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APR 05 2013
OKLAHOMA SECRETARY
OF STATE



SETTLEMENT AGREEMENT BETWEEN
THE STATE OF OKLAHOMA
AND THE CHEYENNE-ARAPAHO TRIBES

This Settlement Agreement ("Agreement") is entered into by and between the State of Oklahoma ("State") and the Cheyenne-Arapaho Tribes of Oklahoma (collectively "Tribes") (all of which are hereafter collectively referred to as "the Parties"), through their authorized representatives.

RECITALS

A. The Parties have previously entered into a *State Tribal Gaming Compact*, published in the Federal Register, Vol. 70, No. 67, Friday, April 8, 2005, and filed with the Oklahoma Secretary of State on March 30, 2006.

B. The Tribes are currently operating an online website www.pokertribes.com. The State contends that as currently operated, this website, and other similar electronic practices, materially violate the State Tribal Gaming Compact.

C. Part 12 - Dispute Resolution of the State Tribal Gaming Compact states that it is the goal of the parties to "resolve all disputes amicably and voluntarily." Therefore, due to the high regard with which each sovereign holds the other, to avoid the delay, uncertainty, inconvenience, and expense of protracted arbitration and litigation of the above dispute, and in consideration of the mutual promises and obligations of this Agreement, the Parties hereby agree and covenant as follows.

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STIPULATIONS

1. IT IS HEREBY STIPULATED BY THE PARTIES, that any gaming by the Tribes, in all physical and electronic forms, is covered conduct under the State Tribal Gaming Compact.

2. IT IS HEREBY STIPULATED BY THE PARTIES, that gaming by the Tribes, regardless of the location of any portion of a gaming transaction, is covered conduct under the State Tribal Gaming Compact.

3. IT IS HEREBY STIPULATED BY THE PARTIES, that all forms of internet and/or electronic gaming by individual players, who are not physically present at all times in a facility located entirely on Indian lands as defined by IGRA, is covered conduct under the State Tribal Gaming Compact, but is not permissible and is prohibited if the individual player(s) are located or reside within the boundary of the United States and its territories during any portion of a gaming transaction.

4. IT IS HEREBY STIPULATED BY THE PARTIES, that all forms of internet and/or electronic gaming by individual players, who are not physically present at all times in a facility located entirely on Indian lands as defined by IGRA, is covered conduct under the State Tribal Gaming Compact, and is permissible if the individual player is located or resides outside the boundary of the United States and its territories during the entirety of a gaming transaction pursuant to the attached technical standards of play. *See Attached Addendum.*

5. IT IS HEREBY STIPULATED BY THE PARTIES, that violation of any of these stipulations, would constitute a *per se* material breach of the State Tribal Gaming Compact and be subject to the breach of contract remedy of termination. Such a termination would void any and all contracts and agreements between the State and the Tribes related to Class III Gaming.

6. IT IS HEREBY STIPULATED BY THE PARTIES, that these stipulations constitute the understanding of each of the Parties to the State Tribal Gaming Compact as to the intent and interpretation of existing Compact terms and shall be considered only statements of intent and/or clarification, not modifications of Compact terms. Further, these stipulations and this Settlement Agreement in no way expands or modifies Compact standards already in existence.

TERMS AND CONDITIONS

7. The Parties agree and acknowledge that Part 11 of the State Tribal Gaming Compact provides that in exchange for certain limitations on State action the Tribes are obligated to pay certain agreed fees. The Parties agree that the State has continuously maintained its' Compact obligations and the Tribes agree to pay certain fees associated with all forms of internet and/or electronic gaming by individual players, who are not physically present at all times in a facility located entirely on Indian lands as defined by IGRA, but are located or reside outside the boundary of the United States and its territories during the entirety of a gaming transaction.

8. The Tribes covenant and agree to pay to the State twenty percent (20%) of all gaming revenues generated by all forms of internet and/or electronic gaming by individual players, who are not physically present at all times in a facility located entirely on Indian lands as defined by IGRA, but are located or reside outside the boundary of the United States and its territories during the entirety of a gaming transaction.

9. The State agrees that any other federally recognized tribe with a valid State-Tribal Gaming Compact with the State may permissibly conduct internet and/or electronic gaming by individual players who are not physically present at all time in a facility located entirely on Indian lands as defined by IGRA, but are located or reside outside the boundary of the United States and its territories during the entirety of the gaming transaction only upon entering into a Settlement Agreement with the State.

10. The Parties further agree that twenty percent of all gaming revenues with respect to online activities that require no traditional brick and mortar operating expenses roughly equates to the ten percent maximum allowable under the State-Tribal Gaming Compact. Each party agrees that twenty percent is equitable.

11. The Tribes agree all payments shall be made in accordance with State Tribal Gaming Compact provisions and all depository financial transactions related hereto shall be done in a financial institution located within the State of Oklahoma.

12. Each Party agrees that any determination by a Court or Governmental Agency, whether Tribal, Federal, or State, that purports to sever ¶ 8 above will not effect this Agreement as both Parties agree that this Agreement is settlement of a dispute between the State and the Tribes and, as such, is not subject to any approval pursuant to the Indian Gaming Regulatory Act.

12. Each Party shall bear its own legal and other costs incurred in connection with this matter, including the preparation and negotiation of this Agreement.

13. Each Party and signatory to this Agreement represents that it freely and voluntarily enters into this Agreement without any degree of duress or compulsion.

14. This Agreement is governed by the choice of law provisions contained within the State Tribal Gaming Compact.

15. For purposes of construing this Agreement, this Agreement shall be deemed to have been drafted by both Parties to this Agreement and shall not, therefore, be construed against any Party for that reason in any subsequent dispute.

16. This Agreement constitutes the complete agreement between the Parties with respect to the issues addressed herein. This Agreement may not be amended except by signed written consent of the Parties.

17. The undersigned represent and warrant that they are fully authorized to execute this Agreement on behalf of the persons and entities indicated herein.

18. This Agreement may be executed in counterparts, each of which constitutes an original and all of which constitute one and the same Agreement.

19. This Agreement is binding on the Parties successors, transferees, heirs, and assigns.

20. State and Tribes agree that the approval of the National Indian Gaming Commission, the Bureau of Indian Affairs, and the Department of the Interior may be beneficial, but is not necessary for this Agreement to be in full force and effect.

21. State and Tribes agree that either Party may, at their discretion, submit this Settlement Agreement to the Department of the Interior for clarification purposes as an Addendum to the original State-Tribal Gaming Compact. Provided, however, that no action or inaction on behalf of the Department of the Interior is required for this Agreement to be in full force and effect.

22. Notwithstanding any other provision herein, the Parties agree that should any other entity or federally recognized tribe located within the State of Oklahoma be allowed, through agreement or otherwise, to operate internet gaming on terms of revenue and/or scope (including but not limited to geographical location of individual player(s)) different than those contemplated herein, such more favorable terms shall, at the option of the Tribes, automatically be incorporated herein.

23. This Agreement is effective on the date of signature of the last signatory to the Agreement (Effective Date of this Agreement). Facsimiles of signatures shall constitute acceptable, binding signatures for purposes of this Agreement.

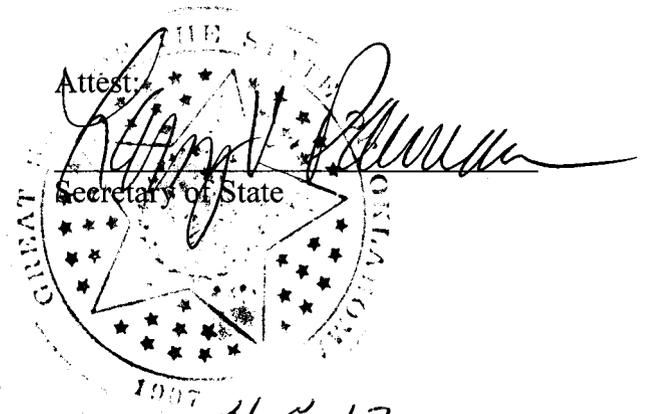
24. This Agreement will terminate in conjunction with the State-Tribe Gaming Compact between the State of Oklahoma and the Cheyenne and Arapaho Tribes, which was published in the Federal Register, Vol. 70, No. 67, Friday, April 8, 2005, and filed with the Oklahoma Secretary of State on March 30, 2006.

IT IS AGREED:

Each of the undersigned represents that they are duly authorized, and has the authority, to execute this agreement on behalf of the designated party.

STATE OF OKLAHOMA

Mary Fallin 4-5-13
MARY FALLIN, GOVERNOR DATE



CHEYENNE-ARAPAHO TRIBES

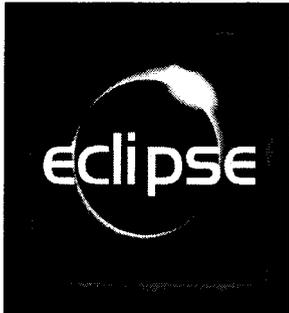
Janice Prairie Chief-Boswell 4-5-13
JANICE PRAIRIE-CHIEF BOSWELL, GOVERNOR DATE

Addendum to the Settlement Agreement between

The State of Oklahoma and

The Cheyenne-Arapaho Tribes of Oklahoma

April 5, 2013



eclipse

Compliance Testing

**Technical Standards for Internet Gaming Systems Utilized in International
(Non USA) Markets Where Internet Gaming is Not Illegal**

Version 1.02

April 3, 2013

Prepared by:

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Prepared for:

**The Cheyenne & Arapaho Tribes of Oklahoma
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Introduction

These standards address the compliance requirements for Internet Gaming Systems pursuant to the Tribal-State Compact. Such systems permit a patron to engage in gaming/gambling activities via the internet from designated geographically permitted locations, or more specifically, international locations where law and regulations permit and regulate Internet Gaming.

The purpose of these standards is to promote fairness and consistency in the performance and implementation of Internet Gaming, provided by Tribal Gaming Enterprises, from play to play and player to player; to provide clear notices and instructions to consumers as players; to strive for industry standards; to reduce the risk of allegations of conflict with laws and regulations as commonly known; and to lessen the likelihood of litigation pertaining to applicable laws.

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I Overview of Technical Standards for Internet Gaming Systems

A. Introduction

1. General Statements

The General Statements are as follows:

- a) Before being permitted to operate in the live environment, all Internet Gaming Systems (IGSs) must be tested to the applicable requirements set forth in these Technical Standards.
- b) The Tribal Gaming Commission may select an appropriate Independent Testing Laboratory (ITL), or other equivalent body, to perform this testing; provided that the ITL, or other equivalent body, has been approved by the Tribal Gaming Commission.
- c) The appointed testing body must provide their evaluation results to the Tribal Gaming Commission, who in turn must review these evaluation results, and where required, engage in subsequent discussion.
- d) The Tribal Gaming Commission (TGC), or the IGS Operator, may elect to perform internal quality assurance testing on an IGS; however, reliance on the test results for the purposes of certification will rest solely with the TGC.
- e) Although the appointed testing body may recommend the approval of any IGS for use by the Tribe, the ultimate authority to approve IGSs rests solely with the TGC. Only the TGC can issue a Certificate of Compliance.

2. Future Revisions to Standards

The TGC, in its sole discretion, may update these Technical Standards at any time, to reflect any changes in technology, testing methods, or known cheating methods, provided these updated Technical Standards are negotiated with and/or approved by the state of Oklahoma.

Note: The TGC reserves the right to modify (or selectively apply) the requirements set forth in these Technical Standards as deemed necessary to ensure the integrity of gaming. However, in order to ensure consistency and compliance, the TGC will not modify or selectively apply the requirements set forth in these Technical Standards without first providing reasonable prior written notice to ITLs, on an as-needed and case-by-case basis.

B. Acknowledgment of Other Technical Standards Reviewed

1. General Statement

These Technical Standards have been developed by reviewing and using portions of the following Standards:

- Alderney Gambling Control Commission (AGCC)'s Technical Standards named 'Control System Guidelines for Interactive Gaming'.
- British Columbia Gaming Policy and Enforcement Branch (GPEB)'s Technical Standards named 'TGS5 Technical Gaming Standards for Internet Gaming Systems (IGSs) Technical Standards Document (TSD) Version 1.0 dated September 15, 2009'.
- Government of Gibraltar Ordinance named 'Act No. 2005-72 Gambling Act dated October 26, 2006'.
- Gaming Laboratories International, Inc. Technical Standards named 'GLI-19 Interactive Gaming Systems version 1.0 dated May 31, 2011 (for Operators and Suppliers)'.
- Government of Malta Regulations named 'Subsidiary Legislation 438.04 Remote Gaming Regulations dated April 20, 2005 amended by L.N. 90 2011'.

