PROPOSED AMENDMENTS TO
TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT 1, 2, AND 4

Draft Dated: 12/02/2025

PURPOSE STATEMENT: Pursuant to Nevada Gaming Commission ("NGC") Regulation 14.050, to amend Nevada Gaming Control Board ("NGCB") technical standards 1, 2, and 4 to make wholesale revisions to the requirements contained therein and to consolidate those requirements into technical standard 1; To Amend the technical standards to modernize terminology and the requirements set forth currently in technical standards 1, 2, and 4; To Amend the requirements set forth currently in technical standards 1, 2, and 4 to bring those standards in-line with other nationally recognized standards; And to take such additional actions as may be necessary and proper to effectuate this stated purpose.

EFFECTIVE DATE: To Be Determined.

EXPLANATION: Matter in *blue italics* is new language; matter between ~~[red brackets with single strikethrough]~~ is material to be omitted; and matter between *[green brackets in italics]* is for informational purposes only and will not be included in codified version.

TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT
~~**[DEFINITIONS]**~~

STANDARD 1

DEFINITIONS; INTEGRITY OF GAMING DEVICES; AND PROPER ACCOUNTING FOR GAMING DEVICES

1.010 Definitions. As used in these standards unless the context requires otherwise:

1. "Alterable media" means any form of storage device that allows the modification of the programs or data on the device during the normal operation of the ~~[gaming device]~~ *EGD*. This does not include devices typically considered to be alterable but through either software or hardware means ~~[approved]~~ *acceptable* by the ~~[chairman]~~ *Chair*, have been rendered un-alterable.

2. "Cashable credits" means the monetary units displayed on a credit meter that are redeemable for cash.

3. "Cashless ~~[Wagering Kiosk]~~ *wagering kiosk*" is a device capable of accepting or generating wagering instruments and/or wagering credits ~~[or]~~, is capable of initiating electronic transfers of money to or from a wagering account, or is used to facilitate other forms of cashless wagering functionality.

4. ~~["Chairman"]~~ *"Chair"* means the ~~[chairman]~~ *Chair* of the ~~[state gaming control board]~~ *Nevada Gaming Control Board* or ~~[his]~~ *the Chair's* designee.

5. *"Client station" means the device the player uses to participate in gaming offered by a licensee as part of an electronic table game system, an integrated gaming system, a system based game, or a system supported game. The term does not mean a mobile communications device.*

6. "Complete voucher" means a voucher which contains, at a minimum, a complete validation number and is of a quality that can be redeemed through the use of an automated reader or scanner.

~~[6.]~~ *7.* "Conventional ROM ~~[Device]~~ *device*" is a *read only memory* device incapable of being altered while installed in ~~[a gaming device]~~ *an EGD* and may contain ~~[executable]~~ *control* programs or data that are directly addressed by a processor.

~~[7.]~~ *8.* "Credit meter" means a slot machine indicator that displays the number of denominational credits or monetary value available to a ~~[patron]~~ *player* for wagering.

9. "Cryptographically secure pseudorandom number generator" or "CSPRNG" means a pseudorandom number generator that is resistant to compromise through knowledge of the past or current internal state of the PRNG, satisfies the next-bit test, and passes specified randomness tests.

~~[8.]~~ *10.* "Dealer ~~[Operated Electronic Table Game]~~ *operated electronic table game*" means any equipment or mechanical, electromechanical or electronic contrivance, component, system or machine used in conjunction with a live "game" or "gambling game" as defined ~~[by]~~ *in* NRS 463.0152 *in which the dealer determines the outcome of the game*. Dealer operated electronic table games are ~~[considered]~~ associated equipment as defined ~~[by]~~ *in* NRS 463.0136.

~~[9.]~~ *11.* "Debit instrument" means a card, code or other device with which a person may initiate an electronic funds transfer or a wagering account transfer.

~~[10. "Duplicate voucher" means any reprinted complete or incomplete voucher.]~~

~~[11.]~~ *12.* "Electronic funds transfer" means a transfer of funds from an independent financial institution to a *client station, game, or* gaming device through a cashless wagering system.

13. "Electronic gaming device" or "EGD" means a slot machine or client station.

~~[12.]~~ *14.* "Electronic ~~[Table Game]~~ *table game*" means any equipment or mechanical, electromechanical or electronic contrivance, component, system or machine used to facilitate, fully automate, or simulate the play of a live "game" or

"gambling game" as defined ~~[by]~~ *in* NRS 463.0152. Electronic table games electronically accept wagers, randomly generate game elements or outcome, evaluate outcome and award payment. Electronic table games are gaming devices as defined ~~[by]~~ *in* NRS 463.0155.

~~[13.]~~ *15.* "Electronic ~~[Table Game System]~~ *table game system*" means a system comprised of a server ~~[or system part]~~ *component* and client stations that, together, form a single integrated electronic table game or dealer operated electronic table game. ~~[The term also includes a system used to facilitate additional wagering on a table game or a system used to interlink table game wager and activities.~~

~~14.]~~ *16.* ~~[~~"In-Session~~]~~ *"In-session* feature" means an option presented to the player prior to the initiation of a game or within a gaming session that allows a player to select an artistic attribute such as graphics or sound to provide entertainment value to the game for which consideration is paid. ~~[An in-session feature does not include options that influence the operation of the game.]~~

~~[15.]~~ *17.* "Inappropriate coin-in" is a legal coin or token of the correct denomination which has been accepted by ~~[a gaming device]~~ *an EGD* after the ~~[device]~~ *EGD* has already accepted its maximum number of coins or when the ~~[device]~~ *EGD* is in a state *in* which *it* normally rejects additional coins.

~~[16.]~~ *18.* "Incomplete voucher" means a voucher which contains, at a minimum, the voucher validation number printed across the printed leading edge and is manually redeemable, but is not of a quality that can be redeemed through the use of an automated reader or scanner.

~~[17. "Leakage Current" is any electrical current which flows when a conductive path is provided between exposed portions of a gaming device and the environmental electrical ground when the gaming device is isolated from the normal AC power ground.~~

~~18.]~~ *19. "Integrated gaming system" means the collection of hardware and software with which the player may participate simultaneously on a single device in any combination of wagering on a game or gambling game, race book or sports pool wagering, or any other wagering opportunity acceptable to the Chair. The term does not include a mobile gaming system.*

20. "Mobile communications device" means the mobile device that a player uses to participate in mobile gaming. The term includes devices designed specifically for the use of mobile gaming devices provided by a player, such as a smartphone or tablet, to conduct mobile gaming activity. The term does not include stationary EGDs or client stations that make use of wireless communications.

21. "Multi-factor authentication" is a method of authenticating an individual's identity through the use of different kinds of evidence. For purposes of these standards, multi-factor authentication uses, at a minimum, two of the following factors:

(a) What the individual knows as a secret, such as a password, PIN, or answers to questions;

(b) What the individual uniquely has, such as a physical token, electronic token, or an ID card; and

(c) What the individual is, such as biometric data like fingerprint, face geometry, or voice recognition.

22. "Non-cashable credits" means the monetary units displayed on a credit meter that have no cash redemption value.

~~[19.]~~ *23.* "On-line slot system" means, as used in these standards, an on-line slot metering system, a cashless wagering system, or both.

~~[20.]~~ *24.* "Player interaction technology" means equipment that facilitates a player's physical interaction with ~~[a gaming device]~~ *an EGD*, allowing the player to direct commands, perform physical actions, or simulate physical activity. Examples include, without limitation, touch screens, keypads, joy sticks, motion sensors, image sensors, image displays, infrared emitters and detectors, and accelerometers.

~~[21.]~~ *25.* "Print failure" is a condition following the failed attempt to print a complete or incomplete voucher.

~~[22.]~~ *26.* "Promotional account" means an electronic ledger used in a cashless wagering system to record transactions involving a patron or patrons that are not otherwise recorded in a wagering account.

~~[23.]~~ *27.* "Random Access Memory" ~~[(RAM)]~~ *or "RAM"* is the electronic component used for computer workspace and storage of volatile information in ~~[a gaming device]~~ *an EGD*. The term does not include memory which is used exclusively for bit-mapped video displays.

~~[24.]~~ *28.* "Random Number Generator" *or "RNG"* is a hardware, software, or combination hardware and software device for generating number values that exhibit characteristics of randomness.

~~[25.]~~ *29.* "Read Only Memory" ~~[(ROM)]~~ *or "ROM"* is the electronic component used for storage of non-volatile information in ~~[a gaming device]~~ *an EGD*. The term includes Programmable ROM and Erasable Programmable ROM.

~~[26. "Replacement voucher" means any voucher that is printed following a failed attempt to print a complete or incomplete voucher.]~~

30. "Server component" is the system portion of a system based or system supported game.

~~[27.]~~ *31.* "Slot machine coupon" means a printed wagering instrument that has a fixed dollar wagering value that can only be used to acquire non-cashable credits.

~~[28. "Slot machine payout receipt" means an instrument that is redeemable for cash and is either issued by a gaming device or as a result of a communication from a gaming device to associated equipment that cannot be accepted by gaming devices for wagering purposes.~~

~~29.]~~ *32.* "Slot machine wagering voucher" means a ~~[printed wagering instrument that has a fixed dollar wagering value that can only be used to acquire an equivalent value of cashable credits or cash]~~ *wagering voucher as defined in Regulation 1.190*.

~~[30.]~~ *33.* "Socket ID" as used for a system based game means the unique identification assigned to a client station or mobile communications device for accumulating and recording meter and wagering account transfer data associated with a client station or mobile communications device.

34. "Strong authentication" is a method of authenticating an individual's identity through the use of at least two responses to any of the three factors of muti-factor authentication.

35. "System game" means a system based or system supported game as defined in Regulations 1.172 and 1.174, respectively.

~~[31.]~~ *36.* "Tilt condition" is a programmed error state for ~~[a gaming device]~~ *EGD*. A tilt condition has occurred when the ~~[device]~~ *EGD* detects an internal error, malfunction, or attempted cheating, and it disallows further play until the error is resolved.

~~[32. "Wagering account" means an electronic ledger for a cashless wagering system patron deposit account wherein only the following types of transactions are recorded:~~

~~(a) Deposits and withdrawals of cash or cash equivalents at a designated area of accountability;~~

~~(b) Deposits initiated with a debit instrument;~~

~~(c) Wagering account transfers to and from gaming devices;~~

~~(d) Wagering account adjustments; and~~

~~(e) Other transactions approved by the chairman.]~~

37. "Wager category" means the specific wager amount or amounts corresponding to a theoretical payback percentage within a single paytable that has multiple wager amounts, each having a corresponding theoretical payback percentage.

~~[33.]~~ *37.* "Wagering account transfer" means a transfer of funds between a ~~[cashless wagering system]~~ wagering account and a ~~[gaming device]~~ *game or EGD*.

~~[34.]~~ *38.* "Wagering instrument" ~~[means, as used in these standards, a representative of value, other than a chip or token, that is issued by a licensee and approved by the board for use in a cashless wagering system]~~ *has the meaning ascribed to it in NRS 463.019767* and includes slot machine coupons and slot machine wagering vouchers, or digital representations thereof.

~~[TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT~~

~~STANDARD 1~~

~~INTEGRITY OF GAMING DEVICES]~~

1.020 ~~[Electrical]~~ *Safety and electrical* interference immunity.

1. ~~[A conventional gaming device or client must exhibit total immunity to human body electrostatic discharges on all player-exposed areas. For purposes of this standard, a human body discharge is considered to be an electrical potential of not greater than 20,000 volts DC discharged through a network with a series resistance of 150 to 1500 ohms shunted by a capacitance of 100 to 150 picofarads. The device must withstand this discharge repeated at one-second intervals. The power source for this human body equivalent is a high impedance source such that, in effect, the energy available for a given discharge is limited to that contained in the shunt capacitor]~~ *An EGD must not present a physical safety, mechanical, electrical, or fire hazard when used in its intended mode of operation*.

2. ~~[A gaming device]~~ *Electrostatic discharge:*

(a) An EGD may exhibit temporary disruption when subjected to electrostatic discharges of ~~[20,000 to]~~ 27,000 volts ~~[DC through a network with a series resistance of 150 to 1500 ohms shunted by a capacitance of 100 to 150 picofarads]~~, but must exhibit a capacity to recover and complete an interrupted play without loss or corruption of any stored or displayed information and without component failure.

