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Legality of Optical Disk: An Update

Optical disk technology may offer effective solutions to pressing information management problems. Organizations in both the public and private sector continue to explore the feasibility of adopting this technology to meet their own needs.

Some believe that the legal questions regarding this technology may present obstacles to its widespread acceptance. Will records maintained by this technology be admissible in evidence? Can records required by state and federal regulatory agencies be maintained using this technology? Can government agencies use this technology for their own purposes? What legal principles will apply to this technology in countries outside the United States?

Since "The Legal Status of Optical Disk and Electronic Imaging Systems" [020-3040-00] was published, a few laws have changed and a few new issues have been raised. At least three states have addressed optical disk in laws affecting records as evidence. A few other states have addressed legal issues regarding the use of this technology used by state government agencies.

The legal questions regarding optical disk can be categorized in four distinct areas:

- Admissibility in evidence
- Submission to government agencies
- Use by government agencies
- Law in countries outside the United States

This article provides additional information in each of these four areas.

Admissibility in Evidence

In the United States, two uniform laws clearly establish the basis for admitting records maintained on optical disk systems into evidence: The Uniform Rules of Evidence [US 128-0060-00 to 0170-00] and The Uniform Photographic Copies of Business and Public Records as Evidence Act (UPA) [US 1128-0020-00]. Both laws would admit duplicate records into evidence if they accurately reproduce the original. [The laws are reproduced in part at the end of this article.]The optical disk technology is a duplication technology similar to photocopies, microfilm and facsimile. The four best-known reproduction techniques — photocopy, microfilm, facsimile and electronic image management or optical disk — exhibit the same three characteristics.

- *Image Capture.* A photographic, scanning or other process to identify and capture the image of the original document.
- *Image Manipulation.* A photographic, electronic, photostatic or other process that transforms the captured image into a format for storing and reproducing the image.
- *Visible Reproduction.* A photographic, photostatic, printing, or other process that converts the manipulated image into visible form.

An optical disk system, for example, utilizes an electronic scanner for image recognition, computer software, memory and optical disk storage for image manipulation and graphic terminals and laser printers to make the image visible. An optical disk system is therefore similar to other reproduction technologies.

Like all other reproduction technologies, the image will be manipulated and converted from one form to another. As long as the final reproduced image "accurately reproduces the original," the law of evidence in the United States would allow the visible records produced by any technology to be admissible in evidence. Most organizations recognize that courts will require paper prints of duplicate records. Even though microfilm would be admissible in evidence in court, few judges will be willing to accept the film itself, even when they are provided with a reader/printer. Instead, they will insist that paper prints be prepared because they feel more comfortable with paper records.

Using Optical Disk Images in Court

In a recent court proceeding in California's, San Mateo County, records were scanned using an optical disk system and presented to witnesses on computer terminals. Most witnesses were reluctant to identify the documents as the ones they signed, prepared or used. As a result, the court was unable to use records from the optical disk system in evidence.

While some may argue that this case indicates optical disk records are not admissible into evidence, nothing could be further from the truth. In reality, the judge and attorneys felt quite comfortable with the legal status of these records. The problem was a psychological one, rather than a legal one. Witnesses were forced to testify from records displayed on a screen rather than in the familiar paper format. These people had never seen the records on a screen and therefore felt uncomfortable regarding their authenticity. Similarly, we would expect that witnesses would have difficulty testifying from a reader displaying a microfilm image. And microfilm is clearly legal as evidence.

While any visible form of a duplicate image would be admissible in evidence, most people feel comfortable only with the paper version. Clearly, judges will insist on the paper version for their own use. We can then expect little opposition to records produced by optical disk systems provided that paper prints are submitted to the court. Your decision to use the technology will then be based on the cost and operational issues, not legal ones!