C. Purpose of Technical Standards

1. Purpose

The Purpose of these Technical Standards is as follows:

- a) To eliminate subjective criteria in analyzing and certifying IGS operation.
- b) To test those criteria that impact the credibility and integrity of IGS operation from both the Revenue Collection and Player's play point of view.
- c) To create Technical Standards that will help ensure that IGSs operating in the live environment are fair, honest, secure, safe, auditable, and able to operate correctly.
- d) To recognize that non-gaming testing (such as Electrical Testing) should not be incorporated into these Technical Standards but left to appropriate test laboratories that specialize in that type of testing.
- e) To recognize that except where specifically identified in these Technical Standards, testing is not directed at health or safety matters. These matters are the responsibility of the manufacturer of the equipment.
- f) To construct Technical Standards that can be easily changed or modified to allow for new technology or functionality.
- g) To construct Technical Standards that do not specify any particular method or technology for any element or component of an IGS. The intent is instead to allow a wide range of methods and technologies to be used to comply with these Technical Standards, while at the same time, to encourage new methods and technologies to be developed.

2. No Limitation of Technology

One should be cautioned that these Technical Standards should not be read in such a way that limits the use of future technology. The Technical Standards should not be interpreted that if the technology is not mentioned, then it is not allowed. As new technology is developed, the TGC will review these Technical Standards, make any changes deemed necessary, and incorporate new minimum standards for the new technology.

D. Other Documents That May Apply

1. Other Technical Standards

The TGC may incorporate or adopt additional Technical Standards which will be given as full effect as possible. In the event of a conflict or inconsistency between additional Technical Standards, this document will be given precedence.

2. Legislated Acts or Regulations

These Technical Standards must not contradict any provisions of the following legislation:

- a) The Unlawful Internet Gambling Enforcement Act (UIGEA); and
- b) The Oklahoma Tribal-State Gaming Act;
- c) The Settlement Agreement between the State of Oklahoma and the Cheyenne-Arapaho Tribes.

3. Information Systems Security (ISS) Industry Standards

The Administrative Controls, Technical Controls and Physical & Environment Controls for the IGS must comply with all applicable and relevant ISS industry standards, as dictated by such sources as (listed in order by detail):

- a) AS / NZS 4360:2004 Risk Management,
- b) Control Objectives for Information and Related Technology (COBIT),
- c) Open Source Security Testing Methodology Manual (OSSTMM), and
- d) International Standards Organization (ISO) 17799 Standard – Information Technology – Code of Practice for Information Security Management.

II Submission Requirements

A. Introduction

1. General Statement

This section shall govern the types of information that are, or may be required to be submitted by the submitting party in order to have equipment tested to these Technical Standards. Where the information has not been submitted or is not otherwise in the possession of the TGC and/or the ITL, the submitting party shall be asked to supply additional information. Failure to supply the information can result in denial in whole or in part of the submission and/or lead to testing delays.

2. Previous Submission

Where the TGC and/or the ITL has been previously supplied with the information on a previous submission, duplicate documentation is NOT required, provided that the previous information is referred to by the submitting party, and those documents are easily located at the TGC's and/or the ITL's facilities. Every effort shall be made to reduce the redundancy of submission information.

B. Prototype (Full Submission) Submissions

1. General Statement

A Prototype (full submission) submission is a first time submission of a particular piece of hardware or software that has not previously been reviewed by the TGC and/or the ITL. For Modifications of previous submissions, including required changes to a previously submitted Prototype (full submission) certification, whether certified or pending certification, please refer to **Section II C - Submissions of Modifications (Partial Submissions) to a Previously Certified Item**.

Note: The testing of the submission will take place at the ITL's facilities, unless otherwise agreed upon by the ITL, TGC, IGS Operator and the IGS provider.

2. Submission Letter

Each request for certification shall include a submission letter/email, on company letterhead, forwarded to the TGC or designated ITL. The letter must include the following:

- a) A formal request for certification specifying the TGC or Tribe as the jurisdiction for which the gaming equipment will be approved; and
- b) The gaming equipment requested for certification. In the case of software, the submitting party shall include Identification (ID) numbers and revision levels, if applicable. In the case of proprietary hardware, the submitting party shall indicate the manufacturer, supplier, model number(s), part number(s) and revision number(s) of the associated components of hardware; and
- c) A contact person who will serve as the main point of contact for engineering questions raised during evaluation of the submission. This may be either the person who signed the letter or another specified contact.

3. Base Website Submission Requirements - General

'Base Website' refers to IGS elements that drive the features that are common to all of the games, and form the primary interface to the IGS for the player, the IGS Operator and TGC:

- a) The Base Website provides the player with the means to access an account, log in to/out of their account, modify their account information, access funds deposited in their account, request account activity statements/reports, and close their account. In addition, any web pages displayed to the player that relate to gaming offered on the IGS (excluding advertising), but are not an actual game screen, are considered to be part of the Base Website, and
- b) The Base Website provides the IGS Operator and the TGC with the means to review player accounts, enable / disable games, generate various gaming/financial transaction and account reports, input game outcomes for sports betting events (if permitted), enable/disable player accounts, and set any configurable parameters.

The following sections outline the submission requirements for a base website.

4. Base Website Submission Requirements - Source Code

The following requirements apply to all base website source code submitted to the ITL:

- a) All base website source code shall be reviewed by the ITL in a secure, controlled and supervised manner that is agreeable to the TGC, the ITL and the software vendor;
 - i) If source code is not physically maintained by the ITL, the software vendor shall ensure a method to preserve the code in an identifiable manner and permit the ITL to review such code as and when needed.
- b) All submitted base website source code shall contain the following information (at a minimum):
 - i) File / module / function name(s);
 - ii) Brief description of file / module / function purpose(s); and
 - iii) Edit History, including who modified it, when and why.
- c) All submitted base website source code shall be commented in an informative and useful manner; and
- d) All submitted base website source code shall be correct, complete and able to be compiled.

5. Base Website Submission Requirements - Documentation

The following documentation must be submitted for the base website:

- a) A list of all games hosted / offered on the base website,
- b) An all-inclusive functional description of the base website (including website home page and all website peripheral pages),
- c) Detailed functional descriptions of the following technical functionality available on the base website:
 - i) Player Account Access Information;
 - ii) Player Account Login (Username & Password);
 - iii) Player Interface to Player Account;
 - iv) Operator Interface to Player Account;
 - v) IGS Accounting and Financial Reporting Capabilities;
 - vi) Player Protection / Exclusion Systems;
 - vii) IGS Payment Systems;
 - viii) Player Location & Identity Verification Software; and
 - ix) Player Account Deactivation.

6. Game Submission Requirements - General

'Games' refer to IGS software that is specific to each individual game that is hosted / offered on the base website. Each game is to be treated as a separate and distinct entity. Any information and materials required to be submitted with respect to the games (as outlined herein) must be submitted for each individual game hosted / offered on the base website.

The following sections outline the submission requirements for the games.

7. Game Submission Requirements - Source Code

The following requirements apply to all game source code submitted to the ITL:

- a) All game source code shall be reviewed by the ITL in a secure, controlled and supervised manner that is agreeable to TGC, the ITL and the software vendor;
 - i) If source code is not physically maintained by the ITL, the software vendor shall ensure a method to preserve the code in an identifiable manner and permit the ITL to review such code as and when needed.
- b) All submitted game source code shall contain the following information (at a minimum):
 - i) File / module / function name(s);
 - ii) Brief description of file / module / function purpose(s); and
 - iii) Edit History, including who modified it, when and why.
- c) All submitted game source code shall be commented in an informative and useful manner; and
- d) All submitted game source code shall be correct, complete and able to be compiled.

8. Game Submission Requirements - Documentation

The following documentation must be submitted for each individual game hosted / offered on the base website:

- a) Game name;
- b) Game version number(s);
- c) Paytable version number(s);
- d) Detailed game rules, including all options and bonus features;
- e) Detailed breakdown of all paytables, payouts and mapped symbols present in the game; and
- f) A formal mathematical treatise of the derivation of the theoretical Percentage Return to Player (%RTP) of the game.

9. Game Submission Requirements - Emulation Capability

The purpose of 'Emulation Capability' is to facilitate the testing process.

Emulation Capability is a mode of game operation that is alternate to the standard / live version of the game (i.e.: to be activated and operated in the test environment only) whereby the game outcomes can be artificially introduced into the system by the user (i.e.: the tester), processed by the same game logic as the standard / live version of the game, and then displayed to the user for testing purposes.

Unless a game makes use only of game outcomes that are commonplace throughout the course of standard game play, it must come complete with 'Emulation Capability' for testing purposes.

10. Random Number Generator (RNG) Submission Requirements - General

'RNG' refers to IGS software and/or hardware that determines random outcomes for use by all of the games hosted/offered on the base website.

The following sections outline the submission requirements for an RNG.

11. Random Number Generator (RNG) Submission Requirements - Source Code

The following requirements apply to all RNG source code submitted to the ITL:

- a) All RNG source code shall be reviewed by the ITL in a secure, controlled and supervised manner that is agreeable to TGC, the ITL and the software vendor;
 - i) If source code is not physically maintained by the ITL, the software vendor shall ensure a method to preserve the code in an identifiable manner and permit the ITL to review such code as and when needed.
- b) All submitted RNG source code shall contain the following information (at a minimum):
 - i) File / module / function name(s);
 - ii) Brief description of file / module / function purpose(s); and
 - iii) Edit History, including who modified it, when and why.
- c) All submitted RNG source code shall be commented in an informative and useful manner; and
- d) All submitted RNG source code shall be correct, complete and able to be compiled.

12. Random Number Generator (RNG) Submission Requirements - Documentation

The following documentation must be submitted for the RNG:

- a) A list of all games utilized by the RNG (including the associated mathematical Degrees of Freedom (DOFs) for each game);
- b) For hardware-based RNGs:
 - i) Type of hardware device used;
 - ii) Technical specifications for hardware device;
 - iii) Methods of connecting hardware device to IGS software; and
 - iv) Details of all RNG / game implementation, including methods of scaling and mapping.
- c) For software-based RNGs:
 - i) Type of mathematical algorithm used;
 - ii) Full details, in technical terms, of random number generation process and mathematical algorithm theory;

- iii) Details of the mathematical algorithm's period;
- iv) Details of the mathematical algorithm's range;
- v) Details of the methods for seeding (and re-seeding);
- vi) Details of the methods for background cycling / activity; and
- vii) Details of all RNG / game implementation, including methods of scaling and mapping.

13. ISS Submission Requirements - General

'ISS' refers to the Administrative Controls, Technical Controls and Physical & Environment Controls necessary for the secure, safe and auditable operation of the IGS by the TGC (to be audited by the ITL in a manner and location suitable to the TGC and the ITL).

System overview diagrams and schematics that describe the basic architecture and topology of the IGS, and how that computer network is interconnected, must be submitted for the ISS. This documentation should include (but not necessarily be limited to) details of each of the following – where applicable:

- a) Firewalls and Intrusion Detection Systems (IDS);
- b) Servers and Operating Systems (OS);
- c) Hubs, Switches and Routers;
- d) Relevant Internet Protocol (IP) Addresses;
- e) Gateway and Access Points;
- f) Application Entry Points and Web Forms (for application security);
- g) Local Area Network (LAN) and Virtual Local Area Network (VLAN); and
- h) All Documented Security Policies and Procedures.

C. Submissions of Modifications (Partial Submissions) to a Previously Certified Item

1. General Statement

Any update submissions (i.e.: revisions to existing hardware, software or control systems that are currently under review, certified or have been reviewed and not certified), will require review and re-testing by an authorized ITL to verify compliance with the applicable requirements set forth in these Technical Standards, as per **Section I A.1. - General Statements**. Where deemed necessary by the TGC or ITL, the following information shall be required to process the update submission in addition to the requirements set forth in **Section II B. 2. - Submission Letter**.

2. Base Website Re-Submission Requirements

A base website re-submission must include a detailed description of the software change(s) and module(s) affected, from a functional perspective and a source code perspective, as well as the updated source code package for the IGS.

Where applicable, updated base website functional specification documents (as per **Section II B. 3. b)**) must also be submitted.

3. Game Re-Submission Requirements

A game re-submission must include a detailed description of the software change(s) and module(s) affected, from both a functional perspective and a source code perspective, as well as the updated source code package for the IGS.

Where applicable, updated game design documents (as per **Section II B. 4. b)**) must also be submitted.

4. RNG Re-Submission Requirements

An RNG re-submission must include a detailed description of the software change(s) and module(s) affected, from a functional perspective and a source code perspective, as well as the updated source code package for the IGS.

Where applicable, updated RNG design and implementation documents (as per **Section II B. 5. b)**) must also be submitted.

5. ISS Re-Submission Requirements

An ISS re-submission must include a detailed description of the system change(s) and component(s) affected, as well as the reason(s) for the changes implemented by the IGS Operator (if applicable).

Where applicable, updated ISS design and configuration documents (as per **Section II B. 6.**) must also be submitted.

