STANDARD SERIES

GLI-16:

Cashless Systems in Casinos

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ABOUT THIS STANDARD

This Standard has been produced by **Gaming Laboratories International, LLC** for the purpose of providing independent certifications to suppliers under this Standard and complies with the requirements set forth herein.

A supplier should submit equipment with a request that it be certified in accordance with this Standard. Upon certification, Gaming Laboratories International, LLC will provide a certificate of compliance along with an appropriate *Gaming Labs Certified*® mark evidencing the certification to this Standard.

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CHAPTER 1

1.0 OVERVIEW - STANDARDS FOR CASHLESS SYSTEMS IN CASINOS

1.1 Introduction

1.1.1 Cashless Systems Defined. Cashless systems allow players to play gaming devices through the use of a magnetic strip player card, which accesses a player's account at the host system in the casino. Funds may be added to this player cashless account via a cashier station or any supporting gaming machine (through the insertion of coins, ticket/vouchers, bills, and coupons). The account value can be reduced either through debit transactions, in smaller amounts at a gaming device or by cashing out at a cashier's cage. A Cashless system is characterized as a host system whereby a player maintains an electronic account on the Casino's host database. Usually a casino issues a patron a unique magnetic card and Personal Identification Number (PIN) in conjunction with a cashless account on the system's database, although any method of uniquely identifying patrons could be implemented. All monetary transactions between a supporting gaming machine and the host must be secured either by card insertion into a magnetic card reader attached to the host and PIN entry or by other protected means. After the player's identity is confirmed, the device may present transfer options to the patron on the LCD/VFD display of the card reader, which requires selection using a keypad/touchscreen before occurring. Such options would include how many credits they wish to "withdraw" and placed on the machine they are playing. Some systems may move either a predefined amount or the player's entire balance to the machine for play. Once play is complete the player may have the option to move some of the credits back to the player's account or cash out some credits. Other systems may require that the entire credit value be transferred back to the system.

It should be noted here, at the outset, that some readers may have heard the term "EFT," which stands for "Electronic Funds Transfer". While this term has been used in the gaming industry as

a description for Cashless gaming, it is important to note that this document does not contemplate nor request opinions on transferring money from a credit card account or bank account (ATM) for use in gaming. The "account" as described here is an account set up at the local casino for the purpose of play at that casino. Players, casinos, and the system described here cannot access the banking system for any transaction contemplated.

NOTE: "Smart Card" technology implementation will be evaluated on a case-by-case basis.

1.1.2 Phases of Certification. The approval of a Cashless System shall be certified in two phases:

a) Initial laboratory testing where the laboratory will test the integrity of the system in conjunction with EGDs, in a laboratory setting with the equipment assembled; and
b) With on-site certification where the communications and set-up are tested on the casino floor prior to implementation.

1.2 Acknowledgment of Other Standards Reviewed

1.2.1 RESERVED

1.3 Purpose of Standard

1.3.1 General Statement. The purpose of this technical standard is as follows:

a) To eliminate subjective criteria in analyzing and certifying the Cashless System operation.
b) To only test those criteria which impact the credibility and integrity of gaming from both the revenue collection and game play point of view.
c) To create a standard that will insure that Cashless Systems in Casinos are fair, secure, and able to be audited and operated correctly.

d) To distinguish between local public policy and laboratory criteria. At GLI, we believe that it is up to each local jurisdiction to set their public policy with respect to gaming.

e) To recognize that non-gaming testing (such as Electrical Testing) should not be incorporated into this standard but left to appropriate test laboratories that specialize in that type of testing. Except where specifically identified in the standard, testing is not directed at health or safety matters. These matters are the responsibility of the manufacturer, purchaser, and operator of the equipment.

f) To construct a standard that can be easily changed or modified to allow for new technology.

g) To construct a standard that does not specify any particular technology, method, or algorithm. The intent is to allow a wide range of methods to be used to conform to the standards, while at the same time, to encourage new methods to be developed.