(b) A manufacturer may provide evidence of satisfying equivalent requirements by an OSHA Nationally Recognized Testing Laboratory for electrical interference immunity in lieu of the requirements of this subsection.

(c) This subsection does not apply to decorative lighting that is not necessary for the play of a game or EGD.

3. ~~[Gaming device power supply filtering must be sufficient to prevent disruption of the device by repeated switching on and off of the AC power. The device must not exhibit disruption when a 1 microfarad capacitor, charged to plus or minus 680 volts DC is discharged between the hot and neutral AC supply lines, at any phase from zero to 360 degrees, with a repetition rate of 30 times per second]~~ *An EGD that incorporates a mobile device charging mechanism, to include a charging port or wireless charging technology, must be designed to prevent the charging mechanism from impacting the integrity of the EGD. This includes, without limit, electrically isolating the charging hardware from the primary EGD power supply and ensuring the charging mechanism cannot access the main processing unit of the EGD*.

4. This section does not apply to devices provided by a patron used to conduct gaming activity or interact with a gaming device. Such devices include, but are not limited to smartphones and tablets.

~~[5. A manufacturer may request a waiver from the chairman of this section for gaming devices that are certified by an OSHA Nationally Recognized Testing Laboratory for electrical interference immunity.]~~

1.025 Physical security.

1. An EGD must resist forced entry.

2. An EGD must have a protective cover over the circuit boards that contain control programs and circuitry used in the random selection process and control of the EGD, including any electrically alterable program storage media. The cover must be designed to permit installation of a security locking mechanism by the manufacturer or end user of the EGD.

3. System games:

(a) The server component must reside in a secure area where access is limited to authorized personnel.

(b) Server logs must:

(1) Log access to the system game automatically on the server component.

(2) Protect the logs from unauthorized alteration through a means acceptable to the Chair.

(3) Include time and date of the access and the identification of the accessing individual or individuals.

(4) Be retained for a minimum of 90 days. [Drafter's Note: Formerly Lab Policy Technical Standard 1.050.]

1.030 Coin ~~[acceptor]~~ and ~~[receiver]~~ *token acceptance*.

1. ~~[Coin (or token) acceptors]~~ *An EGD that accepts coins or tokens* must ~~[be designed to]~~ *only* accept designated coins or tokens and reject others.

2. The ~~[coin receiver on a gaming device]~~ *the EGD* must be designed ~~[in a manner that minimizes]~~ *to minimize* the potential for use of cheating methods such as slugging, stringing or spooning.

~~[2. Gaming devices which are configured to accept more than 20 coins or tokens for a single play must use a coin acceptor that accepts or rejects on the basis of metal composition of the coin or token unless the denomination of the coin or token is $.05 or less.]~~

3. Inappropriate coins-in must be returned to the player or be added to the credit meter. [Drafter's Note: Formerly Technical Standard 2.020.]

1.035 ~~[Change vouchers or coupons]~~ *Wagering instrument acceptance*.

~~[1.]~~ A wagering instrument ~~[inserted into a gaming device]~~ *presented to an EGD for redemption* that is ~~[less in amount than that gaming device's smallest]~~ *not evenly divisible by an available credit* denomination shall~~[:~~

~~(a) Cause that gaming device to]~~ *be* immediately ~~[reject the wagering instrument]~~ *rejected* if ~~[that gaming device does not have an odd cents meter; or~~

~~(b) Allow~~] *the EGD cannot account* for*, display to* the ~~[additional accumulation of wagering]~~ *patron, and payout partial* credits ~~[if the gaming device has an odd cents meter]~~.

~~[2. A wagering instrument inserted into a gaming device that is greater in amount than that gaming device's smallest denomination and not evenly divisible by any of the gaming device's denominations shall:~~

~~(a) Cause that gaming device to immediately issue a change voucher or coupon if that gaming device does not have an odd cents meter and is equipped with a printer mechanism;~~

~~(b) Allow for the additional accumulation of wagering credits; or~~

~~(c) Cause that gaming device to immediately reject the wagering instrument if that gaming device is not equipped with a printer mechanism or if the printer mechanism is not functioning for any reason.]~~

1.040 Hoppers. ~~[The hopper mechanism on gaming devices]~~

1. An EGD must be designed to detect jammed coins, extra coins paid out, hopper ~~[runaways]~~ *runaway*, and hopper empty conditions. The ~~[device control program]~~ *the EGD* must monitor the hopper mechanism for these error conditions in all active game states that do not indicate error conditions.

2. All coins or token paid from the hopper mechanism must be properly accounted for by the EGD including those paid as extra coins during a hoper malfunction. [Drafter's Note: Formerly Technical Standard 2.030.]

1.045 Printers.

1. ~~[Printer mechanisms on gaming devices]~~ *An EGD* must be designed to ~~[allow the gaming device to]~~ detect low paper, paper out, printer failure, and paper jam *printer* conditions.
2. Printers must be mounted inside a lockable area of the ~~[gaming device]~~ *EGD*.

1.050 ~~**[Physical security]**~~ ***Credit play requirements*****.** *[Drafter's Note: Formerly Technical Standard 2.050.]*

1. ~~[A conventional gaming device must resist forced illegal entry and must retain evidence of any entry until properly cleared or until a new play is initiated. A gaming device must have a protective cover over the circuit boards that contain programs and circuitry used in the random selection process and control of the gaming device, including any electrically alterable program storage media. The cover must be designed to permit installation of a security locking mechanism by the manufacturer or end user of the gaming device.~~

~~2. A system supported game must:~~

~~(a) For the client portion of the system supported game, comply with Technical Standard 1.050(1).~~

~~(b) For the system portion of the system supported game, the server or system component must reside in a secure area where access is limited to authorized personnel. Gaming device application access to the system supported game shall be logged on the server or system component and remotely on a secondary logging device which resides outside the secure area and is not accessible to the individual accessing the secure area. A system supported game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device. Logged data shall include: time and date of the access and the identification of the accessing individual(s). The resulting logs shall be retained for a minimum of 90 days.~~

~~3. A system based game must:~~

~~(a) For the client portion of the system based game, comply with Technical Standard 1.050(1).~~

~~(b) For the system portion of the system based game, the server or system component must reside in a secure area where access is limited to authorized personnel. Gaming device application access to the system based game must be logged automatically on the system component of the game and on a computer or other logging device that resides outside the secure area and is not accessible to the individual(s) accessing the secure area. A system based game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device. The logged data shall include the time, date, and the identity of the individual accessing the secure area. The resulting logs must be kept for a minimum of 90 days. Additionally, a dedicated video camera specifically installed to monitor access to the system based game must record all accesses to the secure area and the resulting video log must be retained for a period of at least 7 days~~] *Cashable credits may be accumulated from wins, coin acceptance, currency acceptance, electronic funds transfers, token acceptance, wagering account transfers, wagering instrument acceptance, or any other transfers of cashable credits*.

2. Wagering credits available for play must be wagered in the following order:

(a) Non-cashable credits;

(b) Cashable credits given away by a licensee; and

(c) All other credits.

1.055 Auto-play functionality. *[Drafter's Note: Formerly Lab Policy Auto Play Functionality.]*

1. An EGD that offers functionality to automatically place wagers on behalf of the player, referred to herein as "auto-play":

(a) Must not activate or configure auto-play by default,

(b) Must require the player to physically interact with the EGD to acknowledge that the player intended to enable the auto-play functionality, and

(c) Must allow a reasonable period of time between games for the player to review the game outcome and/or stop auto-play.

2. Continuously holding down a button or pressing a touch screen must not result in an auto-play of the EGD.

1.060 ~~[Gaming Device Communications]~~ *EGD communications.*

1. ~~[Any gaming device]~~ *An EGD* which is capable of ~~[bidirectional]~~ communication with ~~[internal or external]~~ associated equipment or other equipment must utilize ~~[a communication protocol]~~ *an interface* which ~~[insures]~~ *ensures* that erroneous ~~[data or signals]~~ *communications, or the malfunction of the associated equipment or other equipment* will not adversely affect the operation of the ~~[device]~~ *EGD*.

2. ~~[Any new or modified gaming device submitted for approval which is used with a progressive controller or any other associated equipment that is intended to signal a jackpot hit of any level must provide a complex signal consisting of at least eight logical transitions involving time and magnitude. The device may optionally provide an additional jackpot signal intended for use with older progressive equipment]~~ *An EGD communicating with any device, such as a top box or external bonus controller, in which the award values of the device are calculated in the theoretical return to player of the EGD must:*

(a) Prevent the play of the EGD if the communication with the device is disrupted;

(b) Report the combined theoretical return to player of the device and the EGD to an online slot metering system; and

(c) Meter all awards calculated in the theoretical return to player as coin-out. *[Drafter's Note: Formerly Lab Policy Technical Standard 2.040.]*

3. System ~~[supported and system based]~~ games may only communicate with *associated* equipment or ~~[programs]~~ *other equipment* external to the system ~~[supported or system based]~~ game through a secure interface. This interface will specifically not allow ~~[any]~~ *an* external connection to directly access the ~~[internal components, software or]~~ *control programs and* data of the system ~~[supported or system based gaming device]~~ *game*. The interface must~~[:~~

~~(a) Be]~~ *be* based on a specific defined protocol or a specific set of defined commands and as a result of these commands, retrieve information for an external request~~[;~~

~~(b) Place data in an area sufficiently segregated from the system supported or based game software that is available to external requests or associated equipment; or~~

~~(c) Be of a suitable design capable of supplying requested information while isolating the external request or equipment from the system supported or system based game internal components, software or data]~~.

4. ~~[Software transferred between server and client or conventional gaming device portions of a system based or system supported game must be conducted using a method that securely links the client or clients to the server such that the software may only be used by authorized clients. In general, if certificates, keys or seeds are used they must not be hard coded, and must change automatically, over time, as a function of the communication.~~

~~5. Information related to player input, game outcome, financial transactions, and game recall information must be encrypted by a means approved by the Chairman.~~

~~6.]~~ Internet accessibility

(a) ~~[A gaming device]~~ *An EGD*, other than an interactive gaming device, may not directly access or be directly accessed via the internet.

(b) ~~[A gaming device, other than an interactive gaming device,]~~ *An EGD* may indirectly access the internet or be accessed indirectly via the internet *only* using a method that securely isolates and segregates the ~~[gaming device]~~ *EGD* from the internet.

~~[7.]~~ *5.* Communication between ~~[a gaming device]~~ *an EGD* and any *external* device *using a physical connection, or communication between the EGD* external or internal to the ~~[gaming device]~~ *EGD* conducted using wireless transmission technologies such as Near Field Communications, Bluetooth, or WiFi must:

(a) Be secured to prevent the ability of unintended recipients to read the data;

(b) Employ a method to detect data corruption. Upon detection of corrupt data, correct or terminate the communication; and

(c) Employ a method to prevent modification of the data.

1.066 Remote access to ~~[gaming devices]~~ *system games*. Remote access includes all access to a ~~[gaming device]~~ *system game* from outside the *system* gaming ~~[device or gaming device]~~ network including access from other networks within the same establishment. *For purpose of this Standard "system gaming network" means any method uses and the components employed by a licensee to facilitate the operations of a system game.*

1. Remote access to a ~~[gaming device]~~ *system game* may only be conducted with the server ~~[or system portion of a system supported or system based game]~~ *component*.

2. Remote access to a ~~[gaming device]~~ *system game* may only be granted for the following activities:

(a) Monitoring system health and performance;

(b) Scheduling operational gaming device functions such as downloading of content;

(c) Troubleshooting system issues;

(d) Performing inquiry-only functions such as viewing logs or generating reports*;*

(e) *Adding, reconfiguring, or removing control programs;*

(f) Adding or removing EGD related firmware such as printer, bill validator, or touch screen firmware; and

(g) Any other activity that is ~~[approved by]~~ *acceptable to* the ~~[Chairman]~~ *Chair*.

3. ~~[A gaming device]~~ *The EGD component of a system game* must be securely isolated from any remote access connection through a means ~~[approved by]~~ *acceptable to* the ~~[Chairman]~~ *Chair*.

