

Pure Entropy Technologies

Data encryption is a hot-button topic with businesses throughout Michigan and around the country. Troy-based Pure Entropy Technologies is not only working with commercial clients in this area but with the federal government.

The company provides the highest level of encryption security services and performance to insure that critical information is secure. We have developed a cutting-edge technology that is considered at the forefront of its industry.

One of Pure Entropy's most important products is Hard Drive Protection (HDP) capable of protecting all computer hard drives and in particular, laptops, from unauthorized access to data.

That is why Pure Entropy Technologies, founded by a developer, lawyer and serial entrepreneur, is thriving despite having just been established in May 2006. Much of the company's work with the federal government is confidential but one of the owners Thomas DeAgostino said there are many unique things about the company's applications.

"We distinguish ourselves from the competition by utilizing a unique and innovative streaming encryption/decryption cipher which requires very little overhead on the resident computer," DeAgostino said. "We encrypt any form of digital data, including; alphanumeric, audio and real time streaming HD video.

"Unlike the competition, our streaming cipher doesn't rely on block ciphers which are traditionally plagued with processing delays, limitations as to the data it can encrypt and precludes true real-time encryption."

Pure Entropy currently has seven encryption products under development today and DeAgostino expects each product to have a major impact on current security systems utilization based on market needs.

Encryption is the final line of defense against data theft. When a firewall fails, encryption prevents the thief from recovering any meaningful data. It allows for the locking in of data that is as close to 100 percent safe as possible.

The company's customers are comprised of a combination of commercial and governmental entities. Pure Entropy offers two versions of our proprietary encryption algorithm.

The U.S. government has long expressed interest in a Military algorithm, which it will adapt for many classified uses. This algorithm uses a 2048 bit key.

"Our commercial algorithm uses a 256 bit key in our streaming cipher. This methodology sets us apart from the competition, all of whom use block ciphers or substantially weaker forms of streaming encryption," DeAgostino said.

The company's work with the U.S. government is highly classified. For a time, Pure Entropy was the only company in the world that provided streaming real-time encrypted HD video DeAgostino said. The applications for that technology are virtually endless.

On the commercial side Pure Entropy has initially targeted Michigan companies and plan to expand from there. It has also had discussions with locally-based OEMs, Fortune 50 and 100 companies about joint ventures or strategic alliances. The ideal customer is one who has to contend with governmental regulations such as HIPAA.

There is a demand for these services because according to the Ponemon Institute, only 4.2 percent of all companies have an enterprise-wide encryption solution. So Pure Entropy offers advanced encryption standards which are more secure, faster, transparent to the user and simple to understand and use.

"Many companies have encryption programs but they aren't used or aren't used correctly," DeAgostino said. "If the Department of Defense for example can be compromised, as recently disclosed, then what company today can be considered safe?"

"Hackers today are often more sophisticated than the guardian of data."

Written by Mike Scott

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