BCX Consulting, LLC

Perspectives

Summary

Prior to using current computer tools, physical media contained work products. Now companies use Electronic Data Storage to hold work product on computer systems. Processes are required to validate electronic files data integrity prior to performing data backups.

Discussion

Prior to computer tools available today, company personnel used physical media (paper, vellum, mylar, etc.). The physical originals were stored in vaults, protecting the media from fire and other hazards. Copies on microfilm were stored at a secondary location to provide catastrophic protection.

Today's tools use magnetic or optical media to store work product in data formats compatible with current tools. Prior to electronic storage methods, storage media provided a stable solution resistant to change while in storage. Electronic storage provides improved data flexibility for document or design creation but does not have the same degree of storage stability. Environmental effects or mechanical equipment failure may corrupt data stored in electronic systems. Processes that validate file data integrity, used in conjunction with backup systems, assure the preservation of the original data on backups.

The primary reason to validate data integrity in addition to backups is to protect the company's intellectual property. Most, if not all, of today's electronic data embodies a company's intellectual property, which is an asset just like property, plants, and equipment. Few, if any, software packages or operating systems include the validation tools to verify data integrity prior to making backups forcing each company to implement a data verification tool. Data verification and backup processes are critical elements in the practice of good corporate governance and company sustainability.

Industry regulators also have requirements to assure the preservation of a company's data. The Federal Aviation Administration issued Order 8000.79 on March 22, 2002, to address the Use of Electronic Technology and Storage of Data. This order and a companion Advisory Circular provide the foundation for the FAA requirements for Electronic Data Storage; as a result detailed procedure documentation is required. Process documentation and the corresponding audits assure critical data preservation.

Conclusion

Corporate governance and sustainability, as well as regulatory requirements, drive the need for reliable processes for data verification and backup processes.