4. A ~~[gaming device]~~ *system game* may only be accessed using a method that securely links the ~~[gaming device]~~ *system game* to the remote system requesting access. This secure link must uniquely identify the remote system requesting access as an entity authorized to conduct remote communications with the ~~[gaming device]~~ *system game*.

5. A ~~[gaming device must provide a hardware or software mechanism that will sever the connection between the gaming device and the remote access terminal unless persistent remote access is implemented for the purpose of monitoring]~~ system ~~[health and performance. This device must default to and must remain in the disconnected state unless specifically set to allow communications as a result of a command issued by the gaming device. Additionally, upon completion of the communications, the device must again sever the connection between the gaming device and the remote access terminal.~~

~~6. A gaming device]~~ *game* must log each remote access ~~[on]~~ *to* the server ~~[or system part of the gaming device and on the secondary logging device. A system supported game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device]~~ *component*. The log must include time and date of the access and a list of programs transferred or changed.

~~[7.]~~ *6.* ~~[A]~~ *If a* system ~~[based]~~ game ~~[must not enable remote access unless the secondary logging device, if used to comply with these standards, is operational and is communicating with the gaming device.~~

~~8. If a gaming device]~~ allows for ~~[downloading of new gaming device applications or gaming device]~~ *adding or modifying control programs or EGD* related firmware through remote access, the ~~[software]~~ *control programs or EGD related firmware* downloaded to ~~[a]~~ system ~~[based or system supported]~~ game must ~~[be initially stored]~~*:*

(a) Store the downloaded or modified control program or gaming related firmware in a separate area or partition of memory such that ~~[the software]~~ is sufficiently

segregated from the system ~~[based or system supported gaming device's operating software]~~ *game's control programs and data* as to be unable to affect the operation of the ~~[gaming device]~~ *system game*.

~~[9.]~~ *(b)* ~~[If a gaming device allows for downloading of new gaming device applications or gaming device related firmware through remote access, the software downloaded to a system supported or system based game must be completely authenticated]~~ *Authenticate the control program or gaming related firmware* prior to performing any operation on ~~[the software]~~ *it,* including, but not limited to, decrypting, extracting, uncompressing or installation.

~~[Note: For the purposes of these regulations "gaming device network" means any method used and the components employed by a licensee to facilitate the operations of a system based or system supported gaming device.]~~

1.070 Error conditions.

1. ~~[Gaming devices]~~ *An EGD* must detect and display the following conditions during idle states or game play. These conditions may be automatically cleared by the ~~[gaming device]~~ *EGD* upon completion of a new play sequence or the initiation of a new play sequence if the ~~[gaming device]~~ *EGD* maintains a log of the most recent ~~[error condition and the previous thirty-four]~~ *thirty-five* error conditions.

(a) Power reset.

(b) ~~[Door open.~~

~~(c)]~~Door just closed.

~~[(d)]~~ *(c)* Inappropriate coin-in if the inappropriate coin(s) in are not returned to the player.

2. ~~[Gaming devices]~~ *An EGD* must ~~[be capable of detecting]~~ *detect* and ~~[displaying]~~ *display* the following error conditions which must disable game play and may only be cleared by an attendant:

(a) Coin-in error (coin jam, reverse coin-in, etc.).

(b) Coin-out error (coin jam, extra coin paid out, etc.).

(c) Hopper empty or timed-out (Hopper failed to make payment).

(d) Hopper runaway.

(e) Low RAM battery ~~[(a)]~~. *A* designated battery replacement schedule may be used in lieu of a low battery detection scheme~~[)]~~.

(f) Print failure~~[, if the gaming device has no other means to make a payout. A replacement voucher may be printed once the failure condition has been cleared]~~.

(g) Printer mechanism paper jam. A paper jam condition must be monitored *for* at all times during the print process.

(h) Printer mechanism paper out, if the gaming device has no other means to make a payout.

(i) Program error (Defective program storage media).

(j) Reel spin error of any type including a mis-index condition for mechanical reels. The specific reel number must be identified. If a tilt occurs while the reel(s) are spinning the gaming device must spin the reel(s) at a slow speed.

(k) Removal of control program storage media.

(l) Uncorrectable RAM error (RAM defective or corrupted).

(m) Door open

3. ~~[Gaming devices must be capable of detecting and displaying the following error conditions which must be cleared by an attendant. Game play may continue if an alternative method is available to complete the transaction or the condition does not prohibit the transaction from being completed.~~

~~(a) Hopper empty or timed-out (Hopper failed to make payment).~~

~~(b) Printer mechanism low paper.~~

~~(c) Print failure.~~

~~(d) Printer mechanism paper out.~~

~~4.]~~ A description of device error codes and their meanings must be affixed inside the gaming device unless the displayed device error codes are self-explanatory.

1.075 Game recall.

1. An EGD must maintain and have the capacity to display a complete ply history for, at a minimum, the last 10 games played. The game recall must contain for each played game:

(a) The date and time of the played game. The time shall include the hour, minute, and second the game was played;

(b) The credits available at the start of the played game;

(c) All wagers placed on the played game including a breakdown of lines, bet per line, and other betting options available;

(d) Intermediate play steps, such as hold, draw, or double down;

(1) EGDs offering games with a variable number of intermediate play steps per game may satisfy this requirement by providing the capability to display, at a minimum, the last 50 play steps per played game.

(2) In games where "free games" are awarded as the result of a qualifying alignment, the "free games" are regarded as intermediate play steps of the played game that initially warded the free games.

(I) The initiating played game and, at a minimum, the last 50 free games awarded must be retained.

(II) For games that award additional "free games" during free game play, the subsequent "free game" initiating games need not be stored unless they are contained in the last 50 free games played.

(e) The outcome of the played game, or representative equivalent;

(f) The credits won on the played game;

(g) The credits available for play at the end of the played game; and

(h) The credits cashed out at the end of the played game.

2. Game recall information must be stored in non-volatile memory.

[Drafter's Note: Formerly Technical Standard 1.080(7).]

1.080 Control program requirements.

1. ~~[All gaming devices which have control programs residing in one or more Conventional ROM Devices must employ a mechanism approved by the chairman to verify control programs and data. The mechanism used must detect at least 99.99 percent of all possible media failures. If these programs and data are to operate out of volatile RAM, the program that loads the RAM must reside on and operate from a Conventional ROM Device]~~ *The EGD must verify the integrity of all control programs and of all data of upon a power cycle. The EGD must enter into an unplayable state upon a verification failure and require operator intervention to return to the EGD to a playable state*.

(a) Employ a mechanism ~~[approved by]~~ *acceptable to* the ~~[chairman]~~ *Chair* which ~~[verifies]~~ *validates* that all control ~~[program components, including]~~ *programs,* data, and graphic information~~[,]~~ are authentic copies of the approved components. The authentication mechanism must ~~[employ]~~*:*

(1) Employ a hashing algorithm which produces a message digest output of ~~[a]~~ *at* least ~~[128]~~ *160* bits. ~~[If the]~~ *The* message digest ~~[is]~~ *must be* stored ~~[on]~~ *in* a ~~[memory device other than a Conventional ROM Device the digest must be encrypted using a public/private key algorithm with a minimum of a 512 bit key. The mechanism must prevent the]~~ *secure form acceptable to the Chair;*

(2) Prevent the execution of any control program ~~[component if any component is]~~ determined to be invalid~~[. Any program component of the verification initialization]~~*;*

(3) Be protected from unauthorized alteration; and

(4) Be automatically executed upon a power cycle, game reset, or door open event prior to loading control programs, data and graphic information into electronically erasable or volatile memory and further play of the EGD;

(b) Provide for on-demand validation. The on-demand validation mechanism must ~~[be stored on a Conventional ROM Device that must be capable]~~*:*

(1) Employ SHA-1 and HMAC SHA-1 hashing algorithms;

(2) Allow for the selection and validation of ~~[being authenticated]~~*:*

(I) Control programs;

(II) Data and graphics; or

(III) Both control programs and data and graphics.

(3) Support GAT 3.5 of higher; and

(4) Identify control programs using ~~[a method]~~ *the nomenclature with which they were* approved ~~[by the chairman]~~.

~~[(b)]~~ *(c)* ~~[Employ a mechanism approved by the chairman which tests unused or unallocated areas]~~ *Check the addressable area* of any alterable media for unintended programs or data and ~~[tests the structure of the storage media for integrity. The mechanism must prevent further play of the gaming device if unexpected data or structural inconsistencies are found]~~ *enter into a tilt condition if unintended programs or data are present; and*

~~[(c) Provide a mechanism for keeping a record, in a form approved by the chairman, anytime a control program component is added, removed, or altered on any alterable media. The record must contain a minimum of the last 10 modifications to the media and each record must contain the date and time of the action, identification of the component affected, the reason for the modification and any pertinent authentication information.]~~

(d) ~~[Provide, as a minimum, a two-stage mechanism for verifying all program components on demand via a communication port and protocol approved by the chairman. The mechanism must employ a hashing algorithm which produces a messages digest output of a least 128 bits and must be designed to accept a user selected authentication key or seed to be used as part of the mechanism (i.e. HMAC SHA-1). The first stage of this mechanism must allow for verification of all control components. The second stage must allow for the verification of all program components, including graphics and data components in a maximum of 20 minutes. The mechanism for extracting the verification information must be stored on a Conventional ROM Device.~~ ~~**[Effective 11/1/2012]**~~ ~~All gaming devices must also provide the same two-stage mechanism for verifying all program components on demand via a gaming device user interface where the results are displayed on the gaming device]~~ *Verify the integrity of the storage media and enter into a tilt condition if the storage media is found to be corrupt*.

~~[(e) If approved before July 1, 2004, receive a waiver from the chairman for any modification to the device if the full implementation of this section can not be met. The chairman may waive portions of this section if the manufacturer can demonstrate to the chairman's satisfaction that the imposition of the full standard would hinder the design of the device or pose a hardship due to limitations in the approved platform.]~~

3. ~~[Any gaming device executing control programs from electrically erasable or volatile memory must employ a mechanism approved by the chairman that ensures the integrity of all control program components residing therein, including fixed data and graphic information and ensures that they are authentic copies of the approved components. Additionally, control program components, excluding graphics and sound components, must be fully verified at the time of loading into the electrically~~

~~erasable or volatile memory and upon any significant event, including but not limited to game resets and power up. The mechanism must prevent further play of the gaming device if an invalid component is detected.~~

~~4. Unless otherwise approved by the chairman, any gaming device that allows the adding, removing, or alteration of any control program components through a data communication facility must employ a mechanism for:~~

~~(a) Preventing any change from taking place that would interrupt a game in progress or a game session; and~~

~~(b) Storing program changes including changes in graphics and sound information in a~~] *An EGD must:*

(a) Verify the integrity of the contents of non-volatile ~~[device that may be verified using such means as prescribed by the chairman. Any device, technique or network which may be used to accomplish the adding, removing, or alteration of any control program components may, at the chairman's discretion, be considered a gaming device that must receive separate commission approval.~~

~~5. Gaming devices with control programs or other security programs residing in conventional Read Only Memory (ROM) devices such as EPROM's or fusible-link PROM's must have the unused portions of the~~] memory ~~[device that contains the program set to zero.~~

~~6. Gaming device control programs must check for any corruption of random access memory locations~~] used for crucial ~~[gaming device]~~ *EGD* functions including, but not limited to~~[, information]~~*:*

(1) Information pertaining to ~~[the play and final outcome of the most recent game, the nine games prior to the most recent]~~ game~~[, random]~~ *recall;*

(2) Random number generator outcome~~[, credits]~~*;*

(3) Credits available for play~~[,]~~*;* and ~~[any]~~

(4) Any error states. ~~[These]~~

(b) Verify the integrity of non-volatile memory ~~[areas must be checked for corruption]~~ following game initiation but prior to display of the game outcome to the player. ~~[Detection]~~

(c) Automatically tilt upon detection of any corruption that cannot be *automatically* corrected ~~[shall be deemed to be a game malfunction and must result in a tilt condition]~~.

