In this series, we are reviewing some of the implications of personnel management for information security.

For most areas of information processing, redundancy is generally viewed as either a Bad Thing or an unavoidable but regrettable cost paid for specific advantages. For example, in a database, indexing may require identical fields (items, columns) to be placed in separate files (datasets, tables) for links (views, joins) to be established. However, in managing personnel for better security, redundancy is a requirement. Without shared knowledge, our organization is a constant risk of a breach of availability.

Redundancy in this context means having more than one person who can accomplish a given task. Another way of looking at it is that no knowledge shall belong to only one person in an organization.

Unique resources always put our systems at risk; that's why companies like Tandem, Stratus and others have so successfully provided computer systems for critical-task functions such as stock exchanges and banking networks. Such redundant or fault-tolerant computer systems and networks have twin processors, channels, memory arrays, disk drives and controllers.

Similarly, a fault-tolerant organization will invest in cross-training of all its personnel. Every task should have at least one other person who knows how to do it—even if less well than the primary resource. This principle does not imply that you have to create clones of all your employees; it is in fact preferable to have several people who can accomplish various parts of any one person's job. Spreading knowledge throughout the organization makes it possible to reduce the damage caused by absence or unavailability of key people.

If a single employee is the only person who knows about a critical function in your organization, you are at risk. Your organization will suffer if the key person is away, and it may suffer if the key person decides to behave in unauthorized and harmful ways. Do you have anyone in your shop whose absence you dread? Are there any critical yet undocumented procedures for which everyone has to go ask Joe?

A client in a data center operations management class volunteered the following story. There was a programming wizard responsible for maintaining a key production program; unfortunately, he had poor communication skills and preferred to solve problems himself rather than training and involving his colleagues. "It'll be faster for me to do it myself," he used to say. During one of his rare vacations, something went wrong with "his" production program, shutting down the company's operations. The wizard was in the north woods, out of reach of all modern communications; the disaster lasted until he returned.

Not only does your organization suffer, but also Mr/Ms Indispensable suffers from the imbalance
of knowledge and skill when no one else knows what they know. Some indispensables are dedicated to the welfare of their employer and of their colleagues. They may hesitate to take holidays. If their skills are needed from hour to hour, it becomes more difficult to allow them to participate in committee meetings. These are the people who wear beepers and cannot sit undisturbed even in a two-hour class. If the Indispensible's skills affect day-to-day operations, they may find it hard to go to offsite training courses, conferences and conventions. Despite their suitability for promotion, indispensable people may be delayed in their career change because the organization finds it difficult or expensive to train their replacement. In extreme cases, the newly promoted manager may find themselves continuing to perform specialized duties that ought to be done by their staff. I remember my amazement when the newly-promoted VP of information systems at a service bureau informed me that he was the only person on the technical support and operations team who was competent to reconfigure the mainframe computer.

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