Physical Security:  
Electricity (6)

by M. E. Kabay, PhD, CISSP  
Security Leader  
INFOSEC Group  
AtomicTangerine, Inc.

In this series, we are looking at how physical security can support the security needs of network operations centers (NOCs) and data centers (DCs). Today's brief note is a continuation of a sub-series on electrical power and related topics.

Be sure that there are at least two panic buttons (more properly known as the Emergency Power Off or EPO) in your computer room: one at each end and both near exits. The EPO cuts off all power to everything in the computer room except the lights. These switches should be protected against accidental use; for example, you can choose switches covered with a spring-loaded flip-top cover or models with the button at the bottom of a one-inch finger-sized tube. Install a phone within reach of each EPO for rapid communications in an emergency. Put a long extension cord on the handset of that phone or provide a cordless phone for use only in an emergency (cordless phones are not secure and should not normally be used for business communications). For an extended discussion of the EPO, see Technical Note #T22, "Understanding Emergency Power Off (EPO)", at the APC Web site <http://159.215.19.5/kbasewb2.nsf/Tnotes+External/6982D6F45A1473718525672300568CB0?OpenDocument>.

It is especially important that the EPO shut down the power to your air conditioning equipment in case of a fire: ventilating an area threatened by fires is a really bad idea.

In one apartment building where I lived many years ago, a visitor had trouble opening the electrically-operated door and therefore pulled the nearest handy lever to the fire alarm. To prevent this sort of error, label panic switches clearly; e.g., MASTER POWER CUTOFF. In general, my experience running a large data center convinced me that every single switch, electrical receptacle, and data communications plug ought to be labeled understandably and clearly. I don't think you can easily overdo labeling in an operations center.

Keep fuses handy in all the right sizes for all your electrical gear, including the power supplies. Make sure that your staff knows exactly where those fuses are kept. Run drills to make sure that their response to an electrical emergency is exactly what you have decided makes the most sense.

Every time you order modifications to the electrical system or find out that your building is having such modifications, be sure to check that the grounding is correct. Especially when your midrange or mainframe systems use three-phase power, it's crucial that the correct wires carry the ground. While you're at it, verify that your building is properly grounded in case of lightning strikes. This precaution is especially important throughout the great plains of North America.

Be sure that your facilities crew are absolutely clear on which circuits may NOT be interrupted for routine work on the power system. Losing power because an electrician tripped a breaker is just
as much a problem as any other kind of power loss. And it's worse if some untrained, unaware person shuts off power from your standby power systems \( \mathbb{B} \) and the RISKS FORUM DIGEST <http://catless.ncl.ac.uk/Risks/> is full of reports of that kind of incident.

Next time, the last in this sub-series on electricity; we'll look at some odds and ends such whether to shut the power off your computer at all and how to stop an accidental electrocution.

* * *

Mich Kabay can be reached by e-mail at <mkabay@atomictangerine.com>. He invites inquiries about a wide range of information security courses he would be delighted to deliver to your employees at your site and at your convenience.

AtomicTangerine is the Internet's first e-business venture consulting firm, combining the disciplines of venture capital, technology innovation and strategic consulting to create category killers and incubate new industries for companies of all sizes and at all stages of evolution. AtomicTangerine headquarters are in the San Francisco Bay Area and we have offices in New York, London, Tokyo, Washington DC, Boston, Denver and Seattle/Tacoma. Visit our new Web site at <www.atomictangerine.com>.

Copyright 8 2000 M. E. Kabay. All rights reserved.

Permission is hereby granted to Network World to distribute this article at will, to post it without limit on any Web site, and to republish it in any way they see fit.