# SECTION 12

# ELECTRONIC IMAGING SYSTEMS

## A. GENERAL

A licensee may use an electronic imaging system to facilitate compliance with the Division's record control and retention requirements. Electronic imaging systems can be used for the capture, storage, retrieval and management of electronic images of files and required gaming documents and related structured data repositories. Imaging systems provide document integrity in that digitally stored documents do not degrade in quality due to handling or age and images cannot be altered. Systems can operate anywhere from a single stand-alone PC workstation to an enterprise-wide system via a local area network (LAN) or wide area network (WAN). Utilizing optical disks, CD-ROM disks, and/or zip disks, systems can convert both paper documents and electronic information into easily accessible databases for quick and simple recall, intelligent transmission to other users or departments, expedient printing and faxing and secure archival storage.

Many different technologies are involved in electronically managing documents and data, including high-speed communication networks, scanners and printers, servers and workstations, optical and magnetic storage devices, relational databases and more. This section of the ICMP provides general guidelines for the implementation and use of any electronic imaging technology.

When a licensee decides it wants to consider utilizing an imaging system, certain procedures must be followed and specific concerns must be addressed prior to installation, implementation, and reliance on any system. These include, but are not limited to, designing an indexing methodology, developing a scanning plan, output media, and other planning considerations; testing requirements, quality assurance issues, quality control matters, access to records, inventory control of original media, and other ongoing requirements. This section of the ICMP provides general guidelines for these procedures and concerns.

**The licensee must receive written approval from the Division prior to relying on the imaging system as the means of record retention.**

## B. DOCUMENT CONTROL AND RETENTION REQUIREMENTS

It is the responsibility of the licensee to maintain compliance with the Division's record control and retention requirements as specified in CLGR 30-1602 and 30-1607, regardless of the specific capabilities and/or limitations of its imaging system. Potential limitations of any imaging system, including limitations affected by the licensee (e.g., incorrect indexing, accidental omission of a document, non-retrievable image, lost image, etc.), will not justify noncompliance with Division requirements.

## C. MINIMUM REQUIREMENTS

If a licensee intends to utilize an electronic imaging system, the licensee must ensure the system meets, at a minimum, the general requirements discussed in this section.

### Access to Electronically Stored Records

As stated above, utilization of an imaging system does not mitigate the licensees' responsibilities for complying with the record control and retention requirements set forth in the CLGR. These requirements address, in part, the Division's access to gaming records upon demand (CLGR 30 - 1602 (1)). Consequently, the licensee must ensure that any request for gaming records by a Division representative can be met in accordance with the regulations. It is the responsibility of the licensee to determine the best manner of satisfying this requirement. At a minimum, the licensee must have an employee available during all hours of operation who is knowledgeable enough to respond to any such request (i.e., produce the requested information) upon demand.

### Testing the Imaging System

All electronic imaging systems must be tested by the licensee for a period of not less than four consecutive drops. Results of the test must be documented by the licensee and submitted to the Division. The Division will audit the results and, upon successful completion of the audit, issue written approval for the system to be used, as tested, to capture, store, retrieve and manage electronic images of files and required gaming records. **All original media (includes all original documents) must be maintained by the licensee in accordance with CLGR 30-1602 and 30 - 1607 until the licensee receives this written approval from the Division**. Additional detail on testing requirements is presented later in this section.

### Indexing Methodology

Central to the effective utilization of an imaging system to electronically manage records and data is a sound, comprehensive indexing methodology. The licensee must design an indexing methodology to be submitted to the Division prior to testing the system. This is discussed in more detail later in this section.

### Inventory Control of Original Media

No gaming document, report, slip, form, etc., may be electronically imaged until all required document review procedures and audit procedures specified in the ICMP and the licensee's written accounting plan have been completed by the licensee. Once the original gaming records are audited and subsequently electronically imaged, they must be maintained for 90 days from the gaming date of the document. This applies to all first run reports, audit adjustments, variance explanations, final reports, multi-part slips, and all other required gaming records. After the 90-day period, the original media (only the media that has been imaged) may be disposed of in accordance with the procedures outlined in the licensee's written inventory control procedures.

(Note: the 90-day retention requirement is applicable subsequent to receipt of written approval, issued by the Division, to use the system. Prior to receipt of written approval, all original media must be controlled and maintained in accordance with CLGR 30-1602 and 30-1607.)

**Multi-Part Forms**

Certain required gaming documents have multiple parts, such as the Jackpot Payout/Fill slips, Opener/Closer forms, and Unclaimed Jackpot Receipts, etc. It is the licensee's responsibility to ensure that electronic images of the individual parts of all multi-part forms are readily identifiable. In other words, when viewing or retrieving the electronic image of the 2nd copy (i.e., the yellow copy) of a Jackpot Payout/Fill slip, it must be apparent that the viewed/retrieved image is, in fact, the 2nd (i.e., yellow) copy. This may be accomplished through the use of a color scanner, or by the use of watermarks or any other identifying mark on each part of a multi-part form, or any other method that provides the proper identification. It is the licensee's discretion to use any method as long as each part is properly identified.