Recent Laws Affecting Optical Disk Records

Three states to date have modified their laws of evidence to specifically address optical disk or electronic image management systems. Missouri, Louisiana and Virginia modified existing laws affecting microfilm and duplicate copies as evidence to include such phrases as "electronic transfer to other material using electronic processes", "electronic digitizing process" and "copies from optical disks."

The Missouri Revised Statutes Section 109.120 and 109.130 say the following:

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- **TITLE 8. PUBLIC RECORDS.**

CHAPTER 109. TRANSCRIBING AND REBINDING.

§109.120. Records reproduced by photostatic process — costs — marginal releases prohibited.

1. The head of any business, industry, profession, occupation or calling, or the head of any state, county or municipal department, commission, bureau or board may cause any and all records kept by such official, department, commission, bureau, board or business to be photographed, microphotographed, photostated or transferred to other material using photographic, video, or electronic processes and the judges and justices of the several courts of record within this state may cause all closed case files more than five years old to be photographed, microphotographed, photostated or transferred to other material using photographic, video, or electronic processes. Such reproducing material shall be of durable material and the device used to reproduce the records shall be such as to accurately reproduce and perpetuate the original records in all details.

* * * * *

§109.130. Reproduced records deemed original, when

Such reproduction of the original records shall be deemed to be an original record for all purposes provided that the reproduction is equal in resolution to microfilm produced under those standards set forth in subsection 4 of section 109.241 and shall be admissible in evidence in all courts or administrative agencies. A facsimile, exemplification, or certified copy thereof shall, for all purposes recited in sections 109.120 and 109.140, be deemed to be a transcript, exemplification or certified copy of the original.

The Louisiana Revised Statutes section 44:39 says the following regarding public records as evidence:

- **TITLE 44. PUBLIC RECORDS AND RECORDERS**

§139. Microfilm and electronic digitized records; use as evidence.

A. All persons and public bodies having custody or control of any public records of the state of Louisiana or any of its subdivisions may utilize any appropriate form of the microphotographic process, or an electronic digitizing process capable of reproducing an unalterable image of the original source document, for the recordation, filing, and preservation of all existing public records, forms, and documents or records, forms, and documents hereafter accumulated which pertain to the their functions and operations in order to maintain efficient and economical records management programs and to conserve storage space, provided that the use of such microphotographic or electronic digitizing processes are not otherwise prohibited by law and that all microforms produced comply with standards established by the division of archives, records management, and history of the Department of State in accordance with the provisions of R.S. 44:415.

B. Any microfilm or electronically digitized copy, when satisfactorily identified, shall be deemed to be an original itself, and shall be admissible in evidence in all courts or administrative proceedings in any agency, whether the original document is in existence or not, and an enlargement or facsimile of a reproduction is likewise admissible in evidence, if the original reproduction is in existence and available for inspection under direction of the court or the administrative agency. Original records shall remain subject to subpoena.

The Virginia Code Annotated section 8.01-391 says the following:

- **TITLE 8.01. CIVIL REMEDIES AND PROCEDURE.**

CHAPTER 14. EVIDENCE.

Article 2. Laws, Public Records, and Copies of Original Records as Evidence.

§8.01-391. Copies of originals as evidence.

C. If any business or member of a profession or calling in the regular course of business or activity has made any record, and again in the regular course of business has caused any or all of such record to be copied, the copy shall be as admissible in evidence as the original, whether the original exists or not, provided that such copy is satisfactorily identified and authenticated as a true copy both by the custodian of such record and by the person to whom said custodian reports, if they be different, and is accompanied by a certificate that said person does in fact have the custody. Copies in the regular course of business shall be deemed to include reproduction at a later time, if done in good faith and without intent to defraud.

The original of which a copy has been made may be destroyed in the regular course of business unless its preservation is required by law, or its validity has been questioned.

D. The introduction in an action of a copy under this section neither precludes the introduction or admission of the original nor the introduction of a copy or the original in another action.