~~[7. All gaming devices must have the capacity to display a complete play history for the most recent game played and nine games prior to the most recent game. Retention of play history for additional prior games is encouraged. The display must indicate the game outcome (or a representative equivalent), intermediate play steps (such as a hold and draw sequence or a double-down sequence), credits available, bets placed, credits or coins paid, and credits cashed out. Gaming devices offering games with a variable number of intermediate play steps per game may satisfy this~~

~~requirement by providing the capability to display the last 50 play steps. Note: In accordance with this standard, 10 games (nine prior and the most recent) must be stored in memory. In games where "free games" are awarded as the result of a qualifying alignment, the "free games" are regarded as intermediate play steps of the game that initially awarded the free games. As such, the initiating game and the last 50 free games awarded must be stored in game memory. For games that award additional "free games" during free game play, the subsequent "free game" initiating games need not be stored unless they are contained in the last 50 free games played.~~

~~8.]~~ *4.* ~~[All gaming devices]~~ *An EGD* must have *and maintain* the capacity to display a complete transaction history for*, at the minimum,* the ~~[most recent transaction]~~ *last 35 transactions* with a cashless wagering system~~[, and the previous thirty-four transactions prior to the most recent transaction,]~~ that incremented any of the in-meters ~~[set forth in Technical Standard 2.040(1)(i) through (t) and that incremented any of the]~~ *and* out-meters set forth in Technical Standard ~~[2.040(1)(i) through (t)]~~ *1.800(2)(i) to (t), inclusive*. ~~[Retention of transaction history for additional prior]~~ *For wagering instrument* ~~[transactions is encouraged]~~*, the EGD must prevent the wagering instrument validation number from being displayed in its entirety in any operator or attendant mode of the EGD. [Drafter's Note: Formerly Lab Policy Technical Standard 1.080(8).]*

5. An EGD that incorporates operational functionality for purposes other than gaming activity, such as diagnostic, debugging, or show mode, must employ a mechanism to detect that the EGD is being operated in a non-gaming mode and continuously and prominently display a notification on the primary display indicating the EGD is not in a gaming operation mode. [Drafter's Note: Formerly Lab Policy Technical Standard 1.080(2).]

1.084 Control ~~[Program Requirements]~~ for ~~[System Supported Games]~~ *system games*.

1. ~~[Conventional gaming devices or clients that are considered part of a system supported gaming device containing control programs must comply with the requirements of Technical Standard 1.080.~~

~~2. Systems]~~ *System games* must be capable of ~~[verifying]~~ *validating* that all control programs contained on the server ~~[or system portion]~~ *component* are authentic copies of approved ~~[components]~~ *control programs* both automatically at least once every 24 hours and on demand. The authentication mechanism must ~~[employ]~~*:*

(a) Employee a hashing algorithm which produces a message digest output of ~~[a]~~ *at* least ~~[128]~~ *160* bits. ~~[If the message digest is stored on a memory device other than a Conventional ROM Device the]~~ *The* digest must be encrypted using a public/private key algorithm with a minimum of a 512 bit key or must be a bit-for-bit comparison~~[. The mechanism must prevent]~~*;*

(b) Prevent the execution of any control program ~~[component if the component is]~~ determined to be invalid~~[. If an error(s) is detected, the system must provide]~~*;*

(c) Provide a visual notification of the invalid *control* program~~[. Any program component of the authentication mechanism must reside]~~*;*

(d) Reside on and securely load from ~~[non-alterable media. A report shall be available which details the outcome of each]~~ *storage that has been protected from unauthorized alteration, through means acceptable to the Chair; and*

(e) Maintain a log containing the results of each automated execution of the ~~[authentication]~~ *validation* mechanism and shall identify any invalid program components. *The log shall contain the validation results for, at a minimum, the prior 90 days.*

~~[3. The system or server portion of the system supported game must provide, as a minimum, a two-stage mechanism for verifying all program components on demand via a communication port and protocol approved by the Chairman. The mechanism must employ a hashing algorithm which produces a message digest output of a least 128 bits and must be designed to accept a user selected authentication key or seed to be used as part of the mechanism (i.e. HMAC SHA-1). The first stage of this mechanism must allow for verification of all control components. The second stage must allow for verification of all program components, including graphics and data components in a maximum of 20 minutes. The system or server portion must also provide the same two-stage mechanism for verifying all program components on demand via a user interface where the results are displayed on the user interface.]~~

2. The server component must provide for on-demand validation. The on-demand validation mechanism must:

(a) Employ SHA-1 and HMAC SHA-1 hashing algorithms;

(b) Allow for the selection and validation of:

(1) Control programs;

(2) Data and graphics; or

(3) Both control programs and data and graphics.

(c) Be available via an application interface or other method acceptable to the Chair, the results of which must contain, at a minimum, the control program identification information and the resultant hash; and

(d) Identify control programs using the nomenclature with which they were approved.

~~[4.]~~ *3.* System ~~[supported]~~ games shall be configured such that the system administrator level access may not be achieved without the presence and participation of at least two individuals. ~~[This may include split passwords, dual keys or any other suitable method approved by the chairman.~~

~~5.]~~ *4.* System ~~[supported games]~~ *game logs* must ~~[provide a log]~~*:*

(a) Contain an entry anytime an individual causes a ~~[software]~~ *control program residing on the system* component to be added, removed, or altered ~~[in the server or system portion of the device. Each log entry must contain the]~~*;*

(b) Contain:

(1) The date and time of the action~~[,]~~*;*

(2) The identification of the component affected~~[, the]~~*;*

(3) The identification of the individual performing the ~~[modification, the]~~ *action;*

(4) The reason for the ~~[modification]~~ *action;* and ~~[any]~~

(5) Any pertinent authentication information. ~~[This]~~

(c) The log must be maintained ~~[on the server or system portion of the device as well as on a computer or other logging device not accessible to the individual making the program modification that resides outside the secure area where the server or system component of the device resides. The record of the control program changes must be maintained]~~ for at least 90 days. ~~[A system supported game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device.]~~

~~[6.]~~ *5.* ~~[A log entry must be made on the conventional gaming device or client, on the server or system portion of the device and on a computer or other logging device residing outside of the secure area that houses the system supported game]~~ *When changing software, system game logs must:*

(a) Contain an entry anytime a change is made to ~~[the software, to include]~~ control programs, ~~[data,]~~ graphics, or sound information~~[, in a connected conventional gaming device or client. Each log entry must contain the]~~ *on an EGD that is part of a system game;*

(b) Be maintained on the EGD and the server component;

(c) Contain:

(1) The date and time of the action~~[,]~~*;*

(2) The identification of the component affected~~[, the]~~*;*

(3) The reason for the ~~[modification,]~~ *action;* and ~~[any]~~

(4) Any pertinent authentication information. ~~[This information must be]~~

(d) Be retained ~~[on the server or system portion of the game and on the secondary logging device for a minimum of]~~ *for at least* 90 days~~[. The conventional gaming device or client station must retain the listed information]~~*;*

(e) Be retained on the EGD for at least *the last* 100 ~~[downloads. A system supported game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device]~~ *changes*.

~~[7. Conventional gaming devices or clients that form a part of a system supported game must employ a mechanism that ensures that software downloaded to the~~

~~conventional gaming device or client from the server or system portion of the system supported game is authentic and is received completely and without modification.~~

~~8. The server or system portion of a system supported game must authenticate any software downloaded to a connected conventional gaming device or client. The authentication information must support a resolution of at least 128 bits. The system supported game must support a command(s) that causes any conventional gaming device or client to authenticate any software downloaded from the server or system portion of the gaming device and must be able to disable the conventional gaming device or client if the authentication response is incorrect. Additionally, if the authentication response is not correct, a suitable tilt message must be displayed on the conventional gaming device or client station and a notification must be displayed on the server portion of the system supported game.~~

~~9.~~] *6.* A system ~~[supported]~~ game must not alter any component of the ~~[system or]~~ server ~~[portion or the conventional gaming device or client portion of the device]~~ *component or a participating EGD* that would interrupt, or affect the function or operating parameters of a game in progress on any ~~[conventional gaming device or client station]~~ *EGD*.

~~[10. If a system supported game downloads software components to a conventional gaming device or client station, the downloaded software must be completely authenticated prior to performing any operation on the software including, but not limited to, decrypting, extracting or uncompressing. The downloaded software may not be applied or made available for play until such time as the conventional gaming device or client has met the conditions for changing the active software.~~

~~11.~~] *7.* A system ~~[supported]~~ game must ~~[have the capacity]~~ *be able* to display ~~[a]~~ *the* complete game play history for the ~~[most recent game and at the least 9]~~ *last 10* games ~~[prior to the most recent for each conventional gaming device or client station. The display of the play history for each individual client station or conventional gaming device must be available at the particular client station or conventional gaming device. The display must indicate the game outcome, intermediate play steps (such as a hold/draw sequence or individual bonus game choices), credits available, bets placed, credits or coins paid, and credits cashed out. Gaming devices offering games with a variable number of intermediate play steps]~~ per game ~~[may satisfy this requirement by providing the capability to display the last 50 play steps. The requirement to display game recall applies to all game programs currently installed]~~ *available on a client station in accordance with Technical Standard 1.075. This may be displayed* on *either* the ~~[conventional gaming device]~~ *server* or *the* client ~~[station]~~ *terminal*.

8. A system based game must have: [Drafter's Note: Formerly Technical Standard 1.086(10).]

(a) The capacity to display a complete transaction history for transactions with a cashless wagering system to include the last 35 transactions for each client station that incremented any of the in-meters or out-meters set forth in Technical Standard 1.800(1)(i) to (t), inclusive;

(b) The capability to initiate transaction history available at the EGD for the transaction history specifically associated with the particular client station initiating the history information request; and

(c) The capacity to display the transaction history for each EGD that make up the system based game on the server component of the system based game.

~~[**1.086 Control Program Requirements for System Based Games.**~~

~~1. Conventional games or clients that are considered part of a system based game containing control programs must comply with the requirements of Technical Standard 1.080.~~

~~2. System based games must be capable of verifying that all control programs contained on the server or system portion are authentic copies of approved components of the gaming device both automatically, at least once every 24 hours, and on demand. The authentication mechanism must employ a hashing algorithm which produces a messages digest output of a least 128 bits. If the message digest is stored on a memory device other than a Conventional ROM Device the digest must be encrypted using a public/private key algorithm with a minimum of a 512 bit key or must be a bit for bit comparison. The mechanismmust prevent the execution of any control program component if the component is determined to be invalid. Any program component of the authentication mechanism must reside on and securely load from non alterable storage media. A report shall be available which details the outcome of each automated execution of the authentication mechanism and shall identify any program components determined to be invalid.~~

~~3. System based games must provide for a secondary verification method based on a user input seed of at least 32 bits. The verification method will return a verification result of at least 32 bits corresponding to the control programs currently installed in the system or server portion of the device as well as the client or conventional portion of the gaming device.~~

~~4. System based games shall be configured such that system administrator level access may not be achieved without the presence and participation of at least two individuals. This may include split passwords, dual keys or any other suitable method approved by the chairman.~~

~~5. System based games must provide a log entry anytime an individual causes a software component to be added, removed or altered in the server or system portion of the device. Each log entry must contain the date and time of the action, identification of the component affected, identification of the individual performing~~

~~the modification, the reason for the modification and any pertinent authentication information. This log must be maintained on the server or system portion of the device as well as on a computer or other logging device, not accessible to the individual making the program modification, that resides outside the secure area where the server or system component of the device resides. The record of the control program changes must be maintained for at least 90 days. A system based game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device.~~

~~6. System based games must provide a log entry on the server or system portion of the device and on a computer or other logging device residing outside of the secure area that houses the server or system portion of the device anytime the server or system portion of the game causes a change in the software to include control programs, data, graphics or sound information in the connected conventional gaming device or client. The record must contain the date and time of the action, identification of the component affected, the reason for the modification, and any pertinent authentication information, and must be maintained for a minimum of 90 days. A system based game is not required to log this information on the secondary logging device if the information has been rendered unalterable, through a means approved by the Chairman, on the server or system part of the gaming device.~~

~~7. Conventional gaming devices or clients that form a part of a system based game must employ a mechanism that ensures that any software downloaded to the conventional gaming device or client from the server or system portion of the system based game is authentic, and is received completely and without modification.~~