1.3.2 No Limitation of Technology. One should be cautioned that this document should not be read in such a way that limits the use of future technology. The document should not be interpreted that if the technology is not mentioned, then it is not allowed. Quite to the contrary, as new technology is developed, we will review this standard, make changes, and incorporate new minimum standards for the new technology.

1.3.3 Scope of Standard. This standard will only govern Cashless System requirements necessary to achieve certification when interfaced to electronic gaming devices (EGD), for the purpose of communicating mandatory security events and electronic meters. This infers that all relevant monetary transactions at the EGD level are handled through:

a) Credit Issuance. Electronic transfer through a secure communication protocol.

b) Credit Redemption. Electronic transfer through a secure communication protocol.

1.3.4 Exceptions to Standard. This standard does not govern Bonus or Promotional System requirements for any other form of electronic transaction.

Please refer to GLI-17 for Bonusing System and GLI-18 for Promotional System standards.

1.4 Other Documents That May Apply

1.4.1 General Statement. This standard covers the minimal requirements for Cashless Systems and all associated components. The following other standards may apply:

a) Gaming Devices in Casinos (GLI-11);
b) On-Line Monitoring and Control Systems (MCS) and Validation Systems in Casinos (GLI-13); and
c) Individual Gaming Board Minimum Internal Control Procedures.

CHAPTER 2

2.0 CASHLESS DEVICE AND SYSTEM REQUIREMENTS

2.1 Gaming Device/Card Reader Requirements

2.1.1 ***General Statement***. The requirements throughout this section apply to gaming devices of the cashless environment. These requirements are in addition to the requirements set forth in GLI-11 Gaming Devices in Casinos and GLI-13 On-Line Monitoring and Control Systems (MCS) and Validation Systems in Casinos.

2.1.2 ***Configuring Cashless Transactions on a Gaming Device***. Since a Cashless feature would impact the electronic accounting meters, any gaming device that allows Cashless gaming as a selectable feature must conform to the 'Configuration Settings' requirements outlined within GLI-11 Gaming Devices in Casinos, Section 2.13.4.

2.1.3 ***Audit Trails for Cashless Transactions***. Cashless Gaming Devices must have the ability to recall the last twenty-five (25) monetary transactions received from the host system and the last twenty-five (25) monetary transactions transmitted to the host system. However, if a gaming device has promotional or host-bonusing features, or both, enabled simultaneously with cashless features, a single 100-event log would suffice. The following information must be displayed:

a) The type of transaction (upload/download);

b) The transaction value;

c) The time and date; and

d) The player's account number or a unique Transaction Number, either of which can be used to authenticate the source of the funds (i.e. source of where funds came from/went to).

2.1.4 Meter Requirements for Cashless Gaming Devices and Systems. Cashless gaming devices and cashless host systems must incorporate electronic accounting meters that shall be at least ten (10) digits in length and conform to the following electronic metering requirements:

a) The operation of the mandatory electronic accounting meters, as mandated in GLI-11, must not be impacted directly for Cashless type transactions;

b) Specific Cashless electronic accounting meters shall exist which increment to indicate:
   i. electronic credits received from the central system---downloaded to gaming device from host.
   ii. electronic credits transmitted to the central system---uploaded from gaming device to host.

c) Meters shall be labeled so they can be clearly understood in accordance with their function.

d) The following Cashless meter information shall be stored in units equal to the denomination of the device or in dollars and cents:
   i. Electronic Funds Transfer In (EFT In). The gaming device must have a meter "EFT In" that accumulates the total value of cashable credits electronically transferred from a financial institution to the gaming device through a cashless wagering system.
   ii. Cashless Account Transfer In (A.K.A. WAT In-Wagering Account Transfer In) The gaming device must have a meter that accumulates the total value of cashable credits electronically transferred to the gaming device from a wagering account by means of an external connection between the device and a cashless wagering system;
   iii. Cashless Account Transfer Out (A.K.A. WAT Out-Wagering Account Transfer Out) The gaming device must have a meter that accumulates the total value of cashable credits electronically transferred from the gaming device to a wagering account by means of an external connection between the device and a cashless wagering system;