D. Joint Venture Submissions

1. General Statement

For the purposes of these Technical Standards, an IGS is considered a joint venture when two or more entities are involved in the manufacturing of one system (note: this is different from the legal definition of the term ‘joint venture’). The following procedures must be followed for such submissions:

- a) One entity will prepare and submit the entire submission, even if they are using components from other entities, and must identify all components. This will be the primary contact for the submission.
- b) The entity submitting an approval request must do so on their letterhead. The TGC and/or the ITL will delegate an internal file number in this entity’s name and may bill this entity for all costs incurred throughout the evaluation and approval process.
- c) The primary contact will be called when questions arise. However, the TGC and/or the ITL will work with all entities involved, completing the review.
- d) Those individual entities who submit services that have a direct impact on the integrity of the game must be registered and/or licensed by the TGC.
- e) Upon completion, it is the primary contact company that will receive the approval letter, provided the submission meets the requirements set out in these Technical Standards as well as those requirements set out in any other applicable Standards. The primary contact company may then release copies of the approval letter to the associated entities.

III Administrative Requirements

A. Player Registration and Account Requirements

1. Account Funding

Account funding and withdrawal must be conducted via a method approved by the Tribal Gaming Commission. Patrons wishing to conduct a financial transaction must have an established account; the creation of such account must require a valid government-issued form of identification. Financial transactions must be conducted by a means conforming with applicable laws.

2. Agreement

- a) Part of the player's account access process must be an agreement to the terms and conditions of game play.
- b) The player can only advance to "cash" play if they take an action to acknowledge the agreement.

3. Verification

- a) Players must hold a valid account before commencement of gaming.
- b) The IGS must reasonably identify the location, age and identity of a player before allowing them to bet.
- c) The IGS must have the reasonable capability to deny access to under-aged persons.
- d) The IGS must have the reasonable capability to deny access to persons residing outside of the permissible geographic location.
- e) Player access to an IGS must involve at least a User ID and Password.
- f) Initial passwords are set by the player; however, any subsequent password resets must be issued in a secure manner.

4. Challenge Questions

- a) Players must be asked to nominate a number of challenge questions (and answers) at the time of registration.
- b) The challenge questions must be used by the IGS (or by the help-desk staff) in the event the password or PIN is forgotten (i.e.: to identify the person requesting to access the account or change the password).
- c) Challenge questions may be randomly chosen.

5. Under Aged Persons

- a) No bets shall be accepted from a player unless that person has been registered as a player who is 18 years old, or older depending on jurisdictional requirements.
- b) The IGS must be capable of generating a detailed report of any player's activity (as per **Section IV C. 2.**), such that if a player is ever found to be underage, the IGS Operator has all of the necessary information to take whatever action is deemed appropriate by the TGC.
- c) The IGS Operator must have in place a documented policy and / or procedure for players that are found to be underage.

6. Controls over Accepting Bets

- a) The IGS must not permit a person to participate as a player in an authorized game unless the person is registered as a player.
- b) The IGS must not accept a wager from a player in an authorized game unless a player's account has been established in the name of the player, and there are adequate funds in the account to cover the amount of the wager.

7. Player Accounts

- a) A player must only be permitted to have one active account at a time.
- b) A new player account will be created by depositing funds in a manner acceptable to the TGC and documented in the Player Agreement.
- c) A new account for a person must not be created if the reason for the deactivation of a previous account indicates that the person must not be permitted to establish another account.
- d) Inactive accounts holding moneys in the IGS must be protected against forms of illicit access or removal. This includes internal access by the IGS Operator staff, and external access by ‘hackers’ or other unauthorized parties.
- e) Withdrawals from a player’s account on the IGS must be made in the name of the registered player, or made payable to the registered player and forwarded to the player’s address. The name and address must be the same as held in the player registration details.
- g) Any funds left in a player’s account that is to be de-activated are to be remitted in the name of the owner of the account.

8. Security

- a) Player accounts on the IGS must be secured against unauthorized access or update other than by approved methods. This includes internal access by the IGS Operator staff, and external access by ‘hackers’ or other unauthorized parties.

9. User Inactivity Timeout

- a) Unless the IGS is capable of ‘polling’ to confirm user connections, it must implement a 30-minute user inactivity timeout.
- b) If a session is terminated due to a user inactivity timeout, the end player device must notify the player of session termination. No further game play is permitted until the IGS and the end player device establish a new session.

10. Player Activity Statement

- a) On request by the player, a transaction report must display winnings, losses and duration of play for each day of the period requested, and totals of these details.
- b) Statements must include sufficient information to allow the player to reconcile the statement against their own records to the session level.

11. Player Funds Maintenance

- a) All deposit, withdrawal, transfer or adjustment transactions must be maintained in a system audit log.
- b) A player must be able to withdraw funds up to the current balance of their account at any time.
- c) The IGS must not permit the withdrawal of funds in excess of the player’s balance.

12. Player Game Session

- a) The IGS must give the player an electronic identifier such as a digital certificate or an account description and a password to establish a session.
- b) A session finishes if:
 - i) The player notifies the IGS that the session is finished (i.e.: logs out),
 - ii) A player-inactivity timeout is reached, or
 - iii) The TGC or IGS Operator terminates the session.

13. Unclaimed Funds from Inactive Accounts

- a) A documented process must be put in place to deal with unclaimed funds from inactive accounts. An account is considered to be inactive if the player has not logged into the account for a time period to be specified by the TGC in the documented and published Terms & Conditions for the IGS.

B. Anti-Money Laundering Requirements

1. General Statement

In support of the principles of the Financial Crimes Enforcement Network (FinCEN), the TGC and ITL must ensure that the IGS software is designed to satisfy the following objectives:

- a) The IGS must be capable of closing player accounts.
- b) The IGS must be capable of imposing deposit limits on players.
- c) The IGS must be capable of logging and reporting player account activity, including:
 - i) Opening and closing in short time frames, and
 - ii) Deposits and withdraws without associated game play.

C. Privacy Requirements

1. General Statement

The IGS must have a privacy policy posted on the web site and readily accessible to the player.

2. Use of Data

- a) Any information about the current state of player accounts must be kept confidential by the IGS Operator, except where the release of that information is required by law.
- b) If the IGS processes any part of the registration online, the IGS must ensure that access to the information is restricted to the person supplying the information and to authorized IGS Operator staff. This includes internal access with IGS Operator access control lists, and external access with communications security with username and password.

3. Consent

- a) In order to complete the registration process, the player must offer consent to the privacy policy by taking an action, such as checking a box in the privacy policy, or selecting an acceptance button.
- b) The default of consent shall always be NOT to accept.
- c) Where data is to be used for purposes not directly related to the offering of a gaming product (including, but not necessarily limited to, the use of such data for inclusion in a mailing list), additional specific consent must be granted by the player.
- d) The withholding of this additional specific consent by a person must not in itself be a ground for the IGS Operator refusing to conduct business with the person.
- e) Where the IGS is inseparably integrated with social media, a single consent to a privacy policy shall be acceptable.

4. Cookies

- a) Where cookies are used by the IGS, the player must be informed of the usage.

D. Content, Advertising and Marketing

1. General Statement

- a) All information within the IGS that is displayed or otherwise conveyed to the player must not be in any manner obscene. For the purposes of these Technical Standards, any depiction whereby a dominant characteristic of which is the undue exploitation of sex, or of sex, and any one or more of the following subjects, namely: crime; horror; cruelty; and violence, shall be deemed to be obscene.
- b) It should be noted that it may not be possible for an ITL to verify the IGS as complying with these standards regarding obscenity. However, any obvious breaches must be reported by the ITL as part of their standard testing process.

E. Player Protection Requirements

1. General Information

- a) The IGS website must address issues such as a responsible gaming messaging, the odds of winning, and protection of minors.
- b) The base website entry window must provide the player with a link to a player protection / responsible gaming page.
- c) The player protection / responsible gaming page must contain at a minimum:
 - i) A responsible gambling message, such as *“Bet with your head, not over it”* or *“Know your limit, play within it”*;
 - ii) A link to the National Center for Responsible Gambling website (www.ncrg.org);
 - iii) Information about potential risks associated with gambling, and where to get help for a gambling problem;
 - iv) Meaningful and accurate information about games, rules of play and general odds of winning (detailed information on the odds of winning on specific games may be available on a website);
 - v) Information about self-exclusion programs;
 - vi) A link to the terms and conditions the player agreed to be bound to under the “Player Agreement” and by entering and playing on the site;
 - vii) A link to the IGS Operator’s privacy policy;
 - viii) A link to the TGC website; and
 - ix) All information in (iii) and (v) should be available in languages that primarily reflect the customer base (i.e. American English). Reasonable efforts will be made to make information in (iv) available in languages that reflect the customer base (i.e. American English).
- d) All account related windows on the site must provide a readily accessible link to the player protection / responsible gaming page.
- e) The player protection / responsible gaming page must be readily accessible from any screen available where game play may occur.

2. Last Log in Time Display

- a) When a player logs in to the IGS, the last time they logged in must be displayed.

3. Security Information

- a) The rules of play must advise the player to keep their password and login ID secure.
- b) The rules of play must advise the player to be aware of what mechanisms exist to detect if there is unauthorized use of their account, such as observing the Last Log in Time Display, and reviewing account statements against known deposits/withdrawals.

4. Session Duration Reminders

- a) Upon initial login after account registration, the player must be required to choose a timeframe for session duration reminders. It is acceptable for this choice to include a default option for the player to select.
- b) The available options for timeframes for session duration reminders must include one hour, three hours, and at least one value in between.
- c) During a session, after the user-configured timeframe has elapsed, a message must appear on the screen clearly advising the player how long they have been playing. The message must either: i) be displayed immediately upon completion of the current game in progress; or ii) be displayed immediately upon the player’s next interaction with the game or website.
- d) Once the message has been displayed, the player must be required to take special action to continue gambling, such as checking a box, or selecting an acceptance button.
- e) Thereafter, where the player chooses to continue gambling, upon each subsequent cycle of the user-configured timeframe, steps c) and d) above must be repeated. Each associated message must advise the player of the total amount of time that they have been playing.

5. Self-Exclusion

- a) Players must be provided with an easy and obvious mechanism to self-exclude from game play.
- b) At a minimum, this self-exclusion mechanism must be accessible from the player protection / responsible gaming page.
- c) The player must be provided with the option to self-exclude as defined in the Player Agreement. The IGS must ensure that:
 - i) Immediately upon receiving the self-exclusion order, no new bets or deposits are accepted from that player;
 - ii) The self-excluded player must not be prevented from withdrawing any or all of their account balance, provided that the system acknowledges that the funds have cleared; and
 - iii) Players are provided with a mechanism to revoke the self-exclusion order, using a special process to be identified by the IGS Operator and the TGC.
- d) Note the following requirements from **Section III A. 6. Player Accounts** of this document: *“A player must only be permitted to have one active account at a time”* and *“A new account for a person must not be created if the reason for the deactivation of a previous account indicates that the person must not be permitted to establish another account”*. Accordingly, in the case of a self-exclusion, a player must not be permitted to establish another account.

6. Involuntary Exclusion

- a) The IGS must provide a mechanism by which the IGS Operator and/or the TGC staff can exclude a player from the IGS under the terms of the Player Agreement.
- b) Immediately upon activating the exclusion, no new bets or deposits are to be accepted from that player, until such time as the exclusion has been revoked.
- c) During the exclusion period, the player must not be prevented from withdrawing any or all of their account balance, provided that the system acknowledges that the funds have cleared, and that the reason(s) for exclusion would not prohibit a withdraw.

7. Self-Limitation

- a) The IGS must provide players with an easy and obvious mechanism to self-limit their game play.
- b) At a minimum, this self-limitation mechanism must be accessible from the player protection / responsible gaming page.
- c) Immediately upon receiving any self-limitation order, the IGS must ensure that all specified limits are correctly implemented in the system.
- d) It is acceptable that self-limitations take effect the next time that the player logs in to the IGS; however, the player must be clearly informed that this is the case upon setting the limit.
- e) Once established by a player, it must only be possible to reduce the severity of self-limitations upon seven days notice.
- f) Self-limitations must not be compromised by external time events, such as leap-years and daylight savings adjustments.
- g) Self-limitations must not be compromised by internal status events, such as self-exclusion orders and self-exclusion revocations.

8. Imposed Limitations

- a) The IGS must have a mechanism in place that permits the IGS Operator or TGC to set limits on player accounts.
- b) Players must be notified in advance of any IGS Operator or TGC-imposed limits.

9. Transaction Logging

- a) Adequate on-site transaction logging of player accounts must occur in order to ensure that dispute resolution is transparent (for detailed requirements, please refer to **Section IV C. - Data Logging Requirements** of this document).
- b) Adequate backups of player account transactions must occur in order to ensure all player account balances can be recovered in the event of a disaster rendering the IGS inoperable (for detailed requirements, please refer to **Section IV C. - Data Logging Requirements** of this document).

10. Malfunction

- a) Any unrecoverable malfunction of gaming hardware / software must result in the voiding of affected game bets and pays, and the return of affected bets.
- b) The terms and conditions of game play must clearly define the rules by which these unrecoverable malfunctions of gaming hardware / software are addressed.