E. Copy, as used in this section, shall be deemed to include photographs, microphotographs, photostats, microfilm, microcard, printouts or other reproductions of electronically stored data, or copies from optical disks or any other reproduction of an original from a process which forms a durable medium for its recording, storing, and reproducing.

The laws in Missouri and Louisiana are unique for those states. The Virginia law is based upon the Photographic Copies of Business and Public Records as Evidence Act, although the exact language used in the Virginia statute is substantially different than the uniform wording. Each of these three laws requires that the image be on a "durable medium" or "unalterable." The standards in all three states are stricter than the standard found in approximately 45 states and the United States federal government where the duplicate must accurately reproduce the original. These three states have stricter standards for all duplicate records not just optical disk records. The vast majority of states and the federal government hopefully will not change the wording of their laws in the future.

The Need for a Test Case

Some people have indicated that a test case would be necessary to establish the legality of optical disk records for purposes of evidence. The Internal Revenue Service of the United States has considered the legal questions regarding

the submission of optical disk records into evidence. In a memorandum dated September 4, 1987, the Associate Chief Counsel of Litigation for the Internal Revenue Service reviewed the concern of the Assistant Commissioner that a test case may be necessary to determine the admissibility of such records into evidence. In the memorandum, the Associate Chief Legal Counsel clearly indicated that no test case was necessary since operable laws (The Uniform Rules of Evidence and the UPA in the federal domain) would be adequate to ensure the admissibility of these records. The Internal Revenue Service is now developing an optical disk system to store tax returns.

Even if a test case did take place, the results would not be binding on a court in your state. For example, if the test case took place in California, the results would not be binding in any other court in the United States or in federal jurisdiction. It is also expected that such a decision would not be important enough for review by the Supreme Court of a state or by the Supreme Court of the United States. Similarly, a decision by one federal court is not binding on any other.

A test case is not needed to establish the legality of optical disk records. The prevailing rules of evidence and laws are clear enough to establish the legal principles regarding this technology that could not be overturned by court decisions.

Submission of Records to Regulatory Agencies

Those jurisdictions that have adopted the Uniform Photographic Copies of Business and Public Records as Evidence Act would permit optical disk records to be submitted to regulatory agencies. The uniform law clearly states that a reproduction made under the law "is as admissible in evidence as the original itself in any judicial or *administrative proceeding*."

Normally, when state and federal regulatory agencies require that you keep records, they may be kept in any form unless the agency states a specific form. Some agencies have developed requirements regarding the size, layout and quality of microfilm records. Agencies have not yet adopted requirements related to optical disk.

In the absence of any specific regulatory requirements in this area, those states that have adopted the UPA would permit optical disk records to be utilized for regulatory proceedings. Those states that have not adopted the UPA would also permit records to be maintained using this process unless the regulatory agencies prohibit or restrict this practice.

The UPA has been adopted in most states as a statute. Regulatory agencies therefore could not impose regulations that prohibit the use of optical disk technologies.

The UPA, however, does state that the original paper records may only be destroyed after reproduction "unless its preservation is required by law." Since state regulations are "law," a state regulatory agency could prohibit the destruction of the paper records after they have been scanned by an optical disk system. They could not prohibit the use of an optical disk system. They could, however, require that the original paper records be maintained and could require that those original paper records be submitted to the agency.

United States law is quite specific related to your rights in the absence of law. You are permitted to perform any action and similarly maintain records in any form, unless these actions are prohibited or regulated. Unless a specific state or federal regulation exists that prohibits paper records from being destroyed after scanning into an optical disk system or regulates the method of reproduction, you are permitted to prepare optical disk records and destroy the original records provided that the duplicates *accurately* reproduce the originals.

Use by Government Agencies

The most troublesome legal issue affecting optical disk technology is its use by government agencies. The optical disk medium has not been considered archival or permanent in nature. Unfortunately, the only definition of archival existing in the United States is the methylene blue test performed on silver halide microfilm to determine archival quality. No comparable standards exist for magnetic media or optical disk.

