

Smallest Issue Matters

By Betsy Gott
Rx Monitoring Services, Inc.

Newspapers are the original form of worldwide communication before the use of computer, television, radio and telephone came into play. They were the cheapest and most resourceful way to reach large audiences with news, commentary and advertising. While newspapers from the 1700's are still readable, there is one great difference between a newspaper of the 1700's and its present-day equivalent and that is the way they are generated. In today's technology, there are many pieces of equipment that can do the job for you, where as compared to the 1700's when everything was done by hand to produce a newspaper. When dealing with the equipment that is present in today's society, the smallest issue matters. As Mark Franco, Pre-Press Manager of Anaheim Print Facility, a subdivision of Freedom Communications, will agree seeing as how he experienced it first hand with one of his machines.

The Anaheim Print Facility, a division of the Orange County Register, is located in Anaheim, California and specializes in a 100% computer to plate business. Orange County Register supplies their patrons with numerous magazines and community newspapers. The Anaheim Print Facility is particularly important to their consumers since they deal with what visually attracts them to their publications. They deal with the printing, insertion and distribution of the

newspapers and magazines, which include sending the files to their Trendsetter, which whips the data and then images the plates. It takes less than two minutes for the Trendsetter to image a plate, which is vital to them since they deal with a daily circulation of over 300,000 newspapers.

In this time critical industry, where a business depends on equipment to manufacture their work, everything needs to be working correctly without any problems. Even the smallest problem can disrupt the whole process and Franco can concur. Franco knew something was wrong with a piece of his equipment, Trendsetter, when he noticed that the Trendsetter was producing plates with double images. This issue took place somewhere in the process of transferring the images from RIP to the Trendsetter. Seeing as how this Trendsetter was installed in November of 2003 and this problem began in July of 2005, Franco figured it could be an environmental issue rather than it just being a mechanical issue so he wanted to test both. At the time this issue transpired, Freedom Communications was dealing with Kodak, located in Rochester, NY. Kodak looked into the problem, but could not find anything inside the system to be the cause, so they referred Freedom to Rx Monitoring Services, Inc. (RxMS). RxMS, located in Bedford, NH, is a company that is focused on providing power quality and environmental information to their customers. They are a well-known leader in the area and are capable of monitoring power quality, temperature, humidity, air purity, dust particles,

Mark Franco, Pre-Press Manager of Anaheim Print Facility, with his piece of equipment, Trendsetter, that Rx Monitoring Services, Inc. monitored for him.



air pressure and vibration. Franco contacted RxMS and told them about his issue and they in turn sent out one of their monitors to Franco's site. RxMS's monitor not only monitored the power quality of the site, but also looked into temperature and humidity as well, hoping to understand if static or the rate of change in humidity was the cause of the registration of the plates to change by shrinking or expanding of the medium. After Franco monitored the Trendsetter and other locations for several days, he sent the monitor back to RxMS where the data was downloaded and a detailed report was written. The report was then sent to Franco with RxMS's prescribed solution.

The Power Quality Report showed that there was nothing wrong with the power at Franco's site and everything met the equipment's specs. The report did show that the temperature in the room where the Trendsetter is located was extremely high at 98° Fahrenheit, where the preferred temperature would be 72° Fahrenheit. Since the room temperature was found not to be the issue leading to the double images, one would be puzzled as to what the issue was that was causing this disorder. After looking into further details of the report, the engineers at RxMS found that the Trendsetter had severe Power Factor Correction (PFC) impulses, which were most likely due to the utility switching on and off of the PFC capacitors. While switching on the PFC capacitors can actually save customers thousands of dollars on their electric bill, there is one short eight millisecond waveform that occurs. These events caused sophisticated electronic fits, as there were multiple zero-crossings and over-voltages that degrade and cause false turn-on of the equipment. Seeing as how their system was resetting, it could eventually cause component damage, which would cost them time and money in the future if it was not tended to. Motor sensors skips were also found, which were due to the PFC impulses and sags. RxMS recommended that Franco add an on-line, double conversion type Uninterruptible Power Supply (UPS) to totally protect their system.