~~8. The server or system portion of a system based game must authenticate any software downloaded to a connected conventional gaming device or client. The authentication information must support a minimum resolution of at least 128 bits. The system based game must support a command(s) that causes any conventional gaming device or client to authenticate any software downloaded from the server or system portion of the gaming device and must be able to disable the conventional gaming device or client if the authentication response is incorrect. Additionally, if the authentication response is not correct a suitable tilt message must be displayed on the conventional gaming device or client station and a notification must be displayed on the server portion of the system based game.~~

~~9. System based games must have the capacity to display a complete play history for the most recent game played and at least 34 games prior to the most recent game for each client station connected to the system based game. The display must indicate the game outcome (or a representative equivalent), intermediate play steps (such as hold and draw sequence or a doubledown sequence), credits available, bets placed, credits or coins paid, and credits cashed out. Gaming devices offering games with a~~

~~variable number of intermediate play steps per game may satisfy this requirement by providing the capability to display the last 50 play steps. The capability to initiate game recall must be available at the client for recall of information specifically associated with the particular client station initiating the game recall. The capacity to initiate game recall for any and all clients that make up the system based game must be available from the system or server portion of the system based gaming device. The requirement to display game recall applies to all game programs currently installed on the server portion of the system based game.~~

~~10. All system based games must have the capacity to display a complete transaction history for transactions with a cashless wagering system to include the most recent and the previous thirty-four transactions prior to the most recent transaction for each client station and the previous 99 transactions for the overall gaming device, that incremented any of the in-meters set forth in Technical Standard 2.040(1) (i) through (t) and that incremented any of the out-meters set forth in Technical Standard 2.040(1) (i) through (t). The capability to initiate transaction history must be available at the client or conventional gaming device for the transaction history specifically associated with the particular client station initiating the history information request. The capacity to initiate a display of a transaction history for any and all clients or conventional gaming devices that make up the system based game must be available from the system or server portion of the system based game.~~

~~11. A system based game must not alter any component of the system or server portion or the conventional gaming device or client portion of the device that would interrupt, or affect the function or operating parameters of a game in progress at any conventional gaming device or client station.~~

~~12. If a system based game downloads software components to a conventional gaming device or client station, the downloaded software must be authenticated immediately upon receipt by the conventional gaming device or client station. The downloaded software may not be applied or made available for play until such time as the conventional gaming device or client has successfully authenticated the downloaded software, and has met the conditions for changing the active software.~~

~~13. A system based game must provide a secure interface port through which the software on the system and client portions of the game may be authenticated.]~~

1.090 Bonus or ~~[Extended Game Features]~~ *extended game features*. ~~[All gaming devices]~~

1. An EGD which ~~[offer]~~ *offers a game containing* a bonus game or extended feature which requires player selection or interaction ~~[are]~~ *is* prohibited from automatically making selections or initiating games or features unless the ~~[gaming~~

~~device]~~ *EGD* meets one of the following requirements and explains the mechanism for auto-initiation or selection on the device glass or video display~~[.]~~*:*

~~[1.]~~ *a.* The ~~[patron]~~ *player* is presented with a choice and specifically acknowledges ~~[his]~~ *the player's* intent to have the ~~[gaming device]~~ *EGD* auto-initiate the bonus or extended play feature by means of a button press or other physical/machine interaction~~[.]~~*;*

~~[2.]~~ *b.* The bonus or extended feature provides only one choice to the ~~[patron]~~ *player,* ~~[i.e.,]~~ *such as* press button to spin wheel. In this case, the ~~[device]~~ *EGD* may ~~[auto initiate]~~ *auto-initiate* the bonus or extended feature after a time out period of at least ~~[2 minutes.]~~ *10 seconds; or*

~~[3.]~~ *c.* The bonus or extended feature is offered as part of community play that involves two or more ~~[patrons and where the delay of an offered selection or game initiation will directly impact the ability for other patrons to continue their bonus or extended feature. Prior to automatically making selections or initiating a community based bonus or feature the patron must be made aware of the time remaining in which they must make their selection or initiate play]~~ *players and where the delay of an offered selection or game initiation will directly impact the ability for other players to continue their bonus or extended feature. Prior to automatically making selections or initiating a community-based bonus or feature, the player must be made aware of the time remaining in which the player must make the selection or initiate play*.

2. An EGD that offers a game containing a bonus game or extended feature that requires player selection or interaction in which the player selection or interaction involves strategy or player skill may use an automated selection process if it:

(a) Provides the player with at least 15 seconds to make a selection before automatically initiating a selection on behalf of the player; and

(b) Employs an automatic selection process that is based on a reasonable strategy.

3. An EGD that offers a game containing a bonus game or extended feature that requires player selection or interaction in which the player selection does not involve strategy or player skill, such as pick one of five, may use an automated selection process if it: [Drafter's Note: Formerly Lab Policy Technical Standard 1.090(3)]

(a) Provides the player with at least five seconds to make the selection; and

(b) Uses a random selection process to make the automatic selection.

4. For all games that have a time limitation in which the player has to make a selection, a timer or similar indicator must be displayed onscreen so the player is aware of the time remaining to make the decision.

5. A game that displays the result of a player selection process may not display a non-winning outcome for which the player had no opportunity to receive through the player selection process. For pre-determined outcomes where the prize is the same regardless of the player's selection, the game may not display other prize values at the conclusion of the feature. [Drafter's Note: Formerly Lab Policy 14.040(2)(a).]

1.095 Progressive functionality.

1. An EGD that allows for the use of progressive functionality must:

(a) Provide a mechanism to manually adjust the progressive value; and

(b) Maintain a log containing the last 10 manual adjustments to the progressive. The log must contain the value before the change, the value after the change, and the date and time of the change.

2. An EGD that utilizes a mystery progressive or other type of mystery bonus such that weighted tables are used in the determination of the winner or winning value must ensure that the trigger to award the prize is not predictable. [Drafter's Note: Formerly Lab Policy 14.040(2)(a).]

1.100 Reel ~~[strips]~~ *symbols*.

1. ~~[Given a physical reel strip of length L units containing N physical stops, each blank space must occupy a minimum of (L/N)*0.4 units. These blank symbols must be completely free of any portion of any adjacent symbol]~~ *If a reel symbol is displayed to the player, it must be available for random selection and inclusion in a game outcome unless the game mode or rules specify otherwise.*

2. ~~[All non-blank and blank symbols must be centered in their respective space allocation]~~ *The home or default position for reel symbols or other game elements must not display a winning outcome. [Drafter's Note: Formerly Lab Policy Technical Standard 1.100.]*

~~[**1.110 Safety.**~~

~~1. A gaming device must not present a mechanical, electrical or fire hazard when used in its intended mode of operation.~~

~~2. The power supply used in a gaming device must be designed to minimize leakage current in the event of intentional or inadvertent disconnection of the AC power ground. Leakage currents of greater than 1.0 milliamperes may be considered hazardous. The power supply must be appropriately fused or protected by circuit breakers. A manufacturer may request a waiver from the chairman of the requirements of this section for gaming devices that are certified by an OSHA Nationally Recognized Testing Laboratory for safety.]~~

1.120 System ~~[Based Game Configuration]~~ *based game configuration*.

1. A system based game~~[, with more than 64 client stations, must be configured such that a failure of any single part or piece of equipment or a failure of the system based game's automated software authentication will not result in a cessation of operation of the system based game.~~

~~2. A system based game, with more than 64 client stations, must be configured such that a failure of any single part or piece of equipment will not result in more than 50% of the associated client stations being disabled.~~

~~3. A system based game]~~ must be configured such that a failure of any single part or piece of equipment will not result in any stored information regarding game recall, cashless wagering transaction history, or game performance and accounting being lost or destroyed.

~~[4.]~~ *2.* ~~[A client]~~ *An EGD that is part of a system based game* must be rendered unplayable if ~~[communications from]~~ *communication with* the server or system ~~[portion]~~ *component* of the ~~[gaming device]~~ *EGD* is lost. ~~[However, in the case of clients that have lost communications with the server, the client]~~ *The EGD* must provide a means, such as a hand pay, for ~~[patrons]~~ *the player* to cash out credits indicated on the ~~[system based gaming device]~~ *EGD* at the time the ~~[communications]~~ *communication* was lost.

1.130 Requirements for downloading ~~[software to a conventional gaming device or client station from a system supported game]~~ *control program, graphic, or sound files to an EGD*.

1. *An EGD that allows the adding, removing, or alteration of a control program, graphic, sound, or peripheral firmware must prevent any change from taking place that would interrupt a game in progress or a game session.*

2. Prior to any ~~[software]~~ *control program, graphic, or sound file* being added *to* or removed from ~~[a conventional gaming device or client station]~~ *an EGD* comprising a part of a system ~~[supported]~~ game that would result in the loss of accounting meter information, a complete set of meter information to include all meters required by Technical Standard ~~[2.040]~~ *1.800* must be successfully communicated to a slot accounting system.

~~[2.]~~ *3.* ~~[Software]~~ *Control program, graphic, or sound files* may not be added ~~[onto]~~ *to* or removed from ~~[a conventional gaming device or client station]~~ *an EGD* if an error or tilt condition exists on the ~~[conventional gaming device or client station]~~ *EGD*. *An EGD may employ a manual mechanism to override a "door closed" condition that would otherwise prevent the change in control program, graphic, or sound files from being applied. [Drafter's Note: Formerly Lab Policy Technical Standard 1.140.]*

4. The server component of a system game must authenticate any control program, graphic, or sound file downloaded to a participating EGD prior to the control program, graphic, or sound file being downloaded. The authentication mechanism must support a resolution of at least 160 bits.

5. An EGD that is part of a system game must employ a mechanism that authenticates control programs, graphics, or sound files downloaded to the EGD from

the server component. The downloaded control programs, graphics, or sound files must be authenticated prior to being applied or made available for play.

6. The server component of a system game must employ a mechanism that will cause a participating EGD to authenticate any control program, graphic, or sound file contained on the EGD and must be able to disable the EGD if a control program, graphic, or sound file is found to be invalid. If an invalid control program, graphic, or sound file is detected, the EGD must enter into a tilt condition and a notification must be displayed on the server component.

~~[**1.135 Requirements for downloading software to a conventional gaming device or client station from a system based game.**~~

~~1. Prior to any software being added or removed from a system based game that would result in the loss of accounting meter information, a complete set of meter information to include all the meters required by Technical Standard 2.040 for all the client stations as well as the system must be successfully communicated to a slot accounting system.~~

~~2. Software may not be removed from a system based game if the particular software being removed is being served to a client station that is in an error or tilt condition.]~~

1.140 Conditions for changing active software on ~~[a conventional gaming device or client station]~~ *of an EGD* that is part of a system ~~[supported or system based]~~ game.

1. Active software consists of all the games currently available for immediate play ~~[by the patron on the conventional gaming device or client station]~~ *on the EGD*. For this section, immediate play means games that do not require additional software or a change in game configuration such as denomination, maximum wager, payback percentage, etc. prior to the ~~[patron]~~ *player* being able to initiate play. Active software also includes any software in which a change will interrupt normal game play, i.e. ~~[game operating system]~~ *a control program* and peripheral firmware.

2. ~~[The conventional gaming device or client station]~~ *To change active software, the EGD* must:

(a) Be in the idle mode with no errors or tilts, no play and no credits on the ~~[machine]~~ *the EGD* for at least ~~[two (2) minutes]~~ *30 seconds*; *and*

(b) Not be participating in an in-house or inter-casino linked payoff schedule where the change will result in a violation of Regulation 5.110 or 5.112~~[; and]~~.

3. If the change in the active software is the direct result of a player request or a qualifying event*, such as the number of games played or cumulative amount wagered,* that is not an identifier, the ~~[time delay requirements]~~ *idle mode requirement* of section 2(a) of this technical standard may be ignored. However, the active software

may not be changed if an error or tilt exists on the ~~[conventional gaming device or client station]~~ *EGD*.

~~[Note: A qualifying event may include, but is not limited to, the number of games played or the cumulative amount wagered by a patron during a gaming session as provided for in the rules of play.]~~

1.150 Documentation requirements for a system game. *[Drafter's Note: Formerly Technical Standards 2.047, 2.048, and 2.049.]*

1. Documentation generated by a system game shall be available for a user specified period. The system must be designed so that documentation includes, at a minimum, each document:

(a) Document title;

(b) Version number of the current system software;

(c) Date or time period of activity;

(d) Date and time the document was generated; and

(e) Column and row titles (if applicable).