Many government records must be kept for long periods of time or permanently. These records are maintained historically to preserve the actions of government for later research and analysis. State and federal archivists have insisted that records for this purpose be preserved either in paper form or on microfilm that has been tested for archival quality.

State Laws Affecting the Use of Optical Disk Systems By Government Agencies

The state of Texas recently adopted legislation that would have allowed some long-term (retention period over 10 years) or permanent school records to be maintained on optical disk and the original paper destroyed. Unfortunately, the legislature failed to review this matter with the Texas Library Commission in advance to determine the archival requirements for these records. The law was later modified to allow optical disk records and the destruction of the original paper only for short-term records (retention under 10 years). Optical disk may be used to store long-term or permanent records but the original paper records must be preserved in paper or microfilm form.

California recently adopted laws and established standards for the preservation of state, county and district records maintained on optical disk systems. The law requires that the medium "does not permit additions, deletions, or changes to the original document" and is of a "type approved for permanent records by the National Bureau of Standards." These laws seem to require non-erasable optical disk as well as a type of disk that can maintain a permanent record. Unfortunately, neither the National Bureau of Standards nor any other government standards group has established a standard for permanent records. In fact, the National Bureau of Standards has never established any requirements for permanent records, including microfilm. We can therefore expect that few paper records in California government agencies will be destroyed after they are scanned into an optical disk system.

Requirements of Archives

The state and federal archives will also develop standards for these technologies. Unless specific standards for creation, maintenance and disposition are followed, the archives will not grant permission to the government agencies to destroy the original paper records. As a practical matter, the archives will probably not accept any form of electronic record for permanent retention, including computer disks, tapes, and optical disks. Government records scheduled for long-term or permanent retention will have to be maintained in either paper or archival microfilm format. Government agencies will still be able to use the optical disk technology to manage information more effectively but cannot use the technology to replace paper or microfilm records.

This conclusion will probably remain the same even when optical disk information can be certified for long-term retention. The problem relates more to the practical problem of reading the disks rather than the disk's ability to retain information. As a technology develops, new disk read/write equipment and disk formats will be developed. Compatible equipment would have to be maintained along with the disk to ensure readability in the future. Even if consistent standards for optical disk formats could be developed, the technology will continue to evolve. It will therefore be impossible and impractical to maintain information on optical disk for long-term retention.

The Needed Technology

The solution to the long-term or archival problem facing government (and other industries requiring long-term retention of records) could best be resolved by the development of low-cost computer output microfilm units for graphic images. Currently this equipment costs over \$200,000 per unit and must be customized for each optical image format. A successful graphics COM unit of the future would enable image information from the optical disk system to be stored in an appropriate order on low-cost, archival microfilm. By utilizing a standardized microfilm format for long-term retention of information once it becomes inactive, the actual optical disks could no longer be needed.

Until the development of this technology, optical disk systems probably will not be available to government agencies to replace paper records for long-term storage. Instead, the technology may only be used for active management and retrieval of short-term information. This technology may be used for long-term records provided that the records are also maintained in either paper or archival microfilm form.

Laws Affecting Optical Disk in Countries Outside the United States

While statutes and rules of evidence determine the legality of optical disks in the United States, court decisions will probably determine its legality in other countries. Countries outside the United States rely on an evolutionary judicial process similar to the British Common Law system. Basically, rules of evidence evolve through court decisions over a period of time. When judges consistently reach the same conclusion, a principle of law is established.

Most countries outside the United States have yet to address the legal issues related to optical disk. In fact, some are still groping with legal questions regarding microfilm and other duplicate records. Few have dealt with issues related to computer records. In this environment, expect great uncertainties regarding the legality of optical disk for many years to come.

The United States also operates under a legal principle that all actions are permitted unless they are specifically prohibited or regulated by law. Other countries may not permit certain activities unless they are specifically permitted by law. As a result, some countries outside the United States will prohibit the use of optical court records until such time as they are specifically permitted by law. This evolutionary process could take many years.