To add additional assistance to their prescribed solution, RxMS sent the report to Gryphon, Inc., a nationwide distributor, which has several manufacturers of power protection products to select from. Gryphon supports the Pre-Press printing industry and has business relationships with almost all of the equipment suppliers within the industry. Not only does Gryphon bring in the expertise of power protection, but they have also dedicated themselves to understanding the issues in the Pre-Press industry allowing them to better serve their customers. After reviewing the report, Gryphon was able to custom size the UPS for inrush and steady-state current, guaranteeing that the best fit and most economical

solution was achieved since over sizing would have cost Freedom money and wasted energy. The report was handed over to Gene Wasserberg, a representative for Gryphon, Inc. Wasserberg reviewed the report and its necessities and then consulted with ONEAC Corporation of Libertyville, IL. ONEAC is a leading international manufacturer of power conditioners and Uninterruptible Power Supplies. They decided that a 7kVA Synergy UPS would be the best solution for Freedom. This 7kVA Synergy UPS is a double conversion technology and can easily supply the high inrush of the system by filtering out the low frequency PFC waveform. Since the surge protections cannot clamp low enough and line interactive UPS turn-on too slow after the distortion occurs, the ONEAC Synergy is precisely the best solution for Freedom. This Synergy UPS saved Freedom time and money and since the unit is typically smaller than the other technologies, it allowed Freedom to place the unit under the plate loader, taking up no additional floor space. The double conversion technology that this specific Synergy UPS consists of is required to filter out this relatively new event of PFC impulses. Until RxMS's patented monitoring technology, this event has been very difficult to document. When dealing with typically only 20 volts in amplitude, the event does not easily show up as an impulse in view of the fact that most power monitor's thresholds are typically set at a much higher level. The distortion level is sub-cycle, typically only 4-6 milliseconds long, and therefore rarely trips the sag event trigger in most monitoring system. If it does trip, then the event log is usually so long that it is easy to miss since there are so many events. Finding the event with this unique distortion is difficult and time consuming. "Not only is RxMS unbiased, which is great, but the expertise they bring to Kodak's customers is invaluable," stated Jim Rivest, Zone Service Manager for Kodak.

After meeting with Franco to follow up on the trouble site, he stated that there have not been any difficulties with the Trendsetter since the installation. Franco also added that they experienced little downtime mechanically and no financial problems when this issue occurred with their Trendsetter, which is significant since the Trendsetter is one of their main pieces of equipment that generate their work. "We removed a variable in the process and we have not had any problems since the installation," stated Franco. Soon after the installation of the UPS, the Anaheim Printing Facility had to deal with a power outage, which caused them to move their work to their Flagship Building. During the outage, the Trendsetter continued to work, but they still could not use their other equipment to generate their work due to the lack of power to the rest of the equipment.

In today's civilization, there are many different components that help produce a newspaper. Each of those components have their own issues and problems that affect



One of ONEAC's UPS's that was placed in Franco's site to help correct the issues with his equipment.

the final outcome, so if one machine is down, it will delay the whole production. This is also true for many businesses and their operations. Each division in a company contributes to their final product and if one division is not doing their job, then the whole process will be delayed. "Pre-Press is the driver for our industry, once we stop, everything else will stop as well," stated Franco, proving even the smallest issue matters!

About RxMS:

Rx Monitoring Services, Inc., located in Bedford, NH, is a recognized leader in power and environmental monitoring. RxMS is capable of monitoring power quality, air purity, temperature, humidity, air pressure, dust particles and vibration. RxMS uses state of the art patented monitors that offer you virtually unlimited data. Fortunately, RxMS features internal expertise to assist in reviewing the data and generate a report to determine the source of the problem. RxMS has a fast turn around rate, requires no capital equipment expense and comprehensive reports that are sent to the customer with a prescribed solution. In essence, RxMS sells their service to you and not just a box. It will save you time by having the data analyzed by our experts and then receive sound advice quickly, which will maximize your time and money. For additional information about RxMS, visit www.rxms.com or call toll free at 1-888-329-2321.

About Gryphon:

Gryphon has been supplying their customers from all over the world with the best power and environmental protection solutions for almost 17 years. Their proficiency in power protection, UPS and power conditioning equipment, telecommunication equipment, medical instrumentation, replacement batteries and backup, etc., can supply your company with consistent product performance and can also save you money. Information on Gryphon and its products is available at www.gryphon-inc.com.

About ONEAC:

ONEAC Corporation is a leading international manufacturer of power conditioners and UPSs. They design and construct products that supply their customers with the greatest level of protection. ONEAC is mainly focused on their use of low-impedance isolation transformer technology. ONEAC's UPS not only provides a clean signal ground, but they reduce AC line impulses, spikes, surges and noise to levels that will be accepted by recent computer systems. ONEAC UPS' are considered to be the best engineered products because of their high efficiency and reliability, no maintenance besides the battery, and a standard five year warranty. Information on ONEAC and its products is available at www.oneac.com or call toll free at 1-800-327-8801.