## D. INTENT TO USE AN IMAGING SYSTEM

The licensee must provide written notification to the Division of its intent to use an imaging system. Written notification must include at a minimum the following:

- The system name,
- The system version,
- The manufacturer,
- The proposed installation and implementation dates,
- The name of a contact person,
- Description of the measures taken by the licensee to ensure the system meets all of the minimum requirements specified above.

Additionally, any subsequent system upgrades and the resulting impact on the overall system must be communicated, in writing, to the Division, within 30 days prior to installing the upgrade.

## E. PLANNING FOR IMPLEMENTATION OF AN IMAGING SYSTEM

Planning the implementation of an imaging system can be very time consuming. It is also the most critical stage in the licensee's implementation strategy. An indexing methodology, scanning plan, processing controls, test schedule and procedures, inventory control, storage and retrieval, and backup and archival are just some of the guidelines and procedures that must be developed during the planning stage.

**Indexing Methodology**

As mentioned earlier, a thorough and comprehensive indexing methodology is crucial to the successful utilization of an electronic imaging system. Indexing methodology tools include

Optical Character Reading (OCR), Intelligent Character Recognition (ICR), barcoding, and/or custom-designed data entry interfaces. The tools and methodology used should be the most efficient for the specific licensee's operation. Every licensee's indexing structure will be somewhat unique as it is built around its specific system capabilities and the types of records it wishes to store electronically. It is the responsibility of the licensee to understand the capabilities and inherent limitations of its system and to ensure the system will support the desired indexing methodology. The licensee must submit the indexing methodology, in writing, to the Division prior to the start of the system test.

**Scanning Plan**

A detailed, written scanning plan must be developed and submitted to the Division at least 30 days prior to the start of the system test. This plan must address pre-scanning controls and document preparation, processing controls to include quality assurance and quality control procedures, and post-scanning controls.

**Processing Controls**

The licensee must develop quality control (QC) procedures designed to avoid human/machine errors and to detect any errors that do occur in a timely manner. QC procedures ensure, among other things, that all documents are scanned and transferred to the proper folder/index. The licensee must also develop quality assurance (QA) procedures that, in effect, test the effectiveness of the QC procedures. Through random sampling or 100% testing, QA procedures must be implemented. Any errors found must be corrected and documented to allow the licensee to quickly identify and address a consistent source of error. A written copy of these processing controls must be submitted to the Division at least 30 days prior to the start of the system test.

**Inventory Control**

The licensee must develop written inventory control procedures for all original media. These procedures must address, at a minimum, the requirements specified in the "Minimum Requirements" section and submitted to the Division at least 30 days prior to the start of the test.

**Storage and Retrieval**

Storage and retrieval issues must be addressed during the planning stage. These procedures must be documented and submitted to the Division at least 30 days prior to the start of the test. The licensee will need to consider output media options (e.g., CD-ROM disks, ZIP disks, Worm (Write Once Read Many) optical disks, etc.) and decide which media is the most appropriate for storage of its electronic images. Other considerations include procedures to ensure re-writable CDs, if used, are not able to be written over.

The output media must contain the exact duplicate of the original document. All records electronically stored must be maintained with a detailed index containing the gaming department and date. This index must be available upon request by the Division.

Another consideration that must be addressed by the licensee is the Division's access to the electronic images. Hardware and/or software must be provided by the licensee in order for the Division to perform its auditing procedures. It is up to the licensee to take whatever measures necessary to ensure the Division has access to all electronic gaming records to perform its auditing procedures. Regardless of the method of access and retrieval, it is the licensee's responsibility to ensure the Division has the necessary tools to accomplish this. The licensee must have controls in place to ensure the accurate reproduction of records, up to and including the printing of stored electronic documents used for Division auditing purposes.

If source documents are stored on re-writable optical disks, the Division cannot rely upon the stored electronic documents for the performance of audit procedures. If re-writable optical disks are used, the licensee must continue to control and retain the physical hard copies of the original documents in accordance with CLGR 30-1602 and 30-1607.

**Backup and Archival**

The licensee's backup policy and archival procedures must be documented and submitted to the Division at least 30 days prior to the start of the test. The backup policy must address who performs the backup function, the timing and frequency of performing backups, the type of output media, any rotation of the output media, and storage of the output media. The working hard drive should be backed up on a daily basis.

Archival must occur in a timely manner to ensure the integrity of the scanned images. Archival procedures must address who performs the archive, the timing and frequency of the archival, the type of output media, and storage of the archived data. At a minimum, one complete set of archives must be maintained onsite, and a second complete set is to be secured at an off-site location.