2. All required documentation must be generated by the system game, even if the period specified contains no data to be presented. The documentation generated should indicate all required information and contain an indication of "No Activity" or similar message if no data appears for the period specified.

3. Documentation required of a system based game:

(a) Shall be available on a day, month, year-to-date basis and for at least a previous two-year cumulative basis.

(b) If mobile communications devices are used, the system based game shall be designed to display and create documentation on demand which includes the maximum number of socket IDs available to operate the mobile communications devices during the period being reported.

(c) The system based game shall be designed so that documentation may be created daily or on demand.

4. The system based game shall be designed so that documentation may be created daily or on demand.

(a) The system shall provide, on demand, a list of all gaming device software, paytable, and denomination changes, such as additions, deletions, status changes, etc., occurring during the reporting period, by machine number. The report must also include the date and time of each change, and the ID of the user performing the change.

(b) The system shall provide a list of all gaming device software available in the system library, including software description, date/time software was added to the library, date/time the theme was last downloaded to a gaming device, identification of the manufacturer, and ID of user who loaded the theme into the system library for the period being reported.

1.200 Logging ~~[Requirements]~~ *requirements* for the use of ~~[Identifiers]~~ *identifiers.*

1. A system ~~[based]~~ game~~[, system supported game,]~~ or gaming associated equipment that assigns or tracks the use of identifiers must log the following information on the system component each time an identifier is assigned:

(a) A transaction identification number unique to the assignment;

(b) The transaction date and time;

(c) An identification number unique to the patron, if known;

(d) The category or name of the identifier assigned;

(e) The basis for the assignment of the identifier; and

(f) Any other information necessary to reconcile the assignment of an identifier to a patron.

2. The logged information required by Technical Standard 1.200 (1) must:

(a) Be retained for a minimum of 30 days;

(b) Be viewable on the system portion of the gaming device;

(c) Be exportable into a ~~[comma separated values text]~~ *human readable or parseable data* file; and

(d) Be ~~[rendered unalterable]~~ *protected from unauthorized alteration* using a method ~~[approved by]~~ *acceptable to* the ~~[chairman]~~ *Chair*.

3. ~~[A conventional gaming device or client of a system supported gaming device]~~ *An EGD* that uses identifiers must log the following information each time an identifier is used:

(a) A transaction identification number unique to the assignment or the transaction identification number assigned by the system component or associated equipment;

(b) The transaction date and time;

(c) The category or name of the identifier assigned; and

(d) The basis for the assignment of the identifier, if assigned by the ~~[conventional gaming device or client of a system supported gaming device]~~ *EGD*. ~~[This information must be maintained for at least the most recent ten identifiers assigned and must be displayable on the conventional gaming device or client of a system supported gaming device.]~~

4. As used in this technical standard, the basis for the assignment of an identifier include, without limitation, one or more of the following:

(a) The frequency, value or extent of predefined commercial activity such as the patron's frequency of visitation or wagering activity at a licensee(s); activity on social media; or accumulation of rank, points, or standing in either gaming or non-gaming activity;

(b) The subscription to or enrollment in particular services such as membership in a licensee's customer loyalty program;

(c) ~~[The use of a particular technology concurrent with the play of a game;~~

~~(d)]~~ The level of skill of a patron as identified or maintained by the gaming system or self-identified by the patron;

~~[(e)]~~ *(d)* The level of skill of a patron relative to the skill of other patrons participating in the same game; or

~~[(f)]~~ *(e)* The degree of skill required by the game.

1.300 ~~[Gaming devices]~~ *EGDs* that incorporate skill.

1. ~~[A gaming device]~~ *An EGD* that incorporates skill and makes use of player interaction technology must:

(a) ~~[Monitor]~~ *Reasonably monitor* the player interaction technology for proper operation ~~[before the initiation of each game]~~. Upon detection of improper operation, the ~~[gaming device]~~ *the EGD* must enter into a tilt condition;

(b) Provide a mechanism to calibrate the technology;

(c) Prevent unintended perturbations, such as physical, radio-frequency, or optical from impacting the proper operation of the game;

(d) Upon initialization, must automatically verify that it meets the minimum hardware requirements necessary to properly conduct the game. The ~~[gaming device]~~ *EGD* must prevent initialization if the hardware is found to be insufficient; and

(e) Ensure that variances in hardware that meet the minimum hardware requirements, such as processing power, amount of memory, or data bandwidth available do not:

(1) ~~[impact]~~ *Impact* the proper operation of the game; or

(2) ~~[provide]~~ *Provide* an advantage or disadvantage to a player.

➥ ~~[Note:]~~ This standard applies to the total amount of resources available to the gaming device. Manufacturers are encouraged to additionally monitor available resource levels during operation to ensure continued proper game play.

2. ~~[Hardware necessary to implement a game must be equivalent on each gaming device. Hardware variances must not:~~

~~(a) Impact the proper operation of the game; or~~

~~(b) Provide an advantage or disadvantage to a player.~~

~~Note: This standard applies to the total amount of resources available to the gaming device. Manufacturers are encouraged to additionally monitor available resource levels during operation to ensure continued proper game play.~~

~~3.]~~ For each enabled paytable, the ~~[gaming device]~~ *EGD* must calculate the actual payback percentage every ~~[N]~~ *10,000* games~~[, where N is the number of games necessary to determine the theoretical payback percentage with a 95% confidence interval within a range of +/- 5%]~~. The ~~[device]~~ *EGD* shall:

(a) Determine the absolute value of the difference between the actual payback percentage and the theoretical payback percentage;

(b) Maintain a record of the most recent 50 calculations for each paytable to include the date, time, paytable ID, the calculated actual payback percentage and the absolute value of the difference between the actual payback percentage and the theoretical payback percentage; and

(c) Upon detection of three consecutive calculations, for a paytable, in which the absolute value of the difference between the actual and theoretical payback percentages is greater than 4%, enter into a tilt condition.

~~[4.]~~ *3.* The rules of play for a game of skill or hybrid game must describe or display information adequate for a reasonable person to understand the method of game play prior to the player committing a wager.

~~[(a) The content of the rules of play necessary to comply with this subsection will be determined based on an evaluation of the following factors:~~

~~(1) The theme of the game;~~

~~(2) Knowledge of the game among the general public based on the history and prevalence of the game or readily identifiable variations of the game;~~

~~(3) The extent to which the format of the game differs from that of a substantially comparable game known in contexts outside the casino gaming environment; and~~

~~(4) The physical attributes of the game, including whether the game is based on:~~

~~(i) Inherent skill based on physical dexterity, endurance and strategy, such as in an athletic activity;~~

~~(ii) Skill based on expertise, education or experience, such as a word or trivia contest; and~~

~~(iii) Dynamic skill based on variations in the difficulty or complexity of a skill activity that change in response to the player's decisions, acuity, agility, dexterity, game duration or an inherent game feature, such as a military combat game.~~

~~(b)]~~ The rules of play may be communicated to the player singularly or through a combination of:

~~[(1)]~~ *(a)* The rules or descriptions displayed by the gaming device;

~~[(2)]~~ *(b)* The pay table; or

~~[(3)]~~ *(c)* A game tutorial or demonstration displayed by the gaming device or at a prominently disclosed location within the gaming establishment.

1.400 Random ~~[Selection Process]~~ *selection process* and ~~[Random Number Generator]~~ *random number generator.*

1. The random selection process must meet 95 percent confidence limits using a standard chi-squared test for goodness of fit.

2. ~~[A gaming device]~~ *An EGD* using a software ~~[random number generator (RNG)]~~ *RNG* shall:

(a) *For an EGD approved prior to January 1, 2027:*

(1) Not use static seed upon initialization;

~~[(b)]~~ *(2)* Cycle the RNG at a minimum average rate of 100Hz (100 times per second); and

~~[(c)]~~ *(3)* Not draw RNG values for future play.

(b) For an EGD approved on or after January 1, 2027:

(1) Make use of a CSPRNG; and

(2) Pass a battery of recognized randomness tests including, without limitation, the Diehard, Dieharder, or NIST SP 800-22 battery of statistical tests.

3. ~~[A gaming device]~~ *An EGD* using a hardware ~~[random number generator]~~ *RNG* shall:

(a) Continually monitor the RNG to ensure compliance with this standard. This shall be done by performing a chi-squared goodness of fit evaluation over the most recent 10,000 random outcomes selected for game play;

(b) Automatically maintain an event log displaying the results of the most recent 10 chi-squared tests to include the result of the test and the date and time the test was performed;

(c) Display a visual indicator of a failure; and

(d) Upon, two consecutive failures, enter into a tilt condition.

4. ~~[RNG's used for purposes other than determining the game outcome must either:~~

~~(a) Be implemented as a separate instantiation of the RNG process; or~~

~~(b) Be based on an algorithm or method that can be demonstrated does not affect the game outcome.~~

~~5.]~~ A game that draws a predetermined set of outcomes for a game, such as a shuffled deck of cards, must prevent the information from being accessible.

~~[6. Additionally, video poker games must not determine replacement cards prior to the player selecting hold cards and initiating a draw.~~

~~7.]~~ *5.* The RNG and random selection process must be impervious to influences from outside the device, including, but not limited to, electro-magnetic interference, electro-static interference, and radio frequency interference.

~~[8.]~~ *6.* ~~[A gaming device]~~ *An EGD* must use appropriate communication protocols to protect the ~~[random number generator]~~ *RNG* and random selection process from influence by associated equipment or other devices which is conducting data communications with the ~~[gaming device]~~ *EGD*.

1.500 Mobile gaming systems. *[Drafter's Note: Formerly Tech Standard 4.]*

1. User authorization.

(a) Mobile gaming systems must employ, at a minimum, strong authentication to verify that the mobile communications device is being operated by an authorized player prior to permitting access to the mobile gaming system. [Drafter's Note: Formerly Lab Policy Technical Standard 4.010.]

(b) Mobile gaming systems must employ, at a minimum, one factor of strong authentication (single factor) to re-verify the mobile communications device is being operated by an authorized player at 30 minute intervals since the last authentication.

(c) The mechanism used to verify that the mobile communications device is being operated by an authorized player must be capable of being initiated both on demand and systematically.

(d) The mobile gaming session must be closed upon an unsuccessful verification attempt.

2. Mobile communications device communication with a mobile gaming system.

(a) Communication between a mobile communications device and a mobile gaming system must be conducted using a method that securely links the mobile communications device to the mobile gaming system and authenticates both the mobile communications device and mobile gaming system as authorized to communicate over that link.

(b) Mobile gaming system components which interface mobile communications devices must sufficiently isolate the mobile communications devices from the server portion of the mobile gaming system.

3. Mobile gaming systems must be designed to restrict the gaming operation of the mobile communications device to public areas as defined by Regulation 5.220.

1.600 Award cards and help screens. *[Drafter's Note: Formerly Technical Standards 2.060 and 2.070.]*

1. Award cards must be clearly identified and must be displayed at all times the EGD is available for play or be readily available for display on the EGD on demand by the player.

2. Award cards must accurately state the award that will be paid through any combination of dispensed coin, credit awards, vouchers, attendant pays, or electronic funds transfer when the player obtains a specific win.

3. The award card must clearly indicate whether awards are designated in denominational units, dollars and cents, or some other unit.

4. All award cards present on an EGD must reflect any change in award value which may occur in the course of play.

5. If the odds of hitting the top award advertised by the EGD exceed 100 million to one, the odds of the advertised jackpot must be prominently displayed on the award card.

6. A game utilizing multiple paylines must display to the player all winning paylines that were achieved in a game outcome and must give the player a reasonable amount of time to review the outcome for each payline before the next game is initiated. The display must indicate the winning payline and the amount won per winning payline. The EGD may allow the player to interact with the device to skip or speed up this display. [Drafter's Note: Formerly Lab Policy 14.040(3) and Lab Policy Technical Standard 1.080(7).]

7. An EGD that contains games in which the game or rules of play change for the game during a gaming session, including the probability and award of a game outcome, must:

(a) The rules of play must clearly address the game elements or features that change and the conditions that impact the change.

(b) Options and features that are dependent on configuration, randomness, or player selection must be clear in the game rules, e.g. prizes "may" be awarded must state what the dependency is.

