

# C A S E S T U D Y

## MGE UPS SYSTEMS *Quickly Delivers* Power Protection to Opnix Inc.

MGE UPS SYSTEMS & Opnix Inc.

The evolving Internet faces the challenge of achieving optimal operating efficiency in the face of intensified Internet traffic, network delays and bottlenecks caused in part by rapid advancements in media and data applications. Responding to optimize Internet performance, Opnix, Inc., a next-generation Internet technology company and bandwidth provider, supplies customers with fast and reliable service by avoiding the congested and unsecured paths of the Internet. Requiring reliable, continuous power to provide guaranteed 24/7-uptime service to their customers, Opnix entrusted MGE UPS SYSTEMS to ensure the highest level of critical power protection for their valuable computer and networking systems.

**Opnix Inc.**, a privately held, venture-funded company founded in December 1999 and located in Tempe, Arizona, has redefined "intelligent" routing and risen to lead the industry in IP Traffic Management. The mission-critical services offered by Opnix utilize innovative route-optimization technologies, which send data to its destination as quickly as possible over the most available and reliable paths of the Internet. The Opnix system is the most advanced available, taking into consideration factors such as carrier reliability, latency, router hops, the number of congested public exchange or peering points, circuit capacity and security. Opnix allows customers to efficiently utilize and scale their network, enabling them to offer new products and services that may not have been possible with their current Internet infrastructure. As a result, Opnix's solution saves time and money for customers, allows more transactions per second, extends the life of the customer's existing network investment and enhances the end user's overall experience.



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### UPS Evaluation Process

Due to the mission critical nature of Opnix's services, power related problems are not an option. "We need continuous power not only for our operations, but in fact, our Service Level Agreement (SLA) guarantees 100% uptime to our customers." explained John Kloian, chief technology officer for Opnix Inc. "Our network needs to be up 100 percent of the time in order to monitor and troubleshoot any problems that should arise with our switching core, the Internet, or with our customers. So it is very important to make sure that all aspects of our system are extremely stable, extremely reliable and redundant at full power."

A lack of reliable power can result in serious consequences for Opnix. "There absolutely is a dollar loss attributable to the power going down," confirmed Kloian. "The specific dollar loss varies by customer. However in a generic sense, if our customer is down for 15 minutes or longer, we compensate them with a credit for a full day's business. There also is an opportunity cost if our core is down. Our technology maps the Internet to determine which routes to varying places are better than other routes. We need that information to provide optimized service to our customers."

As the official public launch in November 2000 drew near, it was apparent that other manufacturers could not meet the service and delivery time requirements specified by Opnix. Opnix then contacted the Arizona based Tom Nebrich Agency, Inc., a MGE UPS SYSTEMS manufacturers representative since their establishment in December of 1985. Victor Cota, sales engineer for the Tom Nebrich Agency, understood the requirements, "Opnix especially needed a firm delivery and installation time. They were facing a tight deadline, and we jumped at the opportunity to work with such a pioneering company."

In selecting the optimum power protection solution, Opnix Inc. examined many different factors. "First, there was a power requirement," said Kloian, "the ability to interoperate with the power we were bringing into the building and the way that we wanted to disperse it. The redundancy, the capability and the scalability of the UPS were also important criteria because we wanted to expand on the existing system without having to forklift any existing equipment out of the facility. Another important consideration was the ability to talk to, monitor and control the UPS system remotely."

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The power quality as filtered by the UPS was equally important. "Although the grid power is pretty decent, the voltage fluctuates considerably, depending on which part of Tempe you're in," said Kloian. "With sensitive electronic equipment, this is an issue. We had to make sure that we provided reliable, filtered and stable power to every piece of equipment that was plugged into the system." Additionally, Opnix required eight minutes of backup time between utility power failure and when the generator kicks on.

"We also reviewed the track record and history of each manufacturer," continues Kloian. "We were buying the UPS at a time when certain manufacturers were having trouble getting the components to build their systems. MGE uses multiple component suppliers and that was a determining factor. And, we were under an extremely tight deadline. MGE was able to procure and get us the system in an extremely short amount of time."