2.1.5 Transaction Confirmation. The gaming device or host card reader display must be capable of providing confirmation/denial of every cashless transaction initiated. This confirmation/denial must include:

a) The type of transaction (upload/download);

b) The transaction value;

c) The time and date (if printed confirmation);

d) The player's account number or a unique Transaction Number, either of which can be used to authenticate the source of the funds (i.e. source of where funds came from/went to) [if printed confirmation]; and

e) A descriptive message as to why the transaction did not complete as initiated. This applies only to the denied transactions.

2.1.6 Error Conditions. The following sections outline the Error Conditions that apply to the:

a) Host System. The following conditions must be monitored, and a message must be displayed to the patron at the host card reader for the following:
   i. invalid PIN or Player ID (Can Prompt for Re-entry up to maximum allowed); and
   ii. account unknown.

b) Gaming Device. Any credits on the gaming device that are attempted to be transferred to the host system that result in a communication failure for which this is the only available payout medium (the patron cannot cashout via hopper or ticket/voucher printer), must result in a hand-pay lockup or tilt on the gaming device.

2.1.7 Transfer of Transactions. If a player initiates a cashless transaction and that transaction would exceed game configured limits (i.e. the credit limit, etc) then this transaction may only be processed provided that the patron is clearly notified that he has received or deposited less than requested to avoid patron disputes.

2.1.8 Identifying a Cashless Device. A patron should be able to identify each Cashless compatible machine by a means left to the discretion of the individual jurisdiction (e.g. remove display menu items that pertain to Cashless operation for gaming machines not participating; provide a host message indicating Cashless capability; or a specific sticker on gaming machines to indicate participation or non-participation).

2.2 Central System Security Requirements

2.2.1 General Statement. The rules within this section shall be implemented by the host system to allow for changing of any of the associated parameters or accessing any patron account. Additionally, the communication process used by the gaming device and the host system must be robust and stable enough to secure each cashless transaction such that failure event(s) can be identified and logged for subsequent audit and reconciliation.

2.2.2 Modification of Patron Information. An authorized, logged employee shall only change all player information. Security of this information (including patron PIN codes or equivalent patron identification) must be guaranteed at all times.

2.2.3 Balance Adjustments. Any adjustment to an account balance outside of the normal methodology would require a supervisor's approval with all changes being logged and/or reported indicating who, what, when, and the item value before and after the change, with the reason.

2.2.4 Security Levels. The number of users that have the requisite permission levels/login to adjust critical parameters are limited.

2.2.5 Prevention of Unauthorized Transactions. The following minimal controls shall be implemented by the host system to ensure that games are prevented from responding to commands for crediting outside of properly authorized Cashless transactions (hacking):

a) The network hubs are secured (either in a locked/monitored room or area) and no access is allowed on any node without valid login and password;

b) The number of stations where critical Cashless applications or associated databases could be accessed is limited; and

c) Procedures shall be in place on the system to identify and flag suspect player and employee accounts to prevent their unauthorized use to include:

   i. having a maximum number of incorrect PIN entries before account lockout;

   ii. flagging of "hot" accounts where cards have been stolen;

   iii. invalidating accounts and transferring balances into a new account; and

   iv. establishing limits for maximum Cashless activity in and out as a global or individual variable to preclude money laundering.

2.2.6 Diagnostic Tests on a Cashless Gaming Device. Controls must be in place for any diagnostic functionality available at the device such that all activity must be reported to the system that would reflect the specific account(s) and the individual(s) tasked to perform these diagnostics. This would allow all Cashless diagnostic activity that affects the gaming device's associated electronic meters to be audited by the local regulatory group.