(c) Examples of acceptable disclosures include: "The chance of winning the XYZ award/feature/jackpot increases with the amount wagered" or "The number of available widgets changes based on the amount wagered."

(d) Where base game reel symbol weightings change based on amount wagered, it is sufficient to state that a different set of reels is used based on the amount wagered rather than specifically calling out the specific game elements within the reel that change.

8. An EGD that supports the display of award cards and help screens in multiple languages must have the option for a player to display the award card and help screens in English. All award card and help screen information must be consistent between languages. [Drafter's Note: Formerly Lab Policy Technical Standard 2.060.]

9. An EGD may not use language that suggests the probability of a particular outcome is more likely to happen than its actual probability. Examples include, but are not limited to, the use of the terms "Due", "Overdue", and "Ready to Hit". [Drafter's Note: Formerly Lab Policy Technical Standard 2.060.]

1.700 EGD display device usage. *[Drafter's Note: Formerly Lab Policies Advertising on an EGM Display, Gaming Device Transformation Technology, and Demo and Attract Modes.]*

1. An EGD that uses a service window or similar technology to utilize a full screen or monitor to display non-game related information on a screen that contains information required by 1.800(4) must:

(a) Be in an idle mode with no errors, tilts, or credits on the EGD. If the use of display for non-game related information is the direct result of a player request, the idle mode and no credit requirements do not apply;

(b) Allow a player or the operator to cancel the display of non-game related information; and

(c) Must cancel the display of non-game related information upon the acceptance of credits.

2. An EGD that uses a service window or similar technology to use a portion of or resize one or more of the display devices to display non-game related information on a screen that contains information required by 1.800(4) must:

(a) Allow the player or operator to cancel the display of non-game related information;

(b) Maintain the proper operation and legibility of the game related information as normally displayed.

3. An EGD that makes use of a demo or attract mode must not enter the demo or attract mode if there are credits on the EGD

1.800 Meter requirements. *[Drafter's Note: Formerly Technical Standard 2.040.]*

1. An EGD must maintain digital storage meters, as defined in subsection 2, as follows:

(a) The meters must be capable of storing and displaying positive numbers up to at least 10 digits - 9,999,999,999 or $99,999,999.99;

(b) The meters must be available for display on demand;

(c) The EGD must be capable of communicating the required meters to an on-line slot system;

(d) The meters must accumulate in units equal to the denomination of the EGD or in dollars and cents;

(e) EGDs configured for multi-denomination play must display the required meters in dollars and cents;

(f) The meters must be specifically labeled as defined in subsection 2. EGDs that are unable to display the specific meter labels required due to physical display limitations may use a legend affixed to the inside of the EGD to correlate the displayed information to the required meter name; and

(g) Meter information required by this section must be preserved for a minimum of 72 hours after a power loss to the EGD.

2. An EGD must maintain the following meters, if the functionality of that meter is supported by the device:

(a) "Attendant Paid Cancelled Credits" accumulates the total value paid by an attendant resulting from a player-initiated cash-out that exceeds the physical or configured capability of the EGD to make the proper payout amount;

(b) "Attendant Paid External Bonus Payout" accumulates the total value of amounts awarded as a result of an external bonusing system paid by an attendant;

(c) "Attendant Paid Jackpots" accumulates the total value of credits paid by an attendant resulting from a single game cycle, the amount of which is not capable of being paid by the EGD itself. This does not include progressive amounts or amounts awarded as a result of an external bonusing system. This meter is only to include awards resulting from a specifically identified amount listed in the paytable/award card;

(d) "Attendant Paid Progressive Payout" accumulates the total value of credits paid by an attendant as a result of progressive awards that are not capable of being paid by the EGD itself;

(e) "Bill In" accumulates the total value of currency accepted. Additionally, the EGD must have a specific meter for each denomination of currency accepted that records the number of bills accepted of each denomination;

(f) "Cashable Electronic Promotion In" accumulates the total value of cashable credits electronically transferred to the EGD from a promotional account by means of an external connection between the EGD and a cashless wagering system;

(g) "Cashable Electronic Promotion Out" accumulates the total value of cashable credits electronically transferred from the EGD to a promotional account by means of an external connection between the EGD and a cashless wagering system;

(h) "Cashable Promotion Credits Wagered" accumulates the total value of promotional cashable credits which are wagered. This includes credits that are transferred to the EGD electronically or through the acceptance of a wagering instrument;

(i) "Coin In" accumulates the total value of all wagers, whether the wagered amount results from the insertion of coins, tokens, currency, deduction from a credit meter or any other means. This meter shall:

(1) Not include subsequent wagers of intermediate winnings accumulated during game play sequence such as those acquired from "double up" games;

(2) For multi-game and multi-denomination/multi-game EGDs, provide the coin in information and the theoretical payback percentage, on a per paytable basis; and

(3) EGDs which contain paytables with a difference in theoretical payback percentage which exceeds 4 percent between wager categories, maintain and display coin in meters and the associated theoretical payback percentage, for each wager category with a different theoretical payback percentage, and calculate a weighted average theoretical payback percentage for that paytable;

(j) "Coin Drop" accumulates the total value of coins or tokens diverted to the drop;

(k) "Coin Out" accumulates the total value of all amounts directly paid by the EGD as a result of winning wagers or any amount that is paid by the EGD which has been accumulated as a function of game play (i.e. bonus eligibility), whether the payout is made from the hopper, to a credit meter or by any other means. This meter will not

record amounts awarded as the result of an external bonusing system or a progressive payout, unless the external bonusing system or progressive payout is included in the theoretical return to player of the game;

(l) "Coupon Promotion In" accumulates the total value of all slot machine coupons accepted by the EGD;

(m) "Coupon Promotion Out" accumulates the total value of all slot machine coupons issued by the EGD;

(n) "Electronic Funds Transfer In" or "EFT In" accumulates the total value of cashable credits electronically transferred from a financial institution to the EGD through a cashless wagering system;

(o) "Electronic Funds Transfer Out" or "EFT Out" accumulates the total value of cashable credits electronically transferred to a financial institution from the EGD through a cashless wagering system;

(p) "In-Session Feature Out" accumulates all credits deducted from the credit meter paid as consideration for an in-session feature for an EGD that makes use of in-session features;

(q) "Machine Paid External Bonus Payout" accumulates the total value of additional amounts awarded as a result of an external bonusing system and paid by the EGD;

(r) "Machine Paid Progressive Payout" accumulates the total value of credits paid as a result of progressive awards paid directly by the EGD. This meter does not include awards paid as a result of an external bonusing system;

(s) "Non-Cashable Electronic Promotion In" accumulates the total value of non-cashable credits electronically transferred to the EGD from a promotional account by means of an external connection between the EGD and a cashless wagering system;

(t) "Non-Cashable Electronic Promotion Out" accumulates the total value of non-cashable credits electronically transferred from the EGD to a promotional account by means of an external connection between the EGD and a cashless wagering system;

(u) "Number of games since door close" accumulates the number of games played since the most recent door closure;

(v) "Number of games since power reset" accumulates the number of games played since the most recent power reset;

(w)"Physical Coin In" accumulates the total value of coins or tokens inserted into the EGD;

(x) "Physical Coin Out" accumulates the value of all coins or tokens physically paid by the EGD;

(y) "Voucher In" accumulates the total value of all slot machine wagering vouchers accepted by the EGD;

(z) "Voucher Out" accumulates the total value of all slot machine wagering vouchers and payout receipts issued by the EGD;

(aa) Wagering Account Transfer In ("WAT In") accumulates the total value of cashable credits electronically transferred to the EGD from a wagering account by means of an external connection between the EGD and a cashless wagering system;

(bb) Wagering Account Transfer Out ("WAT Out") accumulates the total value of cashable credits electronically transferred from the EGD to a wagering account by means of an external connection between the EGD and a cashless wagering system; and

(cc) Such other meters as may be required by the Chair.

3. An EGD that allows for additions to or deductions from the credit meter that would not otherwise be metered under the requirements of paragraphs a to cc, inclusive, of subsection 2 must maintain meters sufficient to properly reconcile all additions to or deductions from the credit meter. Examples include, without limitation, fees paid to enter a contest or tournament; awards from a contest or tournament; tipping; and the use of wagering credits on wagering opportunities that would not otherwise be considered coin in for the gaming device.

4. Unless a tilt condition or other malfunction exists, an EGD must have meters in units equal to the denomination of the current game selection, in dollars and cents or in other units acceptable to the Chair, continuously displaying to a player the following information as it pertains to the current play or monetary transaction:

(a) The coins or credits wagered;

(b) The coins or credits won, if applicable;

(c) The coins paid by the hopper for a credit cash-out or a direct pay from a winning outcome; and

(d) The credits available for wagering, if applicable.

5. The server component of system based games must store, must be able to display, and must be able to send to a slot accounting system, meter information that complies with the requirements of Technical Standard 1.800 that are associated with the play of each individual client station as well as for the system based game in its entirely.

~~[TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT~~

~~STANDARD 2~~

~~PROPER ACCOUNTING FOR GAMING DEVICES]~~

~~[2.010 Changes to payout percentage.~~

~~1. The theoretical payback percentage of a gaming device must not be capable of being changed without making a hardware or software change in the device except~~

as provided for in Technical Standard 1. For purposes of this standard, the addition of an attendant-paid bonus, a progressive jackpot, or a change in rate of progression of an existing progressive jackpot is not considered to be a change in the theoretical payback of the gaming device.

2. Notwithstanding subsection 1, draw poker type gaming devices may have switch selectable or menu selectable top award values so long as the selectable range does not alter the payback percentage of the device by more than 1 percent with typical field play.]

[**2.020 Accounting of inappropriate coin-ins.** Inappropriate coins in must be returned to the player by activation of the hopper or credited toward the next play of the gaming device. The gaming device control program must be capable of handling rapidly fed coins so that the occurrences of inappropriate coins in are minimized.] *[Drafter's Note: Superseded by Technical Standard 1.800.]*

[**2.030 Payouts from the hopper.**

1. All coins or tokens paid from the hopper mechanism must be properly accounted for by the gaming device, including those paid as extra coins during a hopper malfunction.

2. Hopper pay limits must be designed to permit compliance by gaming establishments with published IRS Regulations.] *[Drafter's Note: Superseded by Technical Standard 1.040.]*

[**2.040 Meters for conventional gaming devices, system supported and system based games.**

1. All gaming devices must be equipped with electronic digital storage meters of at least 10 digits capable of displaying the information listed in this section on demand. Gaming device must also be capable of communicating these meters to an on-line slot system. These meters, listed below, must accumulate the following information in units equal to the denomination of the device or in dollars and cents. Devices configured for multi-denomination play must display the required information in dollars and cents.