IV Software Requirements

A. RNG Requirements

1. General Statement

- a) With respect to the application of the RNG requirements listed in this document, it is accepted that predictability is not relevant to certain applications, such as bingo card generation. The TGC, in conjunction with the appointed ITL, must determine whether predictability is relevant to the application being tested, and apply these requirements accordingly.
- b) Any RNG outcomes used for game symbol selection / game outcome determination must be proven to:
 - i) Be statistically independent;
 - ii) Be fairly distributed (within statistically expected bounds) over their range;
 - iii) Pass various recognized statistical tests; and
 - iv) Be non-predictable, even from an attacker who has knowledge of the algorithm, the algorithm's implementation within the game(s) / application(s) to which it is connected, and the initial value used to seed the algorithm in the first instance.
- c) Game symbol selection / game outcome determination must not be influenced, affected or controlled by anything other than numerical values derived from the RNG in conjunction with the rules of the game. Note: this does not prohibit metamorphic games or Progressive Jackpots determined by means other than individual game outcomes from being considered on a case-by-case basis.
- d) As game symbols are selected / game outcomes are determined, they must be immediately used as directed by the rules of the game (i.e.: they are not to be discarded due to adaptive behavior by the game).
- e) Where the rules of the game require a sequence of game symbols / game outcomes to be set up in advance, these entities must not be re-sequenced except as provided by the rules of the game.

2. Scaling

- a) The methods of scaling (i.e.: converting raw RNG outcomes of a greater range into scaled RNG outcomes of a lesser range) must be linear, and must not introduce any bias, pattern or predictability.
- b) The scaled RNG outcomes must be proven to pass various recognized statistical tests as defined in **Section IV A. 7.** of this document.

3. Mapping

- a) The methods of mapping (i.e.: converting scaled RNG outcomes into actual game symbols / game outcomes) must also be linear. Note: it is accepted that certain game implementations require exemption from this requirement, such as instances where mapping is purposefully used to create the necessary probabilities for various game outcomes, as provided by the rules of the game.
- b) The mapped RNG outcomes must be proven to pass various recognized statistical tests as defined in **Section IV A. 7.** of this document.

4. Choice of RNG

The RNG can either be software-based, hardware-based, or a combination of both, at the discretion of the IGS Operator. However, the final implementation must comply with the requirements of this document.

5. Hardware-Based RNGs

Owing to their physical nature, hardware-based RNGs can potentially 'break down' over time. Accordingly, failure of a hardware-based RNG could have serious consequences for the IGS, as games may become predictable or exhibit non-fair distribution. If a hardware-based RNG is used, some form of dynamic / active, real-time monitoring of the output is required, such that game play is disabled in the event that a failure is detected.

6. Software-Based RNGs

The following requirements apply only to software-based RNGs.

a) Period

- i) The period of the RNG, in conjunction with the methods of implementing the RNG outcomes, must be sufficiently large to ensure that all game outcome combinations are possible for the given games / applications.

b) Range

- i) The range of raw values produced by the RNG must be sufficiently large to provide adequate precision and flexibility when scaling and mapping.

c) Seeding / Re-Seeding

- i) The methods of seeding / re-seeding implemented in the RNG must ensure that all seed values are determined securely, and that the resultant sequence of game outcomes is not predictable.
- ii) Unless proven to have no adverse effect on the randomness of the RNG outcomes, seeding and reseeding must be kept to an absolute minimum.
- iii) If for any reason the background cycling / activity of the RNG is interrupted, the next seed value for the RNG must be a function of the value produced by the RNG immediately prior to the interruption.

d) Background Cycling / Activity

- i) In order to ensure that RNG outcomes cannot be predicted, adequate background cycling / activity must be implemented in between games.
- ii) Wherever a game outcome is made up of multiple mapped RNG values, background cycling / activity must be implemented during the game (i.e.: in between the selection of each mapped RNG value) in order to ensure that the game outcome is not comprised of sequential mapped RNG outcomes.
- iii) The rate of background cycling / activity must be sufficiently random in and of itself to prevent prediction.

7. Recognized Statistical Tests of Randomness

The following is a list of gaming industry accepted and recognized statistical tests of randomness. All Random Number Generators utilized in the determination of game outcome(s), must pass the Mandatory Tests of Randomness included below, and may also be subjected to passing one or more of the Optional Tests of Randomness.

a) Mandatory Statistical Tests Used on Random Number Generators

Well defined, industry-accepted standard tests must be used to verify the statistical independence of the game outcomes determined by the RNG. The random number generator must pass the following tests with a 99% confidence level:

i) Chi-Squared Test

This test ascertains the frequency of occurrence for each number selected. The generated Chi-Squared statistics compare actual with expected frequency of occurrence of each possible outcome. For each possible outcome, Chi-Squared statistics are a function of the difference between observed frequency of occurrence, as produced by the RNG, and the expected frequency of occurrence.

ii) Correlation Test

This test measures the relationship between numbers within a game and between different games. If a random number generator passes this test, previous outcomes will have no influence on future outcomes.

iii) **Runs Test**

This test measures any cyclical patterns that may exist in the analyzed data. A run is defined as a series of increasing values or a series of decreasing values. The number of increasing, or decreasing values is the length of the run. For a random number generator that passes this test it will not be possible to predict whether the next number drawn will be higher or lower than the previous number.

b) **Optional Statistical Tests which May be Conducted on Random Number Generators**

Additional tests to determine randomness may be performed at the ITL's discretion. If conducted, the results of these tests must satisfy the 99% confidence level. These optional tests include, but are not limited to, the following:

- i) Spectral test;
- ii) Equi-distribution (frequency) test;
- iii) Gap test;
- iv) Overlaps test;
- v) Poker test;
- vi) Coupon collector's test;
- vii) Permutation test;
- viii) Kolmogorov-Smirnov test;
- ix) Adjacency criterion tests;
- x) Order statistic test;
- xi) Interplay correlation test; and
- xii) Tests on subsequences.

B. Game Requirements

1. Game Fairness

- a) Games must not be designed to give the player a false expectation of better odds by falsely representing any occurrence or event.
- b) Near-miss games that are specifically designed to give the player the perception that they almost won the top prize (i.e.: with a frequency greater than that which would naturally occur given the game rules), in order to induce the player to continue gambling, are not permitted.
- c) Games that are designed to give the player the perception that they have control over the game due to player skill, when they actually do not (i.e.: the game outcome is fully random), are not permitted. Note: It is permitted for a game to be designed to give the player the perception that they have control over the game due to player luck, when they actually do not, are permitted, provided that the player has been informed in the game rules that their choices cannot actually influence the outcome of the game.
- d) Each game must have associated rules and instructions of play.
- e) The rules of the game, instructions of play, and general odds of winning must be available online to the player.
- f) The rules of the game must not be unfair or misleading.
- g) Game rules must not be changed during a session unless effective notification is given to player.
- h) Game rules must not be changed between a player making a bet and the decision and payment of winnings for the bet.
- i) Games must operate and interact with the player strictly in accordance with the published rules.

2. Game Play Duration

The minimum duration for a single game is to be 3 seconds.

3. No Adaptive Behavior by Games

- a) A player who plays a game that is represented as being based on a random event must have an equally likely chance of obtaining any possible combination every time a game is played (except for that which is provided in the game rules). That is, it is unacceptable for the %RTP to be manipulated by the system or manual intervention to maintain a constant %RTP.

4. No Forced Game Play

- a) The player must not be forced to play a game just by selecting that game.
- b) The IGS must detect and reject repeated “play” messages that arise from impatient players pressing “play” more than once while awaiting a response from the IGS.

5. Game Play Requirements

- a) The following information must be displayed on the game screen, or readily accessible via a hot-link:
 - i) Game name,
 - ii) Instructions (and restrictions) on game play, including a payable for all prizes and special features,
 - iii) Current account balance displayed in currency (as opposed to credits), and
 - iv) Unit and total bet.
- b) The following principles must be followed where games are provided in different language versions:
 - i) Each language version of the same game must provide the same %RTPs,
 - ii) Each language version must be consistent with the instructions (and restrictions) for that version,
 - iii) All game information must be provided in the language specified for that version, and
 - iv) The game instructions (and restrictions) must carry the same meaning across all language versions so that no one version is advantaged or disadvantaged.

6. Game Design

- a) All critical functions, including the generation of the outcome of any game (and resultant %RTP), must be generated by the IGS, independently of the end player device.
- b) Game outcome determination must not be affected by the effective bandwidth, link utilization, bit error rate or other characteristic of the communications channel between the IGS and the end player device.
- c) Multiple variations (i.e.: %RTP) of one game are not acceptable, except where those alternate variations have been approved by the TGC.
- d) The %RTP for each game must be specified by the IGS Operator in the game documentation. The minimum %RTP for any game offered on an IGS is 75%, unless the game exactly replicates a traditional casino table game.
- e) Where a progressive prize is offered, the calculated %RTP must include such factors as the base game %RTP, progressive base value, progressive increment rate, etc...
- f) %RTP for a game must be demonstrable, as well as theoretical, and must be of a similar %RTP to those games typically found in traditional / land-based gambling venues / sites. Where a game does not have a traditional / land-based equivalent, the TGC reserves the right to withhold game approval if, in its judgment, and having regard to all circumstances, the %RTP is not considered to be fair and reasonable.
- g) Where a game is represented or implied to include a simulation of a real-life physical device, the behavior of the simulation must be identical to the expected behavior of the real-life physical device. That is:
 - i) The visual representation of the simulation must correspond to the features of the real-life physical device,
 - ii) The probability of any event occurring in the simulation that affects the outcome of the game must be equivalent to the real-life physical device,
 - iii) Where the game simulates multiple real-life physical devices that would normally be expected to be independent of one another, each simulation must be independent of the other simulations, and

- iv) Where the game simulates real-life physical devices that have no memory of previous events, the behavior of the simulations must be independent of (i.e.: not correlated with) their previous behavior, so as to be non-adaptive and non-predictable in practice.
- h) Games that are not completely independent of game play history (i.e.: metamorphic games) must:
 - i) Display clearly to the player which game rules apply to the current game state,
 - ii) Display to the player sufficient information to indicate the current status towards the triggering of the next metamorphosis of the game. If the game collects tokens, the number of tokens missing or the total number required to trigger the next metamorphosis must be indicated, along with the number of tokens collected at that point.
 - iii) Not adjust the likelihood of a metamorphosis occurring based on the history of prizes obtained in previous games. Games must not adapt their %RTP based on past game outcomes.
 - iv) Not be designed in such a manner to be misleading to the player.

7. Game Play

- a) Game play that requires monetary payment (i.e.: play-for-real) can only occur during a game session (i.e.: after the player has logged in, and before the player has logged out).
- b) Where hot-links are used to supply information as required by these Technical Standards, game play must not occur if the hot-linked information is not available. These hot-links must be checked (either manually or automatically) at least daily.
 - i) Where a broken hot-link is uncovered, and the hot-link relates to game-specific information only, then the associated game(s) must be taken offline (either manually or automatically) if the hot-link is not repaired within one hour.
 - ii) Where a broken hot-link is uncovered, and the hot-link relates to the website as a whole, then all games must be taken offline (either manually or automatically) if the hot-link is not repaired within twelve hours.
- c) In the event that a game in current play cannot be continued due solely to an IGS action, all bets must be returned to the player(s) of that game.
- d) If the IGS extends an invitation to play a particular game, it must accept all legitimate wagers (as defined by rules) for that game.
- e) The methodology employed by a player to select and play a particular game must be unambiguous.
- f) The IGS must clearly inform the players of all games available at that time.
- g) The player must at all times be made aware of which game has been selected for play or is being played.
- h) It must not be possible to start a new game before the current play is completed and all relevant meters have been updated on the IGS. Some exceptions may be granted in instances where, for example:
 - i) The TGC elects to conduct off-line, manual consideration of large payouts (i.e.: where a player chooses to continue gaming while a large payout is pending), or
 - ii) The game in question is based on a future event, such as with keno, or a periodic bingo drawing.
- i) A 'replay last game' facility must be provided, either as a re-enactment or by description. The replay must clearly indicate that it is a replay of the previous game, and must provide the following information (at a minimum):
 - i) The date and time the game was played,
 - ii) The display associated with the final outcome of the game, either graphically or via a clear text message,
 - iii) Total player cash / credits at start of play,
 - iv) Total player cash / credits at end of play,
 - v) Amount bet including any multipliers,
 - vi) Total cash / credits won for the prize resulting from the last play (including Progressive Jackpots),
 - vii) Any player choices involved in the game outcome, and
 - viii) Results of any intermediate game phases, such as gambles or feature games.

8. Game Disable

- a) The IGS must provide a mechanism for each game variation offered on the IGS to be disabled, individually, by the TGC.
- b) When a game variation is disabled, all players playing that game variation must be permitted to conclude their current game in play.
- c) Once a game variation is disabled, it must not be accessible to players after their current game has concluded.
- d) The IGS must provide full audit trails when disabling a game variation that is currently in play.
- e) The IGS must also provide a mechanism for all gaming offered on the IGS to be disabled, as a whole, by the TGC – with full consideration to the associated requirements listed above.
- f) The IGS must also provide a mechanism for each active game session on the IGS to be disabled, individually, by the TGC – with full consideration to the associated requirements listed above.