2.2.7 Smart Card Technology. It is permissible for systems to allow player's to access their accounts using "Smart Card" technology where the account information, including the current balance, is maintained in the host system's database. Some "Smart Cards" have the ability to maintain a player account balance. This method of technology is only permissible when host system validates that the amount on the card is in agreement with the amount stored within the system's database

NOTE: "Smart Card" technology implementation will be evaluated on a case-by-case basis.

2.2.8 Loss of Communication If communication between the Cashless accounting system and the gaming device is lost, the game or interface element must display a message to the player that cashless transfers cannot currently be processed.

2.2.9 Encryption All data transmitted to and from the gaming device must employ some form of encryption. This does not apply to communication between the gaming device and the interface element

2.3 Central System Audit Trails

2.3.1 General Statement. The central system shall have the ability to produce logs for all pending and completed Cashless transactions. These logs shall:

a) RESERVED
b) Be capable of being filtered by:
   i. machine number
   ii. patron account; and
   iii. time/date.

2.4 Financial and Player Reports

2.4.1 General Statement. The system shall have the ability to produce the following financial and player reports:

a) Patron Account Summary and Detail Reports. These reports shall be immediately available to a patron upon request. These reports shall include beginning and ending account balance, transaction information depicting gaming machine number, amount, and date/time.
b) RESERVED;
c) Liability Report. This report is to include previous days ending value (today's starting value) of outstanding Cashless liability, Total Cashless-in and Total Cashless out and the current day's ending Cashless liability.

d) Cashless Meter Reconciliation Summary and Detail Reports. These reports will reconcile each participating gaming device's Cashless meter(s) against the host system's Cashless activity.

e) Cashier Summary and Detail Reports. To include patron account, buy-ins and cash-out, amount of transaction, date and time of transaction.

2.5 Player Accounts

2.5.1 ***General Statement***. All monetary transactions between a supporting gaming machine and the host must be secured either by card insertion into a magnetic card reader attached to the host and PIN entry or by other protected means (e.g. finger-print recognition). After the player's identity is confirmed, the device may present transfer options to the patron on the LCD/VFD display of the card reader, which requires selection using a keypad/touchscreen before occurring. Such options would include how many credits the player wishes to "withdraw" and be placed on the machine. Some systems may move the entire player's balance to the machine for play. Once play is complete the player may have the option to move some of the credits back to the account or cash out. Other systems may require that the entire currency value of the credit balance be transferred back to the system.

2.5.2 ***Adding Money to a Players Account***. Money may be added to this account via a cashier station or any system-controlled kiosk, assuming that such kiosk has been approved. Money may also be added by any supporting gaming device (through credits won, the insertion of coins, ticket/vouchers, bills, coupons, etc.)

2.5.3 ***Removing Money from a Players Account***. Money may be removed from this account either through downloading of credits (currency based) to the gaming device or by cashing out at a cashier's cage.

2.5.4 ***Movement of Money***. Players may also be afforded the option of moving some of their system credit to the gaming device they are playing through "withdrawal" from the player's account, which is maintained by the system. When they are finished playing, they can "deposit"

their balance from the machine onto their player account. Cashless gaming transactions are entirely electronic.

2.5.5 Personal Identification Number. Usually a casino issues a patron a unique magnetic card and personal identification number (PIN) in conjunction with an account on the system's database, although any method of uniquely identifying patrons could be implemented.

2.5.6 Account Balance. Current account balance information should be available on demand from any participating gaming device via the associated card reader (or equivalent) after confirmation of patron identity and be presented, in terms of currency, to the patron.

2.6 Software Verification

2.6.1 General Statement. Each component within the System, that would affect the integrity of the System, must have the ability to allow for an independent integrity check of the component's software that is critical to its operation, from an outside source. This must be accomplished by being authenticated by a third-party device, which may be embedded within the component's software (see NOTE within this section, below) or having an interface port for a third-party device to authenticate the media. This integrity check will provide a means for field testing the software to identify and validate the program. The test laboratory, prior to system and/or component approval, shall approve the integrity check method.

NOTE: If the authentication program is contained within the software, the manufacturer must receive written approval from the test laboratory prior to submission.