(a) Coin In. The machine must have a meter specifically labeled "Coin In" that accumulates the total value of all wagers, whether the wagered amount results from the insertion of coins, tokens, currency, deduction from a credit meter or any other means. This meter shall:

(1) Not include subsequent wagers of intermediate winnings accumulated during game play sequence such as those acquired from "double up" games;

~~(2) For multi-game and multi-denomination/multi-game gaming devices, provide the coin in information and the theoretical payback percentage, on a per paytable basis; and~~

~~(3) For gaming devices which are considered slot machines and which contain paytables with a difference in theoretical payback percentage which exceeds 4 percent between wager categories, maintain and display coin in meters and the associated theoretical payback percentage, for each wager category with a different theoretical payback percentage, and calculate a weighted average theoretical payback percentage for that paytable;~~

~~(b) Coin Out. The machine must have a meter specifically labeled "Coin Out" that accumulates the total value of all amounts directly paid by the machine as a result of winning wagers or any amount that is paid by the machine which has been accumulated as a function of game play (i.e. bonus eligibility), whether the payout is made from the hopper, to a credit meter or by any other means. This meter will not record amounts awarded as the result of an external bonusing system or a progressive payout;~~

~~(c) Coin Drop. The machine must have a meter specifically labeled "Coin Drop" that accumulates the total value of coins or tokens diverted to the drop;~~

~~(d) Attendant Paid Jackpots. The machine must have a meter specifically labeled "Attendant Paid Jackpots" that accumulates the total value of credits paid by an attendant resulting from a single winning alignment or combination, the amount of which is not capable of being paid by the machine itself. This does not include progressive amounts or amounts awarded as a result of an external bonusing system. This meter is only to include awards resulting from a specifically identified amount listed in the manufacturer's par sheet;~~

~~(e) Attendant Paid Cancelled Credits. The machine must have a meter specifically labeled "Attendant Paid Cancelled Credits" that accumulates the total value paid by an attendant resulting from a player initiated cash-out that exceeds the physical or configured capability of the machine to make the proper payout amount;~~

~~(f) Physical Coin In. The machine must have a meter specifically labeled "Physical Coin In" that accumulates the total value of coins or tokens inserted into the machine;~~

~~(g) Physical Coin Out. The machine must have a meter specifically labeled "Physical Coin Out" that accumulates the value of all coins or tokens physically paid by the machine;~~

~~(h) Bill In. The machine must have a meter specifically labeled "Bill In" that accumulates the total value of currency accepted. Additionally, the machine must have a specific meter for each denomination of currency accepted that records the number of bills accepted of each denomination;~~

(i) Voucher In. The machine must have a meter specifically labeled "Voucher In" that accumulates the total value of all slot machine wagering vouchers accepted by the machine;

(j) Voucher Out. The machine must have a meter specifically labeled "Voucher Out" that accumulates the total value of all slot machine wagering vouchers and payout receipts issued by the machine;

(k) Electronic Funds Transfer In (EFT In). The machine must have a meter specifically labeled "EFT In" that accumulates the total value of cashable credits electronically transferred from a financial institution to the machine through a cashless wagering system;

(l) Wagering Account Transfer In (WAT In). The machine must have a meter specifically labeled "WAT In" that accumulates the total value of cashable credits electronically transferred to the machine from a wagering account by means of an external connection between the machine and a cashless wagering system;

(m) Wagering Account Transfer Out (WAT Out). The machine must have a meter specifically labeled "WAT Out" that accumulates the total value of cashable credits electronically transferred from the machine to a wagering account by means of an external connection between the machine and a cashless wagering system;

(n) Non-Cashable Electronic Promotion In. The machine must have a meter specifically labeled "Non-Cashable Electronic Promotion In" that accumulates the total value of non-cashable credits electronically transferred to the machine from a promotional account by means of an external connection between the machine and a cashless wagering system;

(o) Cashable Electronic Promotion In. The machine must have a meter specifically labeled "Cashable Electronic Promotion In" that accumulates the total value of cashable credits electronically transferred to the machine from a promotional account by means of an external connection between the machine and a cashless wagering system;

(p) Cashable Promotion Credits Wagered. The machine must have a meter specifically labeled "Cashable Promotion Credits Wagered" that accumulates the total value of promotional cashable credits which are wagered. This includes credits that are transferred to the machine electronically or through the acceptance of a wagering instrument;

(q) Non-Cashable Electronic Promotion Out. The machine must have a meter specifically labeled "Non-Cashable Electronic Promotion Out" that accumulates the total value of non-cashable credits electronically transferred from the machine to a promotional account by means of an external connection between the machine and a cashless wagering system;

(r) Cashable Electronic Promotion Out. The machine must have a meter specifically labeled "Cashable Electronic Promotion Out" that accumulates the total

~~value of cashable credits electronically transferred from the machine to a promotional account by means of an external connection between the machine and a cashless wagering system;~~

~~(s) Coupon Promotion In. The machine must have a meter specifically labeled "Coupon Promotion In" that accumulates the total value of all slot machine coupons accepted by the machine;~~

~~(t) Coupon Promotion Out. The machine must have a meter specifically labeled "Coupon Promotion Out" that accumulates the total value of all slot machine coupons issued by the machine;~~

~~(u) Machine Paid External Bonus Payout. The machine must have a meter specifically labeled "Machine Paid External Bonus Payout" that accumulates the total value of additional amounts awarded as a result of an external bonusing system and paid by the slot machine;~~

~~(v) Attendant Paid External Bonus Payout. The machine must have a meter specifically labeled "Attendant Paid External Bonus Payout" that accumulates the total value of amounts awarded as a result of an external bonusing system paid by an attendant;~~

~~(w)Attendant Paid Progressive Payout. The machine must have a meter specifically labeled "Attendant Paid Progressive Payout" that accumulates the total value of credits paid by an attendant as a result of progressive awards that are not capable of being paid by the machine itself;~~

~~(x) Machine Paid Progressive Payout. The machine must have a meter specifically labeled "Machine Paid Progressive Payout" that accumulates the total value of credits paid as a result of progressive awards paid directly by the machine. This meter does not include awards paid as a result of an external bonusing system; and~~

~~(y) In-Session Feature Out. A gaming device that makes use of an in-session feature must have a meter specifically labeled "In-Session Feature Out" that accumulates all credits deducted from the credit meter paid as consideration for an in-session feature.~~

~~(z) Such other meters as may be required by the chairman.~~

~~Note: A gaming device that allows for additions to or deductions from the credit meter that would not otherwise be metered under the requirements of sections a-z must maintain meters sufficient to properly reconcile all additions to or deductions from the credit meter. Examples include, without limitation, fees paid to enter a contest or tournament; awards from a contest or tournament; and the use of wagering credits on wagering opportunities that would not otherwise be considered coin in for the gaming device.~~

~~2. Gaming devices that are unable to comply with the full requirements of Technical Standard 2.040(1) shall:~~

~~(a) For gaming devices that are unable to display the specific meter labels required, use a legend to indicate what information a specific meter accumulates.~~

~~(b) For gaming devices that are unable to incorporate meters (i) through (w) due to undue hardship on the gaming device manufacturer, not be required to incorporate such meters if this requirement is waived by the chairman.~~

~~3. All gaming devices must be equipped with a device, mechanism or method which retains the value of all the required meters in 2.040(1) in the event of power loss to the device.~~

~~4. Gaming devices must have electronically stored meters of at least 8 digits that record the number of games played:~~

~~(a) Since power reset;~~

~~(b) Since door close; and~~

~~(c) Since game initialization (RAM clear). The gaming device must provide the means for on-demand display of the stored information.~~

~~5. Unless a tilt condition or other malfunction exists, gaming devices must have meters in units equal to the denomination of the current game selection, in dollars and cents or in other units approved by the chairman, continuously displaying to a player the following information as it pertains to the current play or monetary transaction:~~

~~(a) The coins or credits wagered;~~

~~(b) The coins or credits won, if applicable;~~

~~(c) The coins paid by the hopper for a credit cash-out or a direct pay from a winning outcome; and~~

~~(d) The credits available for wagering, if applicable.~~

~~6. Electronically stored meter information required by this section must be preserved for a minimum of 72 hours after a power loss to the gaming device. 7. Electronically stored meter information required by this technical standard must be available for display on the gaming device.]~~ *[Drafter's Note: Superseded by Technical Standard 1.800.]*

~~[**2.045 Meters for system based games.**~~

~~1. Client stations must be able to display meters complying with the requirements of Regulation 2.040 that correspond to the play associated with the particular client station available, on demand, at each client station.~~

~~2. System portions of system based games must store, must be able to display and must be able to send to a slot accounting system, meter information that complies with the requirements of Regulation 2.040 that are associated with the play of each individual client station as well as for the system based game in its entirety.]~~ *[Drafter's Note: Superseded by Technical Standard 1.084.]*

~~[**2.047 Documentation requirements.** Documentation generated by a system based game or system portion of a system supported game shall be available for a user specified period. The system shall be designed so that documentation includes, at a minimum:~~

~~1. For each document:~~

~~(a) Document title;~~

~~(b) Version number of the current system software;~~

~~(c) Date or time period of activity;~~

~~(d) Date and time the document was generated; and~~

~~(e) Column and row titles (if applicable).~~

~~Note: All required reports must be generated by the system, even if the period specified contains no data to be presented. The report generated should indicate all required information and contain an indication of "No Activity" or similar message if no data appears for the period specified.]~~ *[Drafter's Note: Superseded by Technical Standard 1.050.]*

~~[**2.048 Documentation required of a system based game.**~~

~~1. Documentation generated for a system based game shall be available on a day, month, year to date basis and for at least a previous two year cumulative basis. The system shall be designed so that documentation may be created daily or on demand.~~

~~2. If mobile communications devices are used, the system based game shall be designed to display and create documentation on demand which includes the maximum number of socket IDs available to operate mobile communications devices during the period being reported.]~~ *[Drafter's Note: Superseded by Technical Standard 1.050.]*

~~[**2.049 Documentation required of a system supported game.** The system portion of a system supported game must provide, at a minimum, the following reports:~~

~~1. The system shall provide, on demand, a list of all conventional gaming device software, paytable, and denomination changes (Additions, Deletions, Status Changes, etc.) occurring during the reporting period, by machine number. The report must also include the date and time of each change, and the ID of the user performing the change.~~

~~2. The system shall provide a list of all conventional gaming device software available in the system library, including software description, date/time software was added to the library, date/time the theme was last downloaded to a gaming device, identification of the manufacturer, and ID of user who loaded the theme into the system library for the period being reported.]~~ *[Drafter's Note: Superseded by Technical Standard 1.050.]*

[**2.050 Credit play requirements.**

1. Cashable credits may be accumulated from wins, approved currency acceptors, electronic funds transfers, wagering account transfers, or any other transfers of cashable credits. Cashable credits may be accumulated directly from coin or token acceptance if the gaming device uses a coin/token acceptor that accepts or rejects on the basis of the metallic composition of the coins being used.

2. Wagering credits available for play must be wagered in the following order:

(a) Non-cashable credits;

(b) Cashable credits given away by a licensee; and

(c) All other credits.] *[Drafter's Note: Superseded by Technical Standard 1.050.]*

[**2.060 Award cards.** Award cards must be clearly identified and must be displayed at all times the device is available for play or be readily available for display on the device on demand by the player. Award cards must accurately state the award that will be paid through any combination of dispensed coin, credit awards, printed tickets, attendant pays, or electronic funds transfer when the player obtains a specific win. The award card must clearly indicate whether awards are designated in denominational units, dollars and cents, or some other unit. All award cards present on a gaming device must reflect any change in award value which may occur in the course of play.] *[Drafter's Note: Superseded by Technical Standard 1.600.]*

[**2.070 Jackpot Odds.** If the odds of hitting any advertised jackpot that is offered by a gaming device exceeds 100 million to one, the odds of the advertised jackpot must be prominently displayed on the award glass or video display.] *[Drafter's Note: Superseded by Technical Standard 1.600.]*

[TECHNICAL STANDARDS FOR GAMING DEVICES AND ASSOCIATED EQUIPMENT

STANDARD 4

MOBILE GAMING SYSTEMS]

[**4.010 User Authorization.**

1. Mobile gaming systems must employ a mechanism approved by the chairman which is capable of verifying that the mobile communications device is being operated by an authorized person.

2. The mechanism used to verify that the mobile communications device is being operated by an authorized person must be capable of being initiated both on demand and on a regular basis.

3. Authorization information transmitted by the mobile communications device to the mobile gaming system for identification purposes must be collected at the time of the request from the mobile gaming system and may not be stored on the mobile communications device.

4. The chairman, in his/her sole and absolute discretion, may waive the requirements of this section for mobile communications devices that cannot be reasonably moved by a patron.] *[Drafter's Note: Superseded by Technical Standard 1.500.]*

[**4.020 Mobile Communications Device Communication with a Mobile Gaming System.**

1. Communication between a mobile communications device and a mobile gaming system must be conducted using a method that securely links the mobile communications device to the mobile gaming system and authenticates both the mobile communications device and mobile gaming system as authorized to communicate over that link.

2. Mobile gaming system components which interface mobile communications devices must sufficiently isolate the mobile communications devices from the server portion of the mobile gaming system.

3. A mobile communications device must be designed or programmed such that it may only communicate with authorized mobile gaming systems.] *[Drafter's Note: Superseded by Technical Standard 1.500.]*

[**4.030 Location Restrictions.** Mobile gaming systems must be designed to restrict the gaming operation of the mobile communications device to public areas as defined by Regulation 5.220.] *[Drafter's Note: Superseded by Technical Standard 1.500.]*

[**4.040 Mobile Communications Device Volume.** Mobile communications devices must be capable of adjusting and/or muting the volume on the device.]