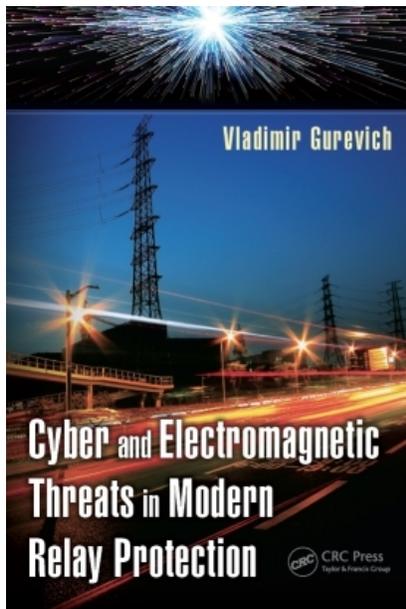


New Sensational Book



Damaging the infrastructure of modern post-industrial society proves to be more detrimental than ordinary military actions. Electronification and the dependence of the infrastructure of any highly developed country on computers makes destruction of the infrastructure significantly simpler since this destruction can be virtual rather than physical. Thus the more the infrastructure is developed, the more it will be vulnerable to this virtual impact.

What place does relay protection occupy in the infrastructure of a country? Absolutely special, since through protection relays, which control position of circuit breakers, one can gain access to changing of configuration of power electric network remotely, thereby resulting in the collapse of an ordinary functioning power system.

Digital protection relays due to their special position are by far not the last target to be hit in the first round. Today two types of remote destructive impacts on digital systems are

known, i.e., cyber attacks and intentional remote destructive electromagnetic impacts.

Modern trends of relay protection development, include, but are not limited to the overall transition to digital relays; the continuous sophistication of their software and hardware; the increase in the number of functions that they perform (including those that are not directly related to relay protection); the transition from fiber-glass communication channels to less protected (Ethernet, Wi-Fi); the continuous miniaturization of electronic equipment; the increase in the number of transistors in micro-processors and the reduction of their operating voltage makes it significantly easier for remote destructive impacts. On one hand, we see a continuous increase of relay protection susceptibility, on the other hand, we see the continuous improvement of methods of remote destructive impact. As a result these two dangerous vectors of development are rapidly heading towards each other. Let me recall the famous saying of Winston Churchill: *“The Stone Age can come back on shiny wings of science”*.

The situation is worsening because both terrorist and criminal bodies are getting access to modern means of impact on computer and micro-processor systems. This makes the meeting of these two vectors inevitable. This is why it is necessary to understand the existing danger and take preventive measures in advance.

In this book, the author tried to convince a reader in actuality of this danger and present the solutions of the problem.

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