9. Incomplete Games

- a) The IGS must provide a mechanism for a player to complete an incomplete game before a player is permitted to participate in any other game. Incomplete games include:
 - i) Loss of communications between IGS and end player device,
 - ii) IGS restart,
 - iii) Game disabled by IGS,
 - iv) End player device restart, and
 - v) Abnormal termination of gambling application on end player device.
- b) Unless allowed for in the specific section in the Appendices of these Standards, upon reconnection by the player, the IGS must present the player the incomplete game for completion.
- c) Bets associated with a partially complete game that can be continued must be held by the IGS until the game completes. Player accounts must reflect any funds held in incomplete games.
- d) Game rules must specify that bets placed but remaining undecided in incomplete games will become void, and will be handled as per **Section III A. 13 - Unclaimed Funds from Inactive Accounts**.

10. Game Artwork (Information Displayed)

This section refers to all forms of graphical and auditory information that is sent to the end player device for presentation to the player. The combination of all relevant information being presented to the player must comply with these requirements.

a) Instructions and Information

- i) All information presented on the base website must comply with **Section III D.** of these Technical Standards.
- ii) All written information presented on the base website and games must be available in English, and must be both grammatically and syntactically sound (note: logos or copyright messages may be displayed). This does not preclude the display of the same information in other languages.
- iii) All written information presented on the base website and games must be stated unambiguously and must not be misleading to the player.
- iv) All written information presented on the base website and games must be truthful.
- v) All game help / rules information must be clearly visible, or the means of displaying such information must be readily available, at all times.
- vi) All game help / rules information must be visible / available to the player without the need for money to be bet on the game.
- vii) All game help / rules information must be easily interpretable, non-ambiguous, and sufficient to explain all game rules.
- viii) There must be sufficient game help / rules information to allow a player to determine the correctness of prizes awarded.
- ix) If random prizes are offered, the maximum value obtainable from the random prize must be indicated in the game help / rules information.

- x) If the value of the random prize depends on the amount of money wagered, this must also be stated in the game help / rules information.
- xi) The name of the game being played must be clearly visible to the player on the game screen.
- xii) For non-event based games, a payable displayed in the game artwork must correspond to the payable used in the mathematical treatise, and correspond to the payable implemented in the actual game design.
- xiii) The functions of all buttons represented on the website and games must be clearly indicated, preferably on the button.

b) Bet Display

- i) The bet denomination (and where applicable the tokenization) of the game must be clearly visible on the game screen, or be able to be easily deduced.
- ii) If a game uses tokens or tokenization, the number of credits registered for each monetary unit for the current game must be displayed on the game screen.
- iii) The artwork must either state the maximum bet, the number of credits that can be bet per selected line and the number of possible lines available, or it must be possible to deduce this information from the game help / rules.
- iv) The minimum bet (if not easily deduced) must be readily available to the player, either directly on the game screen or in the game help / rules information.

c) Result Display

- i) The display of the result of a game outcome must not be misleading or deceptive to the player. The game must not inappropriately indicate a near-miss, as per **Section IV B. 1. b.**
- ii) The outcome of each game must be displayed for a reasonable length of time.
- iii) The nature of all prizes must be clearly indicated. If some prizes are in cash, whilst others are in credits, this must be stated.
- iv) If the artwork contains game instructions specifying a maximum win, then it must be possible to win this amount from a single game (including features or other game options). For example, if the artwork states that \$500.00 is the maximum prize for a game, it must be possible to win \$500.00 on that game.
- v) To the extent that is practicable for the range of games offered, only one method of displaying win amounts should be used on the website so as to avoid confusion.

d) Game-Specific Requirements

- i) The appendices of these Technical Standards detail any requirements that are specific for each type of game or game feature. It should be noted that a game or game feature need only comply with the requirements applicable to that particular type of game or game feature.

C. Data Logging Requirements**1. General Requirements**

- a) The IGS must be capable of retaining and backing up all recorded information, as discussed herein, as far back as five years from the current point in time. Accordingly, among other implications, the number of digits to be used in all fields must therefore be based on appropriately projected performance and business.
- b) All time stamping implemented throughout recorded information must be synchronized amongst all IGS components, and be presented in local time. All times displayed to players must be presented in the local time zone.
- c) All date stamping implemented throughout recorded information must make use of a consistent format to be prescribed by the TGC.

2. Player Account Information

- a) For each individual player account, the IGS must maintain and back up the following information; and be capable of reporting this information for a TGC-configurable time span, upon request:

- i) Player identity details (including player identity verification results),
 - ii) Account details and current balance,
 - iii) Changes to account details, such as change of address, change of credit card, or change of name,
 - iv) Any self-imposed player protection limitations,
 - v) Any self-imposed player protection exclusions,
 - vi) Details of any previous accounts, including reasons for deactivation,
 - vii) Deposit / withdraw history, and
 - viii) Game play history (i.e.: games played, amounts bet, amounts won, Progressive Jackpots won, etc...).
- b) For player accounts as a whole, the IGS must be capable of generating the following reports for a TGC-configurable time span, upon request:
- i) A list of all currently (or previously) active player accounts,
 - ii) A list of all currently (or previously) inactive player accounts (including reasons for deactivation),
 - iii) A list of all accounts for which the player has currently (or previously) imposed a player protection self-exclusion,
 - iv) A list of all accounts for which the player has currently (or previously) been excluded from the site by the IGS Operator or the TGC (i.e.: involuntary exclusion),
 - v) A list of all accounts for which the player's funds have currently (or previously) been inactive for a period of time exceeding 90 days, and
 - vi) A list of all accounts for which one or more of the player's deposits and / or withdraws have exceeded a TGC-configurable limit (i.e.: large deposits / withdraws). The limit must be configurable for single transactions, as well as aggregate transactions over a user-defined time period.
 - vii) A list of all accounts for which one or more of the player's wins have exceeded a TGC-configurable limit (i.e.: large wins). The limit must be configurable for single wins, as well as aggregate wins over a user-defined time period.

3. Gaming Session Information

- a) For each individual gaming session (i.e.: player login time to logout time), the IGS must maintain and back up the following information, and be capable of reporting this information upon request:
- i) Unique player ID,
 - ii) Gaming session start and end time, and
 - iii) Game play information for session (i.e.: games played, amounts bet, amounts won, Progressive Jackpots won, etc...).
- b) For gaming sessions as a whole, the IGS must be capable of generating the following report upon request:
- i) A list of all currently active gaming sessions.

4. Game Information

- a) For each individual game played, the IGS must maintain and back up the following information, and be capable of reporting this information upon request:
- i) Unique player ID,
 - ii) Unique game identifier,
 - iii) Game start time, according to IGS,
 - iv) Player account balance at start of game,
 - v) Amount wagered,
 - vi) Contributions to Progressive Jackpot pools (if any),
 - vii) Current game status (i.e.: in progress / complete) (note: the IGS must maintain records of any game that fails to complete, and the reason why the game failed to complete),
 - viii) Game result / outcome,
 - ix) Progressive Jackpot wins (if any),
 - x) Game end time, according to IGS,
 - xi) Amount won, and
 - xii) Player account balance at end of game.

- b) The IGS must maintain and back up the following information, and be capable of reporting this information, for a TGC-configurable period of time, upon request:
 - i) A list of all games hosted by the website, including approved game / payable versions.

5. Significant Events Information

- a) The IGS must maintain and back up the following information, and be capable of reporting this information for a TGC-configurable time span, upon request:
 - i) Changes made by the IGS Operator or the TGC to game parameters,
 - ii) Changes made by the IGS Operator or the TGC to Progressive Jackpot parameters,
 - iii) New Progressive Jackpots created,
 - iv) Progressive Jackpot wins, and
 - v) Progressive Jackpot shutdowns.

D. Technical Requirements

1. Data Transmission and Data Storage

- a) Where player account information and / or game play data is either a) being passed over communication lines, or b) being stored somewhere in the IGS, such data must be protected (i.e.: encrypted) commensurate with the sensitivity of that data. Examples of sensitive data that require encryption are:
 - i) Player identity details (including player identity verification results),
 - ii) PINs and passwords,
 - iii) Account details and balances,
 - iv) Player protection limitations,
 - v) Player protection exclusions,
 - vi) Money transfers to and from player accounts,
 - vii) Changes to account details, such as change of address, change of name, etc., and
 - viii) Game play (i.e.: games played, amounts bet, amounts won, Progressive Jackpots won, etc...).
- b) Any sensitive or confidential information maintained by the IGS must be stored in areas of the system that are secured from unauthorized access, both external and internal.

2. Shut Down and Recovery

- a) The IGS must be able to perform a graceful shutdown (i.e.: a shutdown where no data is lost, and all applications are able to close properly) in the event of a simple power failure, and not restart automatically on power up.
- b) In the event of a critical hardware / software failure, the IGS must be able to recover all critical information from the time of the last backup to the point in time at which the system failure occurred (no time limit is specified).
- c) The IGS must have disaster recovery capability sufficient to ensure player entitlements are protected and audit ability is facilitated up to the point of the disaster.
- d) The IGS must be able to recover from unexpected restarts of its central computers or any of its other components.
- e) The IGS hardware platform and Operating System (OS) must be proven to be reliable (for further details regarding this requirement, refer to **Section IV E. - ISS Requirements** below).

E. ISS Requirements

1. General Statement

- a) The Administrative Controls, Technical Controls and Physical & Environment Controls for the IGS must comply with industry-best practices, meaning that they must comply with the general intent of applicable and relevant ISS industry standards such as (listed in order by detail):

- i) AS / NZS 4360:2004 Risk Management,
- ii) Control Objectives for Information and Related Technology (COBIT),
- iii) Open Source Security Testing Methodology Manual (OSSTMM), and
- iv) International Standards Organization (ISO) 17799 Standard – Information Technology – Code of Practice for Information Security Management.

2. Change Control Procedures

- a) Program change control procedures must be adequate to ensure that only properly approved and tested versions of programs are implemented on the production IGS. Production change controls must include the following:
 - i) An appropriate software version control mechanism for all software components;
 - ii) Details of the reason for change; and
 - iii) Complete backups of previous versions of software.

3. Authentication

- a) All people (E.g. players, computer operators, maintenance service providers, financial gateway systems, certification authority systems) that connect to the IGS must be authenticated, except as provided in **Section IV E. 3. b)** below.
- b) Players who connect to the IGS for purposes other than gambling do not need to be authenticated unless sensitive information (i.e. monetary transactions, personal information, etc.) is being accessed.
- c) The IGS must authenticate itself to all people and computer systems that establish a connection.
- d) Authentication of people, computer systems controlled by the IGS Operator and third party IGS's must be based on a certificate authentication method recognized by the TGC as being currently secure.
- e) Where a player has forgotten his/her password/PIN, the IGS must provide a secure process for the re-authentication of the player and the retrieval and/or resetting of the password/PIN.

4. Software Development, Testing, Maintenance and Service

- a) Cross-platform software must have identical code for each version, with the exception of operating system dependent functionality.

5. Code Security

- a) Closed Source Software. Where appropriate, code should be protected as much as possible from the player.
- b) Open Source Software. If the software is being submitted as an open source project:
 - i) The developers of the software must obtain a valid open source programming license in order to be classified as an open source submission.
 - ii) A valid procedure must be implemented, which does not violate the open source software license obtained, in order to prevent individuals from publicly publishing their own code modifications that alter the security of the software and IGS.
 - iii) The IGS must be able to reasonably detect any end user made code modifications, and prevent the software from running if any modifications can alter the integrity of the game and/or IGS.
- c) Customizable Aspects Through Code Changes: If the end-user software allows for user customization (e.g. customizable deck of cards, etc.) then the following requirements must be met:
 - i) The end user software may allow for user customization (i.e. interface skinning, customized card decks, etc.). However, should the method of customization be implemented through code modifications, the code must only consist of markup languages.

- ii) No programming languages may be used for this purpose, which are able to perform IGS level commands.
- d) Any publicly installable theme packages must be hosted and monitored on the official website for the game, and all themes uploaded must be verified to ensure they contain potential exploits or malware.

6. Proxy Servers

- a) The IGS must be capable of operating through multiple proxy servers. Correct operation of games must not depend on a refresh request from the end user device reaching the IGS.

7. Self-Monitoring

- a) The IGS must implement the self-monitoring of critical components (e.g. central hosts, network devices, firewalls, links to third parties, etc.).
- b) A critical component which fails self-monitoring tests must be taken out of service immediately. The component must not be returned to service until there is reasonable evidence that the fault has been rectified.

