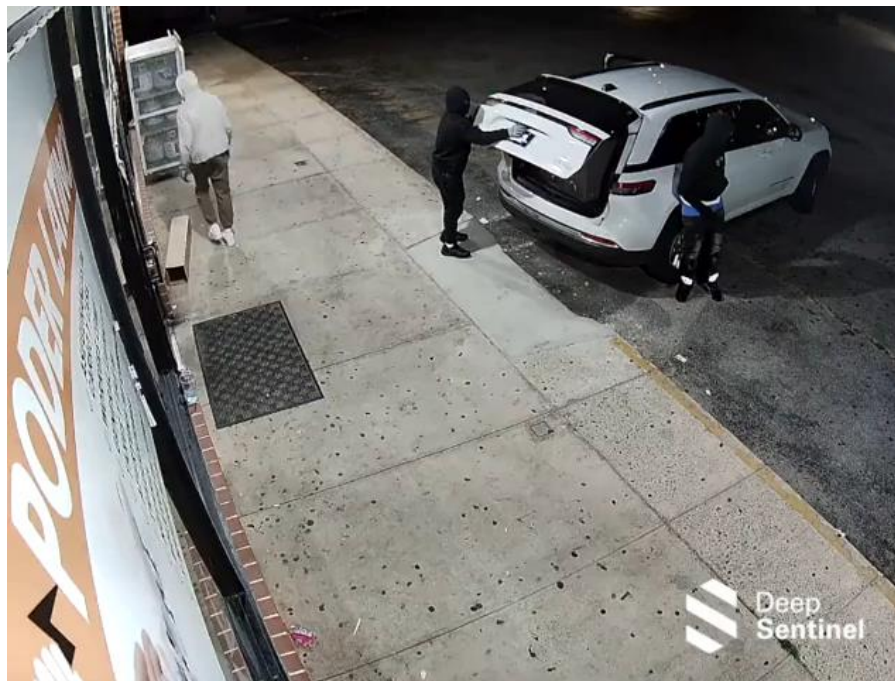
**CRIMINAL ACTION**



**Traditional Security**

**Reactive response  
in minutes, hours**

# What is Deep Sentinel?



**For this video and dozens more just like it:**

<https://www.youtube.com/@DeepSentinel/videos>

# Our Hardware



## Cameras



## On-Prem Compute Hubs

### Why?

No really, WHY!??!

- DIY + Pro
- B2C + B2B
- EOL HW
- Outdated SW (Qualcomm SNPE)
- EOL SW



# Lessons Learned

## “Hardware is Hard”

### Product Development AKA Hardware isn't software

- Terminology is complex
- Process and quality control are critical: Get it right the first time.
- In-field fixes are time, logistics and \$ expensive.
- “Scalability” doesn't mean manufacturing capability -- but operational/quality repeatability, buying power and fiscal resilience.

### Supply Chain/Logistics

- COVID sucked.
- Inventory turns -- Cash are non-linear exploding problems
- Product lifecycle (EOL, etc.) is inflexible and very difficult to work around
- Most vendors want volume. Even if you pay them for something else.
- COVID sucked.

### OEM/ODM/3rd Party

- Hardware suppliers suck at software (firmware, support, etc.)
- Off the shelf is hard too!

# What would have helped us?

## What is a better ecosystem to me?

### Getting a Foothold

- Process & terminology -- 6 months in hell, \$5M to get educated.

### Getting Going

- A Raspberry Pi/Arduino Fast-track: software-only prototypes + production-ready support
- ODM software support: Firmware, Cloud, Modules (???)

### Keeping it going

- Software support
- Software support
- &&&& Software support (!!!)

# THANKS!

## We made it!

- PM-Fit
- 100% YoY Growth through \$10M ARR milestone

## Scalable HW Model

- Off-the-shelf hardware for 90% of sales
- Minimizing manufacturing

## Scalable Business Model:

- Service-based pricing
- Not because we want to charge as a service; we provide an ongoing service.

David Selinger  
selly@deepsentinel.com