



## Hands Off My Cash

### *Advanced ATM Anti-Skimming Device*

With ATM fraud on the rise, sophisticated anti-theft devices are essential for the financial services industry. I-sys Corporation called on Egret Technologies for an innovative, rapid prototype Anti-Skimming Device (ASD) to improve its ATM banking security management system.

**Situation:** ATM crooks are using everything from hidden cameras to bogus faceplates to capture banking account information and passwords from unsuspecting consumers. ATM skimming involves criminals electronically stealing a cardholder's personal financial information by fitting an unseen portable electronic card reader and mini camera on to the ATM. I-sys Corporation, a major supplier and integrator of security and building management systems, asked Egret Technologies to design a more sophisticated Anti-Skimming Device. The new ASD needed to detect foreign devices on ATM card readers and integrate with real-time diagnostic, surveillance and alarm systems over the Internet.



**Solution:** The existing design was strapped with technologies that could no longer be manufactured or supported, thus requiring "reverse engineering" to document and test all printed circuit board (PCB) functions for a new processor. To accelerate I-sys' product launch schedule, Egret Technologies initially focused on critical engineering enhancements packaged in an off-the-shelf enclosure. These included:

- Tripling the number of photo-sensor inputs (from 1 to 3) and adding an analog-to-digital processor so the ASD software could detect minute variations in ambient lighting caused by foreign device attachments, rather than relying on one pre-set mechanical dial setting.
- Adding Ethernet to the device to receive the alarm status via the Internet. Instead of sending out a security technician to check on each alarm, the ASD device now transmits sensor and diagnostic status to a web page that remotely checks for security breaches in a large network of ATMs.
- Redesigning the unit for external connections including two RF detectors which can be customized to any specific

band or frequency. These RF inputs will sense transmissions of data near the ATM, (.e.g. images collected by an unauthorized mini camera and sent to a thief's nearby PC). The original internal RF device offered only one input (2.4 GHz) on a fixed frequency.

- Simplifying the external cable connection system for modular male/female installation. This served to minimize exposure of the ASD's interior components and to eliminate complex rewiring costs.

**“Turning Innovation into Profit” Results:** The original schedule called for five weeks of development. In just three weeks, Egret Technologies completed all designs well below the target cost metrics and delivered working

prototypes. Customer feedback was overwhelmingly positive and orders soared. I-sys Corporation' CTO, Pete Arvanitis, was so impressed with the engineering innovations that a custom mechanical enclosure was immediately added to the project. To complete the ASD, Egret Technologies provided a sleek, new branded package offering a 66% smaller footprint. Upon delivery, Bill Ohlendorf, I-sys' President said, “Egret Technologies exceed our expectations on both performance and deliverables for our project which demanded high quality and out of box dependability. We challenged them in aspects of design and manufacturing in which Egret Technologies provided solutions and help for each step. We certainly would recommend their services and look forward in our next project.”

Egret Technologies is a superior electronic design partner to global vendors of technology products. We are an innovative, solution-driven, US-based engineering design firm specializing in optical, electronic, and mechanical hardware, as well as embedded software systems. We provide concept development, product design and project engineering. Contact Egret Technologies at (954) 518-9645 or [Innovate@EgretTechnologies.com](mailto:Innovate@EgretTechnologies.com)