8. Protection from Attacks

- a) All reasonable precautions must be taken to protect the IGS against attacks based upon the replay of authentic or non-authentic messages (e.g. Distributed Denial of Service Attack).
- b) The software must be able to reasonably detect and/or prevent a man-in-the-middle style attack without invading the end user's privacy.
 - i) If a man-in-the-middle attack has been suspected, all communications between the suspected end user and the IGS must be terminated with a message displayed to the end user as to why communications were terminated.
- c) Upon termination of communications between the OGS and end user, the IGS Operator shall perform appropriate steps to determine if the end user was performing a man-in-the-middle attack. If it was determined that a man-in-the-middle attack was attempted, the appropriate actions in regard to cheating must be taken.
- d) All reasonable precautions must be taken to ensure that no data kept on the IGS or transferred by it can be infected with a virus program, Trojan Horse, worm or other malware.

9. Network Security Management

- a) Networks shall be adequately managed and controlled in order to be protected from threats and to maintain security for the systems and applications using the network, including information in transit.
- b) Security features, service levels, and management requirements of all network services shall be identified and included in any network services agreement whether these services are provided in-house or outsourced.

10. Network Access Controls

- a) An access control policy shall be established, documented and reviewed based on business and security requirements for access.
- b) A formal registration and de-registration procedure must be in place for granting and revoking access to all information systems and services.
- c) The allocation of user privileges shall be restricted and controlled based on business requirements.
- d) Management shall review users' access rights at regular intervals using a formal process.
- e) Users shall only be provided with access to the services that they have been specifically authorized to use.
- f) Passwords must be controlled through a formal management process.
- g) The selection of passwords must follow good security practices.
- h) Unattended IGS components shall have appropriate protection and automatically log the user out after a pre-determined interval.

- i) Appropriate authentication methods shall be used to control access by remote users.
- j) Automatic equipment identification shall be considered as a means to authenticate connections from specific locations and equipment.
- k) Physical and logical access to diagnostic and configuration ports shall be controlled.
- l) Groups of information services, users, and information systems shall be segregated on networks.
- m) For shared networks, especially those extending across the Tribe's boundaries, the capability of users to connect to the network shall be restricted, in line with the access control policy and requirements of the business applications.
- n) Routing controls shall be implemented for networks to ensure that computer connections and information flows do not breach the access control policy of the business applications.

11. Operating System Access Controls

- a) Access to operating systems shall be controlled by a secure log-on procedure.
- b) All users shall have a unique identifier (user ID) for their personal use only, and a suitable authentication technique shall be chosen to substantiate the claimed identity of a user.
- c) Systems for managing passwords shall be interactive and shall ensure quality passwords.
- d) The use of utility programs that might be capable of overriding system and application controls shall be restricted and tightly controlled.
- e) Inactive sessions shall shut down after no longer than 30 minutes of inactivity.
- f) Restrictions on connection times shall be used to provide additional security for high-risk applications.
- g) Access to information and application system function by users and support personnel shall be restricted in accordance with the defined access control policy.
- h) Sensitive systems shall have a dedicated (isolated) computing environment.
- i) A formal policy shall be in place, and appropriate security measures shall be adopted to protect against the risks of using mobile computing and communication facilities.
- j) A policy, operational plans and procedures shall be developed and implemented for telecommuting activities.

12. Cryptographic Controls

A policy on the use of cryptographic controls for protection of information shall be developed and implemented.

- a) Where sensitive data is being passed over communication lines, such data must be encrypted. Examples of data that may require encryption are PINs or passwords, account numbers (including card numbers) and details, encryption keys, player identity details, funds transfers to and from customer accounts, changes to account details (e.g. change of address, change of credit card, change of name, etc.), and game play (i.e.: games played, amounts bet, amounts won, jackpots won, etc.)
- b) Data that is not required to be hidden but must be authenticated must use some form of message authentication technique;
- c) Sensitive data must be encrypted on an end-to-end basis (i.e. the data must not appear on a LAN or WAN in an un-encrypted form). This includes sensitive data transmitted between IGS computers;
- d) Sensitive data transmitted between IGS computers on a switched network within a secure data center need not be encrypted;
- e) Sensitive data transmitted between IGS computers that are located within separate secure data centers need not be encrypted if the communications path is physically secure and cannot be accessed by unauthorized persons;
- f) All communications between IGS terminals and the IGS host must be strongly authenticated and strongly encrypted during transmission outside their respective secure data centers;
- g) Authentication must be available via a Secure Socket Link (SSL) and a security certificate from and approved organization;
- h) Encryption algorithms are to be demonstrably secure against cryptanalytic attacks;

- i) The IGS Operator must have TGC approved procedures for following up on reports of weaknesses in encryption algorithms used in any part of the IGS (including, but not limited to RNGs, firewalls, authentication systems, etc.). Changes to encryption algorithms to correct weaknesses must be implemented as soon as practical. If such changes are available, the algorithm must be replaced.

13. Cryptographic Key Management

- a) The minimum width (size) for encryption keys is 112 bits for symmetric algorithms and 1024 bits for public keys.
- b) There must be a secure method implemented for changing the current encryption keyset. It is not acceptable to only use the current set to “encrypt” the next set. An example of an acceptable method of exchanging keys is the use of public key encryption techniques to transfer new key sets.
- c) There must be secure method in place for the storage of any encryption keys. Encryption keys must not be stored without being encrypted themselves through a different encryption method and/or by using a different encryption key.

14. Malicious and Mobile Code

- a) Detection, prevention and recovery controls to protect against malicious code and appropriate user awareness procedures shall be implemented.
- b) Where the use of mobile code is authorized, the configuration shall ensure that the authorized mobile code operates according to a clearly defined security policy, and unauthorized mobile code shall be prevented from executing.

15. Monitoring

- a) Audit logs recording user activities, exceptions and information security events shall be produced and kept for a TGC-determined period of time to assist in future investigations and access control monitoring.
- b) Any modification, attempted modification, read access or other change or access to any IGS record, audit or log must be evident by the IGS via version control or file time stamping. It must be possible to identify who has viewed or altered a log and when.
- c) Procedures for monitoring use of information processing facilities shall be established and the results of the monitoring activities reviewed at least quarterly, or as specified by the TGC.
- d) Logging facilities and log information shall be protected against tampering and unauthorized access.
- e) System Administrator and System Operator activities shall be logged.
- f) Faults shall be logged, analyzed and appropriate action taken.
- g) The clocks of all relevant information processing systems within the IGS shall be synchronized with a TGC-approved time source.

16. Communications Security Management

This section pertains to communications between the IGS host and an end user device, as well as to communications between other components or equipment of the IGS.

- a) Message authentication must be used in order to verify the correct receipt of the message by the end user device, host or related equipment. A protocol that does not correct errors or re-send erroneous packets (e.g. UDP) may be used as long as no critical game data or information is sent in this manner. E.g. if UDP is being used to stream video or audio, then it would not be acceptable to have the game instructions or payable in this format only.
- b) The IGS game server must be able to validate all of the information received from the end user device to ensure that no additional data (such as a worm) has been sent.
 - i) If it has been detected that additional data (such as a worm) has attached itself to the received data, the IGS must not allow the extraneous data to pass through to the IGS

- c) All protocols must use communication techniques that have proper error detection and/or recovery mechanisms and meet the following rules:
 - i) The high level protocol must employ techniques (e.g. end to end acknowledgement) such that it will not lose messages, even when one end restarts.
 - ii) These techniques must not cause either the IGS or any end user device to completely halt all processes while waiting for this acknowledgment.
- d) The higher level protocol must employ techniques (e.g. transmission numbers) such that repeated messages are identified and discarded – even when one end restarts;
- e) These requirements do not apply to unsecured messages such as broadcast messages;
- f) All functions of the protocol must be clearly specified in its documentation;
- g) The following rules apply to the timestamps in a high level protocol:
 - i) It must include a provision for the transmitting system (i.e. IGS or end user device) to insert a local timestamp in every message transmitted. This timestamp will assist in claims of malfunction; and
 - ii) It must include a provision for the transmitting system (i.e. IGS or end user device) to insert a local timestamp taken at the time that the last valid high level message was received.
- h) The following requirements apply to High Level Interface with Low Level Protocols:
 - i) There must be no restrictions placed on characters that may be included in the messages passed to or from the higher levels to the lower levels;
 - ii) The interfaces between the high level protocols and the low level protocols must cater for messages of variable length including those longer than the standard buffer size of the lowest level;
 - iii) A method of flow control to prevent loss of vital messages must be implemented;
 - iv) The IGS shall detect the maximum transfer speed between it and the end user device and the end user device if the speed detected falls below the minimum requirement set by the TGC; and
 - v) This information shall be displayed to the player via a latency meter which fits with the requirements included in this document.

17. Firewalls

The following apply to firewalls:

- a) All connections to the IGS hosts in the secure data center must pass through at least one TGC-approved firewall. This includes connections to and from any non-IGS hosts (e.g. MIS computers) used by the IGS Operator. The term “connections” is used in its broadest sense, and includes UDP and TCP data transfers;
- b) The choice of firewall will be affected by the low-level protocol used by the application (e.g. some firewalls are not able to make intelligent decisions about UDP streams). Reducing the effectiveness of the application level firewall to a packet filter will not be permitted due to a poor choice of firewall / low level protocol combination;
- c) A device in the same broadcast domain as the IGS hosts must not have a facility that allows alternate network path to be established that bypasses the firewall. Examples of prohibited facilities include:
 - An IGS Operator computer equipped with a telephone modem; and
 - An IGS Operator computer with a connection to the IGS VLAN and a connection to the corporate VLAN.
- d) The firewall must be a separate hardware device with the following characteristics:
 - i) Only firewall-related applications may reside on the firewall; and
 - ii) Only a limited number of accounts may be present on the firewall (e.g. IGS administrators only).
- e) All data packets addressed to the firewall must be rejected if they arrive on interfaces to networks which are outside the baseline envelope;
- f) The firewall must reject all connections except those that have been specifically approved by the TGC;

- g) The firewall must maintain an audit log of all changes to parameters that affect what connections are permitted through the firewall;
- h) The firewall must maintain an audit log of all successful and unsuccessful connection attempts through itself;
- i) The firewall must disable all communications if the audit log becomes full;
- j) The firewall must reject all messages received on the interface if the message purports to be on a device attached to another interface;
- k) The IGS Operator must have TGC-approved procedures for following reports of security incidents and for ensuring that firewalls are kept up to date with respect to advisory recommendations released after such incidents; and
- l) Networks on the secure side of the firewall should use RFC1918 private network numbers. These numbers must be translated into public network numbers for transmission over the internet.

18. Web Application Security

The following requirements apply to the security of the application used in the end user device:

- a) The IGS must be able to detect the version of the web browser or end user software, being used by the player at the time the player logs on;
- b) If the version of the web browser or end user software being used by the end user (player) does not have the capability to run the application(e.g. the game requires Flash Player 10, but the browser has Flash Player 8), the IGS must not allow the application to be executed until the end user software has been updated, and must provide a link to download any required upgrades.

Appendix A: Progressive Jackpot Game Requirements

- a) For the purposes of these Technical Standards, a game is deemed to include a Progressive Jackpot component only where it incorporates a pari-mutuel pool that:
 - i) Acts as a supplement to the base game,
 - ii) Is funded, wholly or in part, by only a portion of the player's wager, as per a prescribed contribution rate, and
 - iii) Rolls over into the next game if it is not won in the current game.
- b) The following requirements apply only to games that implement some form of Progressive Jackpot.

A.1 Progressive Jackpot Fairness

- a) All players that play games on the IGS that implement some form of Progressive Jackpot must be made aware of how they can be eligible to win the Progressive Jackpot.
- b) The rules of the game must include how the Progressive Jackpot is funded and determined.
- c) All players contributing to the Progressive Jackpot must be eligible to win the Progressive Jackpot whilst they are playing that game.
- d) In order to ensure player fairness, either i) the probability of winning the Progressive Jackpot must be linearly proportional to the player's contribution, or ii) the amount of the Progressive Jackpot paid out to the player must be linearly proportional to the player's contribution.
- e) Progressive Jackpot contributions must not be assimilated into revenue. For example, if a cap is established on any Progressive Jackpot, all additional contributions once that cap is reached must be credited to a Diversion Pool as described in **Appendix A - Section A.5**.

A.2 Notification of the Progressive Jackpot Amount

- a) The current Progressive Jackpot amount must be displayed on all end player devices participating in the Progressive Jackpot.
- b) This display must be updated on all participating end player devices at least every 30 seconds. Note: It is accepted that Internet communication delays are variable and beyond the knowledge or control of the IGS Operator, therefore IGS-to-end user delays will vary from player to player and from message to message.
- c) Players must be notified in the terms and conditions of game play of the imperfections of Internet communications, and how this affects them with respect to the Progressive Jackpot.

A.3 Progressive Jackpot Win Notification

- a) Players must be notified of the win (including the amount won) by the end of their current game in play.

A.4 Progressive Jackpot Parameter Changes

- a) Once a Progressive Jackpot has commenced, parameter changes must not take effect immediately. These parameter changes must instead be saved to apply after the current Progressive Jackpot is won.

A.5 Partial Progressive Jackpot Redirection

- a) Diversion Pool schemes, where a portion of the Progressive Jackpot contributions are redirected to another pool so that when the Progressive Jackpot is won, that pool is added to the restart level of the next Progressive Jackpot, require TGC approval. The following requirements apply to such schemes:
 - i) A Progressive Jackpot redirection scheme must not have a mathematical expectation of the diversion pool of infinity.
 - ii) Diversion pools must not be capped.