Outside the United States, few expect the widespread legal acceptance of optical disk records in the near future. The technology certainly can be used for effective management and retrieval of information. Visible records produced by the technology, however, may be questioned in evidence. Rarely will government agencies permit you to use the technology and destroy the original paper records.

Summary

In the United States, visible records made from an optical disk system will be admissible in evidence to the same extent as the original record. Courts will rightly insist that the optical disk records accurately reproduce the original. If that standard has been met, an organization can safely destroy the original records and rely on the optical disk records for purposes of evidence.

Similarly, records required by government agencies can be maintained in optical disk systems. Whenever the agency requests information, you would prepare duplicates from the optical disk system. An agency may require that original records be kept or that your optical disk system meet certain standards. To date, these types of regulations have not been developed.

Government agencies in the United States may also use optical disk systems to manage and retrieve information. Original short-term paper records could be destroyed after the images have accurately been preserved in an optical disk system. Since optical disk records are not archival, long-term (retention over 10 years) or permanent records must generally be maintained in either paper or archival microfilm form. It is not expected that state and federal archives will permit the destruction of long-term paper records after scanning into an optical disk system, even when optical disks are certified for archival purposes.

In countries outside of the United States, optical disk records can also be used to manage and retrieve information. These countries, however, will rarely permit the destruction of the original records after they have been scanned into an optical disk system. It may take many years in some countries for optical disk records to even be admitted into evidence.

The Uniform Rules of Evidence have been adopted by the United States federal government (Title 28 United States Code Appendix - Rules of Evidence for United States Courts and Magistrates) and approximately 30 states. The Uniform Photographic Copies of Business and Public Records as Evidence Act (UPA) has also been adopted by the United States Federal Government (28 United States Code 1732) and also approximately 30 states. As the Uniform Rules of Evidence gain popularity, some states will repeal the UPA to eliminate duplication.

The major provisions of the Uniform Rules of Evidence are as follows:

- **ARTICLE X. CONTENTS OF WRITINGS, RECORDINGS, AND PHOTOGRAPHS**

- **Rule 1001. Definitions**

- For purposes of this article the following definitions are applicable:

- (4) Duplicate. — A "duplicate" is a counterpart produced by the same impression as the original, or from the same matrix, or by means of photography, including enlargements and miniatures, or by mechanical or electronic re-recording, or by chemical reproduction, or by other equivalent techniques which accurately reproduces the original.

- **Rule 1003. Admissibility of Duplicates**

- A duplicate is admissible to the same extent as an original unless (1) a genuine question is raised as to the authenticity of the original or (2) in the circumstances it would be unfair to admit the duplicate in lieu of the original.

The major provisions of the Uniform Photographic Copies of Business and Public Records as Evidence Act are as follows:

- **§1732. Record made in regular course of business; photographic copies**

- If any business, institution, member of a profession or calling, or any department or agency of government, in the regular course of business or activity has kept or recorded any memorandum, writing, entry, print, representation or combination thereof, of any act, transaction, occurrence, or event, and in the regular course

of business has caused any or all of the same to be recorded, copied, or reproduced by any photographic, photostatic, microfilm, micro-card, miniature photographic, or other process which accurately reproduces or forms a durable medium for so reproducing the original, the original may be destroyed in the regular course of business unless its preservation is required by law. Such reproduction, when satisfactorily identified, is as admissible in evidence as the original itself in any judicial or administrative proceeding whether the original is in existence or not and an enlargement or facsimile of such reproduction is likewise admissible in evidence if the original reproduction is in existence and available for inspection under direction of court. The introduction of a reproduced record, enlargement, or facsimile does not preclude admission of the original. This subsection shall not be construed to exclude from evidence any document or copy thereof which is otherwise admissible under the rules of evidence.

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