**Test Schedule & Procedures**

After planning for implementation is complete, and before the field test of the system begins, the licensee must contact the Division and arrange a time for the Division to review the indexing methodology, scanning plan, processing controls, inventory control procedures, backup policy and archival procedures, storage and retrieval procedures, etc. After the Division reviews these documents and procedures, the licensee must submit, in writing, a proposed test schedule and testing procedures. Determination of the most effective testing procedures and test schedule is at the licensee's discretion. Testing procedures must include not only the field testing procedures, but also procedures for periodic and routine (i.e., semi-annual) testing of the imaging system. It is the licensee's responsibility to establish testing procedures that will demonstrate compliance with all record control and retention requirements set forth in all applicable rules, regulations,

and ICMP. As mentioned earlier, the field test period must encompass no less than four consecutive drop periods. Periodic and routine testing must be performed, at a minimum, on a semi-annual basis (i.e., every 6 months). This could be performed in conjunction with the ICO internal review.

## F. FIELD TESTING OF THE IMAGING SYSTEM

After the licensee has addressed all of the planning considerations discussed above, the licensee must contact the Division and make arrangements for the Division to review the documents, policies and procedures developed during the planning stage. Field testing of the system may not commence until the Division has reviewed this information and given the licensee approval to begin testing. The licensee may, at its discretion, perform any internal testing it desires. However, the start date of field testing for purposes of obtaining written Division approval must occur subsequent to the Division's review of the planning documentation as discussed above. It is the licensee's responsibility to contact the Division when this information is available for review.

### Testing Objective

The primary objective of field testing the electronic imaging system is to ascertain that the system, as utilized by the licensee, controls, manages, and maintains, in the form of electronic images and files, required gaming records in accordance with all applicable rules, regulations, and ICMP.

### Testing Procedures

Field test procedures must be applied for four consecutive drop periods. Testing will commence after the Division's review of all required documentation, policies, and procedures developed by the licensee during the planning stage, and approval to begin testing. As stated earlier in this section, determination of the most effective testing procedures is at the licensee's discretion. It is the licensee's responsibility to establish testing procedures that will demonstrate compliance with all record control and retention requirements set forth in all applicable rules, regulations, and ICMP.

### Processing Controls

As stated earlier, a copy of the processing controls must be submitted to, and reviewed by, the Division prior to the field test. Processing controls include quality control (QC) procedures and quality assurance (QA) procedures.

QC procedures are designed to avoid human/machine errors and to detect any errors that do occur in a timely manner. QC procedures must ensure, among other things, that all documents are scanned and transferred to the proper folder/index. One procedure may be to, on a sample basis, trace individual physical documents to the electronic image. Another procedure may be to

check the total of the scanned image count and verify that it agrees to the pre-scan document count for each batch that is scanned.

Through random sampling or 100% testing, QA procedures must be implemented. These procedures must be designed to test the effectiveness of the QC procedures. QA procedures must ensure that electronic images are legible, retrievable, and viewable. One procedure may be to visually examine the first scan of every batch to ensure optimal quality followed by a random sampling of subsequent images to ensure consistency of data. Another procedure should involve confirming the validity of backup media. Any errors found must be corrected and documented to allow the licensee to quickly identify and address a consistent source of error.

Refer to the end of this section for an example of an Imaging Batch Control Form. This form is used to document the outcome of the processing controls discussed above. Any variation of this form may be used by the licensee; however, the information shown on the example represents the minimum amount of information required to be documented by the licensee.

**Systems Related Problems**

Any systems related problems that occur during and/or subsequent to the field test must be documented to allow the licensee to identify and address the problems. This includes any problems relating to the functioning of the system, incorrect transfers, etc. The minimum amount of information that must be documented is as follows:

- full name of person who identified the problem,
- date the problem was identified,
- description of the problem,
- how the problem was resolved,
- date of resolution, and
- full name of the person who resolved the problem.

The licensee may document this information using a loose-leaf binder with a page for each incident or a written log that is maintained on a continuous basis. It is up to the licensee to document the minimum required information in a manner the licensee considers the most constructive.

## G. APPROVAL

Upon completion of field testing, the Division will audit the test results and, upon successful completion of the audit, issue written approval for the system to be used, as tested, to capture, store, retrieve and manage electronic images of required gaming records. All original media must be maintained until the licensee receives this written approval from the Division.

The Division's approval is not to be construed as any type of approval in any other state or federal jurisdiction whatsoever.

## H. ONGOING REQUIREMENTS

### Semi-Annual Testing

The licensee must ensure its imaging system is tested on a periodic and routine basis as discussed under "Planning" earlier. This test must occur, at a minimum, on a semi-annual basis and as outlined in the licensee's written test procedures. Results of the test must be documented and available for review by the Division. For each test, a written narrative of the results and the date of this test must be submitted to the Division's Audit Section.

### Preventative Maintenance

Preventative maintenance measures must be implemented and performed on a periodic and routine basis. Such measures should include cleaning of storage media and storage media locations, running any available diagnostic tools on the system, etc.

### Systems Related Problems

As discussed earlier in this section, problems relating to the functioning of the system, incorrect transfers, etc., must be documented. It is the licensee's responsibility to document the minimum required information in a manner the licensee considers the most useful.