A.6 Multiple Progressive Jackpot Winners

The IGS Operator must address the possibility of a Progressive Jackpot being won (or appearing to be won) by one or more players at approximately the same time. The rules of the game must include resolution of this possibility.

A.7 Conversion of Progressive Jackpots

A Progressive Jackpot pool to be converted or combined into another Progressive Jackpot pool requires TGC approval.

A.8 Progressive Jackpot Financial Liability

The rules of the game must provide for any planned or unplanned termination / discontinuation of a Progressive Jackpot. Of particular concern is how any outstanding pool amounts are dealt with in order to ensure player fairness.

A.9 Progressive Jackpot Shutdown

- a) There are instances in this document where it is indicated that the Progressive Jackpot must be “shutdown”.
A Progressive Jackpot shutdown requires the following action:
 - i) Clear indication must be given to players that the Progressive Jackpot is not operating by displaying a message such as “Jackpot Closed” on end player devices.
 - ii) It must not be possible for the Progressive Jackpot to be won while in the shutdown state.
 - iii) Activation of the Progressive Jackpot from the shutdown state must reinstate the Progressive Jackpot with the identical parameters (including Progressive Jackpot value, and hidden win amount for Mystery Progressive Jackpot) as before the shutdown.

A.10 Progressive Jackpot Meters

- a) The IGS must store and maintain the following software meters at a minimum:
 - i) Total amount contributed / won (normally equal) for each previous Progressive Jackpot, including separate figures for any diverted amounts,
 - ii) Grand total amount contributed / won (normally equal) for all previous Progressive Jackpot combined, and
 - iii) Total amount contributed for current Progressive Jackpot, including separate figures for any diverted amounts.

A.11 Progressive Jackpot Recovery

- a) In order to enable the recovery of the current value of the Progressive Jackpot amount in the case of an IGS failure, either:
 - i) The current value of the Progressive Jackpot amount must be stored in at least two physically separate devices, or
 - ii) The current value of the Progressive Jackpot amount must be able to be accurately calculated from other available metering information that is not stored in the same system as the Progressive Jackpot amount.

A.12 Progressive Jackpot Controller

- a) The Progressive Jackpot controller is deemed to be part of the IGS, even if it is a physically separate controller.
- b) Where a “Master Controller” employs “Slave Controllers” to control a Progressive Jackpot, the following requirements apply:
 - i) All Slave Controllers must be time synchronized with the Master Controller.
 - ii) The Master Controller must be time synchronized with the IGS.
 - iii) Game result Progressive Jackpot win events must be time stamped and the Progressive Jackpot Controller must ensure that hits registered within a minimum time increment are considered as simultaneous wins. Prize payout for simultaneous wins must be made in accordance with **Section A.6 - Multiple Progressive Jackpot Winners** of this document. The minimum time window (Progressive Jackpot Reset Period) is not less than the longest time taken to:
 - 1. Register that a Progressive Jackpot has been won,
 - 2. Announce the win on the displays of all participating end player devices, and
 - 3. Reset the Progressive Jackpot meters.

Appendix B: Internet Interface Game Requirements

The following requirements apply only to games that effectively constitute an Internet Interface or Gateway to an existing traditional / land-based game already operating in the live environment.

It should be noted that Internet Interface Games need not comply with any other requirements from the appendices of these Technical Standards.

B.1 Game Fairness

- a) The rules of the game, as made available to the player using the Internet Interface / Gateway, must include no less information than that which is made available to the player using the traditional / land-based method.
- b) The artwork and functionality of the game, as made available to the player using the Internet Interface / Gateway, must not result in any advantage or disadvantage as compared with the player using the traditional / land-based method.
- c) All players playing the game using the Internet Interface / Gateway must be no more or no less eligible to win the game than players using the traditional / land-based method.

B.2 Win Notification

- a) Where the winning player is one using the Internet Interface / Gateway, they must be notified of the win directly through their player account, including the amount won, in due course after the completion of the game.

B.3 Multiple Winners

- a) The IGS Operator must address the possibility of the game being won (or appearing to be won) by one or more players simultaneously, including players using the Internet Interface / Gateway. Where necessary, the rules of the game, as made available to the player using the Internet Interface / Gateway, must include resolution of this possibility.

Appendix C: Gamble Option Requirements

C.1 Gamble Option

The following requirements apply only to games that implement some form of Gamble Option upon completion of the base game (e.g. “double-up”, “triple-up”, etc...):

- a) The gamble prize limit (if applicable) for a particular game, and the maximum number of gambles available, must be clearly stated. Note that where wording indicating the maximum prize that can be won exists, then it must be possible to win this prize.
- b) When the gamble option is discontinued automatically before reaching the maximum number of gambles available, the reason must be clearly displayed.
- c) All references to gamble must use words such as “gamble” or “double up”, which cannot be misinterpreted to indicate some other feature.
- d) Any unusual game conditions during which the gamble option cannot be accessed must be specified.
- e) If a gamble option offers a choice of multipliers, it must be clear to the player what the range of choices / payouts is.
- f) Once the player has selected a multiplier, it must be clearly stated on the screen which multiplier was selected.

Appendix D: Spinning Wheel / Reel Game Requirements

The following requirements apply only to simulations of Spinning Wheel / Reel games.

D.1 Symbol-Prize Relationship

- a) The prizes for the winning patterns of each symbol must be placed in an area that visually belongs to the symbol. This could potentially be achieved with appropriate boxing or framing. The symbol or group of symbols must not invade the area that visually belongs to some other group of symbols as this could cause ambiguities as to which symbols are displayed on the paying line.

D.2 Number of Symbols Required for a Prize

- a) The number of symbols required to appear in the reels display window, in order to trigger each prize, must be indicated. These numbers must line up with the prizes in order to avoid any ambiguity as to which prize corresponds to which number.

D.3 Mixed or Grouped Symbols

- a) If prizes can be awarded for mixed or grouped symbols, the artwork must clearly specify the grouping of the symbols either by placing the symbols in an area that clearly belongs to the prize and labeled with the term “Mixed” (or equivalent), or by using a descriptive term that clearly defines the grouping. Care must be taken with such phrases as “Mixed Bars” or “Mixed Fruit” to ensure that there can be no misinterpretation.

D.4 Tabulated Prizes for Multiple Credits Staked

- a) If the prizes for multiple credits staked are tabulated, then the number of credits bet required for each prize must be placed in a location that clearly indicates which prizes apply to which multipliers. Such numbers must have associated with them the word “credits” or equivalent (i.e.: “credits per line” or “total credits bet”). Common tabulations display the number of credits bet as column headings and the number of symbols required as row headings.
- b) If partial tabulation exists, the artwork must clearly indicate that the prize for one credit (or other appropriate bet) staked is multiplied by the number of credits bet (per line). Alternate game instructions must ensure that it is not possible to incorrectly assume that the tabulated prizes are further multiplied by credits bet.
- c) Where both multiplier instructions and tabulated prizes are displayed on artwork, there must be no confusion possible as to whether the multiplier applies to the tabulated prizes or not.

D.5 Winning Line Pays (Paylines)

- a) In games that permit multiple credits to be wagered on selected lit lines, the artwork must either clearly state that the win(s) for each selected lit line will be multiplied by the number of credits wagered on that line, or show a tabulation of all possible wagers and their payouts.

D.6 Scattered Pays

- a) The artwork must clearly indicate that scattered pays are multiplied by the total number of credits staked. This may be either via a message or a tabulation of all possible wagers and their payouts. If partial tabulation is used, the artwork must clearly indicate that the prize for one credit (or other appropriate bet) staked is multiplied by the total number of credits bet. Alternate game instructions must ensure that it is not possible to incorrectly assume that the tabulated prizes are further multiplied by credits bet.

D.7 Scatters

- a) The scattered symbol must be clearly labeled with the word “scatter” at least once in the game instructions. Further occurrences of the scattered symbol in the game instructions do not require further labeling.

D.8 Positioning, Size, Color and Shape

- a) Game instructions that belong to only one symbol / prize, or a group of symbols / prizes, must be clearly associated with that symbol / prize or group of symbols / prizes. For example, this may be achieved with appropriate framing or boxing. Additional wording such as “these symbols” could also be used.

- b) Game instructions that refer to all symbols / prizes must read “ALL” or equivalent. If some symbols / prizes are excluded from these instructions, this should be clearly indicated with wording such as “EXCEPT” or equivalent.
- c) Game instructions must be printed in a color that contrasts with the background color in order to ensure that all instructions are clearly readable. For example, black print on dark purple background is not acceptable, as it can easily create confusion.
- d) Symbols that are not characters or numbers must have the same shape throughout all artwork, except while active / dynamic animation is in progress. Any symbol that changes shape or color during an animation process must not appear in a way that might misrepresent another symbol in the pay table.
- e) If game instructions refer to a particular symbol, and the written name for the symbol may be mistaken for another symbol, or may imply other characteristics (e.g. “Pair of Sunglasses” might imply two sunglass symbols), then the visual display of the instructions must clearly indicate to which symbol the instruction refers. For example, this may be via the display of the actual symbol, or a more clearly written description or both.

D.9 Substitutes

- a) The artwork must clearly state which symbols may act as a substitute, in which winning patterns, for which symbols, and any conditions that may apply. For example, this may be permitted in the following manner:
 - i) An indication that the substitute(s) match “ALL” symbols.
 - ii) Provide a list of symbols that the substitute does match.
 - iii) Provide a list, using the term “EXCEPT”, which the substitute does not match.
 - iv) Provide a statement clearly describing groups of symbols that are substituted.
- b) Where a game’s rules provide for both coinciding wins being paid on a selected lit line, and the use of one or more substitute symbols, the following must apply to the artwork:
 - i) If the substitute symbols on their own are awarded a prize, and concurrently may substitute for some other symbol (e.g. Sub Sub Sub Queen Queen pays both 3 Subs and 5 Queens), explanations of this rule must be explicitly included. Likewise, if the highest prize only is paid, explanations of this rule must be included.
 - ii) If multiple patterns that use substitutes exist on the selected lit line (e.g. Queen Queen Sub Jack Jack, for a game playing Left to Right and Right to Left), and the game only pays one of these combinations, explanations of this rule must be explicitly included. Likewise, if both prizes are paid, explanations of this rule must be included.
 - iii) If substitution occurs for patterns where none of the substituted symbols are displayed (e.g. Sub Sub Sub Sub Sub pays for 5 Kings and 5 Queens, etc...), explanation of this rule must be explicitly included. It is not required to state the reverse case where only one prize is paid.
- c) The artwork must contain all rules relative to Substitutes participating in scattered wins. The following must be addressed:
 - i) If applicable, the artwork must specifically state when the term “substitutes for all symbols” is used, but the Substitute does not participate in scattered wins (e.g. “<sub> substitutes for all symbols except scattered <scatter symbol>”).
 - ii) The artwork must state payout rules for coinciding wins when there are multiple scattered win symbols and substitutes participate, including the situation where one or more scattered symbols may not appear.
- d) If there is a feature where a symbol may substitute in a winning pattern when the symbol is not on a pay line, this must be clearly specified on the artwork.
- e) The artwork must clearly state if the game provides for a change of substitutes (e.g. during free games), and any special conditions that may apply.
- f) If the game provides for extra pays or multipliers apply when substitutes participate in winning patterns, a clear explanation must be provided.
- g) If the game provides for multipliers to apply when substitutes participate in winning patterns, the multiplication factor or a tabulation of all prizes with possible multipliers must be displayed.
- h) If extra pays or multipliers apply when substitutes participate in winning patterns, the handling of winning patterns where multiple substitutes participate must be clearly explained.

D.10 Winning Patterns

- a) All winning patterns relevant to the particular point in time in a game must be clearly displayed or accessible on some form of artwork. All undefined patterns must be assumed to be non-winning.
- b) Complicated winning patterns must be clearly explained, preferably with pictorial representations.
- c) The winning pattern for scatters must be explicitly stated or displayed.
- d) If generic winning patterns (graphical representation of the order / position in which the winning symbols are to appear) are only represented graphically (without the aid of a written explanation), then they must be supplemented with numbers to indicate how many correct symbols each pattern corresponds to, except for unusual winning patterns (e.g. X_X_x_X_X) where numbers must not be displayed and the pattern must be positioned in proximity to the prize.
- e) Winning patterns that are not “left to right” or “right to left” or “any” must be clearly explained, preferably with pictorial representations.
- f) The artwork must appropriately state that all wins occur on selected lines (and if applicable – except scatters) or equivalent.
- g) If it is possible to bet on multiple possible lines, and it is not clearly obvious which reel positions are part of each of the possible lines, then the additional lines must be clearly displayed on the artwork, and appropriately labeled. The additional lines must either be shown on static artwork or be available for display on a help or pay table screen, or permanently displayed on all game play screens in a location separate from the actual reels. This requirement applies to all standard five-reel games where lines greater than five must be schematized on the artwork and appropriately labeled.
- h) Upon a win, all pay lines must be clearly indicated. If it is possible to bet more than 5 lines, then upon a win the pay lines must be indicated in a manner such that all pay lines can be clearly identified by the player.
- i) The artwork must clearly state the rules for payments of prizes where multiple wins are possible. The following must be addressed:
 - i) A description of what patterns will be paid when a pay line may be interpreted to have more than one individual winning pattern.
 - ii) Where the game supports multiple pay lines, a message indicating wins on different pay lines are added or the equivalent is to be displayed.
 - iii) Where the game supports scatters, a message indicating that scattered wins are added to pay line wins or equivalent, must be displayed if this is the rule of the game.
 - iv) Treatment of coinciding scattered wins with respect to other possible scattered wins must be clearly stated. For example, the artwork must state whether combinations of scattered symbols pay all possible prizes or only the highest prize.
 - v) Where mixed symbol prizes are paid, the treatment of prizes that may be interpreted to be both mixed and straight winners is to be described.