### Installation

After receiving the initial call at 10 am on a Thursday morning, Cota arrived at Opnix at 11:45 am the same day. They went through the whole scope of the desired equipment and learned that due to lack of delivery by another manufacturer, Opnix needed the equipment the following week! "Anything bigger than a 12 kVA is impossible to have ready in a week timeframe," stated Cota. "It usually takes about 6-8 weeks."

All involved realized this was a near-impossible request, but the Tom Nebrich Agency and Cota approached the situation determined to succeed. After meeting with Opnix, they called the right people and Victor took the next flight out to the headquarters of MGE UPS SYSTEMS Americas located in Costa Mesa, California. Cota and MGE met Friday morning to discuss sales, planning, engineering and all other involved aspects. As it turned out, they were able to produce the requested unit, and they were also able to produce an accompanying system control cabinet (SCC) within one week.

On Monday, Victor returned to Opnix with the good news. They could get them the first parallel system within four days and the SSC the following week. "From that point on, everything else was going to be on a normal six week delivery timeframe," said Cota. However, just as the situation appeared settled, Opnix called back and said that one UPS system was not going to do it. "They needed two systems to start and they had customers coming online within 2-3 weeks," recalled Cota.

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Cota returned to MGE headquarters with the new request. MGE immediately pulled a system off the production line, built it and shipped it to Opnix. "Within two and a half weeks," said Cota, "Opnix was up and running with a 225 kVA parallel redundant system, SSC battery cabinet, the whole nine yards."

Opnix was impressed. "It was only a couple of weeks between the time we made the decision and the time the gear was on the floor installed," said Kloian. At their grand opening ceremony, an up and running Opnix paid warm compliments to the work of the Tom Nebrich Agency and MGE UPS SYSTEMS.

### The Results

To protect Opnix's switching and data storage and Internet telecommunications equipment, MGE's power protection solutions include two standard EPS 6000 225 kVA in and out parallel redundant systems with one 1200 Amp System Control Cabinet (SCC). The EPS 6000's unique generator friendly technology limits the requirement for oversizing Opnix's generator and eliminates the risk of generator failure. "MGE had the best of everything that we were looking for," said Kloian. "In fact, looking back on it, I wish we had looked at MGE from the beginning. We got a superior system."

MGE has provided power protection for Opnix since their official public launch on November 1, 2000. "Everything that sits in our data center is protected, including our switching core and our customer equipment," said Kloian. "MGE has performed outstanding(ly) since installation. When we had the UPS system in place, we had two MGE field engineers out here continuously until the system was up and running satisfactorily. They also provided training for our personnel because we have a need to operate and monitor the equipment on our own."

"In the Tempe area, anywhere from 8-15 power outages occur per year, lasting anywhere from 3-20 minutes," said Cota. "They have had about 3 disturbances in the area since installation, which would have shut down Opnix's traffic if it were not for the UPS."

"We had a brownout about 5 months ago," verified Kloian. "We did not totally lose power, but some breakers did trip as a result. Between the time when the breakers tripped and the generator kicked on, it could have been anywhere between 14 seconds and 7 minutes. During that time, no equipment lost power whatsoever. That is directly because of the MGE system we have in there."

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Kloian also appreciates the precise voltage regulation and filtering capabilities of their EPS 6000. "When the voltage fluctuates, I'm not losing sensitive equipment so I know I am saving money there," said Kloian. "All our gear in the core is extremely expensive, some pieces cost over a quarter of a million dollars. The equipment can be extremely sensitive, and cannot tolerate a 5-10 Volt variance either way. In that respect alone, I'm sure we saved quite a bit of money in equipment not going down as a result of poor quality power."

EPS 6000



According to Kloian, no service has been required since the system went live after installation. *"The UPS's just run. They work and I don't worry about them,"* said Kloian.

*"I was extremely pleased throughout the whole experience, not only with the Tom Nebrich Agency, but with MGE directly. If I look at getting additional power protection equipment, MGE is going to be the first one that I talk to, and if anyone ever asks me who would I recommend, it will definitely be MGE without hesitation."*

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