D.11 Spinning Wheel / Reel Game Features

It is not possible to define requirements for all conceivable types of spinning wheel / reel game features that may be developed over time. The following requirements apply to spinning wheel / reel game features that are commonly in use in traditional / land-based gaming, and may be expected to be used in e-gambling.

a) Feature Trigger Patterns

- i) The trigger pattern(s) and all other conditions that should occur, in order to trigger the feature, must be unambiguously specified.
- ii) The action of the game when feature trigger patterns occur during the feature (e.g. free games) must be clearly stated on the artwork (e.g. further triggers, bonus payout and / or no further trigger).

b) Tokens accumulation

For games with rules that allow for the accumulation of tokens to qualify for a feature(s), or game metamorphosis, the artwork must clearly show:

- i) The definition of the event that leads to the accumulation of tokens.
- ii) A description of how many tokens are accumulated with each occurrence of the event.
- iii) A description of how many tokens are required to trigger the feature.
- iv) An indication of how many tokens are currently accumulated.

- v) If sub-tokens accumulate to tokens, a description of the number of sub-tokens needed to accumulate a token, and the number of sub-tokens and tokens currently accumulated.
- vi) If the accumulation of tokens may lead to free games, the number of possible lines and credits per line that are to be wagered during the free games.
- vii) Game rules when further tokens are not accumulated during the feature sequence for events which normally would qualify to earn tokens.

c) Free games

The artwork must explain all rules relative to free games. Areas relative to free games that must be addressed, in addition to the general requirements above, are:

- i) Additional payouts for non-winners during the free game sequences, if any, must be displayed on the artwork. A clear indication if this payout is to be multiplied by credits staked per line or total credits staked, must be given.
- ii) Any multipliers for prizes, special prizes, substitutes and other special rules during free games, must be displayed on the artwork.
- iii) A clear display of an accumulated win amount is required during each stage of the free games if the gaming machine does not directly add wins to the credit meter.
- iv) If more than one free game is offered, the number of free games that has occurred or the number remaining (or the total number) must be displayed.
- v) Appropriate game instructions defining the number of possible lines and credits per line that are wagered during the free games.

d) Re-Spins / Held Reels

The following requirements apply to game artwork where one or more reels are automatically “held” for one or more “re-spins”. The rules for the criteria for the re-spin, and which reel positions are held, must be clear. Examples of areas that must be addressed are:

- i) Which reels are to be held (e.g. first two reels).
- ii) Whether held reels occur on winning or non-winning patterns.
- iii) The specific line where the trigger combination should occur, if any (e.g. “ON THE CENTRE LINE”), or scattered if that is the actual requirement of the game.
- iv) If a partial number of reels (e.g. 2, 3 or 4 reels) are held for some criteria, it must be clearly stated what happens when the criteria forms part of a larger pattern (e.g. what happens when all 5 reels meet said requirement).
- v) If the trigger is a winning pattern, and the pattern does not pay during re-spins, this must be clearly stated on the artwork.
- vi) The rules for extensions or termination of the re-spin sequences, including additional held reels (e.g. when there are improvements to the original held combination(s)), must be clearly explained on the artwork.
- vii) If more than one re-spin is offered, the number of re-spins that has occurred or the number remaining (or the total number) must be displayed.

e) Bonus Prizes

This section refers to games where one or more bonus prizes may be paid to the player during the feature sequence. Generally, bonus prizes are awarded as a result of some second (or subsequent) screen animation:

- i) Criteria for both the initial entry and entry to further bonus features must be clearly stated.
- ii) All instructions and player choices for the bonus feature must be clearly stated.
- iii) A display of total amounts won must be available at the end of each stage of the game, including on second screen animations. This must include display of bonus prizes won in multiple sequence bonus features.
- iv) If bonus prizes are multiplied, the artwork must clearly state whether they are multiplied by credits staked per line or total, where appropriate.

f) Metamorphic Sequences

This section refers to metamorphic games where the player still “pays” for the sequence game(s):

- i) All instructions for the game, including the differences between the main game and the metamorphic game, must be stated (e.g. <character> appearing anywhere in window pays the original prize which started the feature).
- ii) An indication must be stated that the number of lines and / or number of credits wagered during the metamorphic sequence may not exceed the wager of the game (or games) that triggered the feature, if that is the rule of the feature.
- iii) Any special prizes, substitutes, multipliers or similar rules during the metamorphic sequence must be clearly stated on the artwork.
- iv) If the metamorphic sequence consists of more than one feature game, the number of games in the metamorphic sequence that has occurred or the number remaining (or the total number) must be displayed.

g) Held Reel Games

This section refers to spinning reel variations with Draw Poker characteristics, where the player may hold one or more reels for a second chance to improve the outcome. The artwork must address the following:

- i) Held and non-held reels, including recommended reels, must be clearly marked on the screen at all times.
- ii) The method for changing holds must be clearly displayed to the player.
- iii) If the player is required to wager additional credits to participate in the hold reels phase of the game, this must be stated.
- iv) Display that the player is able to hold or release reels.

h) Miscellaneous symbols

If a symbol that can form part of a winning combination is not on all reels, the artwork must clearly show which reels the symbol appears on.

Appendix E: Keno / Bingo, Or Similar, Game Requirements

The following requirements apply only to simulations of Keno / Bingo, or similar games, where balls are drawn from a simulated cage (or equivalent) and a player tries to pick in advance which of these balls will be selected:

- a) The player must be able to view or access a tabulated display of the paytable (or equivalent), which shows all possible winning payouts, while no game is in progress.
- b) Any special rules that are outside the standard game of Keno / Bingo must be clearly explained.
- c) All of the player's selections (where applicable, the player's card) must be clearly identified directly on the game screen. Where the game uses multiple player cards, it is acceptable for the player's selections to be accessible by flipping or switching through the cards.
- d) If the player is permitted to discard the current card and select a new card before the commencement of the game, then the following requirements must be met:
 - i) This functionality must be clearly explained to the player in the game rules, and
 - ii) This functionality must be made readily available to the player before the commencement of the game.
- e) The artwork must clearly state how the player makes or changes selections. Areas to be addressed are how:
 - i) Individual numbers are picked,
 - ii) Individual numbers are cleared, and
 - iii) All selections are cleared.
- f) The balls drawn must be clearly identified on the screen.
- g) The game must highlight balls drawn which match the player's selections (i.e.: "Hits").
- h) Special hits, if any, must be clearly identified.
- i) The screen must provide clear indication of how many spots were selected and how many hits were achieved.
- j) Rules for purchase of additional features of the game, if any, must be explained.

Appendix F: Scratch Ticket Game Requirements

The following requirements apply only to simulations of Scratch Ticket games:

- a) A precise definition of which player options are required to complete the game must be shown on the artwork.
- b) Details of how payouts are won, and their amounts, must be shown on the artwork.
- c) All rules for symbols that may substitute in winning patterns must be displayed on the artwork.

Appendix G: Racing Game Requirements

The following requirements apply only to simulations of Racing games:

- a) All participants in the race must have characteristics that make it unique in appearance (e.g. number, jockey colors, etc...).
- b) The result of the race must be clearly obvious and not open to misinterpretation.
- c) If prizes are to be paid for combinations involving runners other than just the first place finisher, the order of the place getters that can be involved with these prizes must be clearly shown on the screen (e.g. Result 8-4-7).
- d) Each meaningful result position must be available for display in all last game replays.
- e) The rules for alternative wagering options (e.g. Quinella), and the expected payouts, must be clearly explained on the artwork.

Appendix H: General Card Game Requirements

The following requirements apply to any simulations of card games that involve the dealing of cards from a deck or deck(s):

- a) Card faces must clearly display the card value (e.g. it must be obvious which is a Jack and which is a Queen).
- b) Card faces must clearly indicate the suit (e.g. it must be obvious which is a Spade and which is a Club).
Hearts and Diamonds must be red; Clubs and Spades must be black.
- c) Jokers must be distinguishable from all other cards.
- d) It must be clearly stated if more than one deck of cards is used in the game.
- e) The artwork must clearly state if the rules of the game do not shuffle the deck after every game. In this instance, the artwork must indicate when shuffles actually do occur.
- f) At a minimum, the player must be able to view a paytable that shows all winning hands and their payouts, while no game is in progress. In the case of games such as Poker, where players are competing to win a pot, hand rankings must be shown.

Appendix I: Single-Player Poker Game Requirements

The following requirements apply only to simulations of Single-Player Poker games:

- a) The artwork must provide clear indication if Stud Poker rules apply. Common Draw Poker must be assumed, if nothing is stated.
- b) The artwork must provide a definition of winning combinations outside the scope of standard Poker (e.g. Royal Flush with / without Wild Cards, Four of a Kind “Jacks or Better”, Four Deuces (when Deuces are wild), etc...).
- c) Wild card rules must be clearly explained (e.g. Jokers Wild or Deuces Wild).
- d) Held and non-held cards, including recommended holds (if implemented), in Draw Poker or equivalent must be clearly marked on the screen, and the method for changing Holds clearly displayed to the player.
- e) Winning hands must be clearly labeled as to the win category (e.g. “Full House”).
- f) All special rules outside the scope of common Poker must be clearly explained.
- g) When player options outside the scope of common Poker are available, they must be clearly explained on the artwork.

Appendix J: Multi-Player Poker Game Requirements

The following requirements apply only to simulations of Multi-Player Poker games:

- a) The artwork must provide a clear indication of which Poker rules apply. Common Draw Poker must be assumed, if nothing is stated.
- b) The artwork must provide a definition of winning combinations outside the scope of standard Poker (e.g. Royal Flush with / without Wild Cards, Four of a Kind “Jacks or Better”, Four Deuces (when Deuces are wild), etc...).
- c) Wild card rules must be clearly explained (e.g. Jokers Wild or Deuces Wild).
- d) All special rules outside the scope of common Poker must be clearly explained.
- e) When player options outside the scope of common Poker are available, they must be clearly explained on the artwork.
- f) If some features are available only at certain tables, this must be made clear to the players.
- g) The amount of rake taken by the IGS Operator, as well as any additional fees (e.g. special entry fees), must be displayed on the game page or available through a hot-link.
- h) The artwork must clearly indicate any variation in the rake amount based on the table, limit amount, number of players, or pot amount.
- i) The tournament prize structure, if applicable, must be clearly explained to the players.
- j) The disconnection protection policy must be clearly indicated on the game page or available through a hot-link.
- k) Held and non-held cards, including recommended holds (if implemented), in Draw Poker or equivalent must be clearly marked on the screen, and the method for changing Holds clearly displayed to the player.
- l) The site must state that the use of automated end player devices or ancillary computer systems is not allowed. The site terms and conditions should state the consequences to players if these devices are detected.
- m) The artwork must clearly indicate the total amount the player has bet on the game currently being played. This amount must be updated every time the player places a wager.
- n) The artwork must clearly indicate the prize amount the players are playing for at all times during game play (i.e.: the players’ stakes less the IGS Operator’s rake). This amount must be updated each time a wager is placed.
- o) Winning hands must be clearly labeled as to the win category (e.g. “Full House”).
- p) Players shall not be permitted to play more than one hand in a game.
- q) Players shall not be permitted to wager on another player’s hand.

Appendix K: Blackjack Game Requirements

The following requirements apply only to simulations of Blackjack games:

- a) Insurance rules must be clearly explained if Insurance is available.
- b) Pair Split rules must be explained. Areas to be addressed include:
 - i) Split aces have only one card dealt to each ace, if this is the game rule.
 - ii) Further splits, if available.
 - iii) Double-down after splits, if available.
- c) Double-down rules must be clearly explained, including limitations of which totals may allow a double down to be selected.
- d) The current total of all hands, including the Dealer's total, must be displayed during and at the end of the game. The term "Bust" or the equivalent may be used to indicate a hand whose total has exceeded 21.
- e) Dealer play rules must be clearly explained, including special treatment of a soft 17 count, if any.
- f) Any limits on the number of cards that may be drawn by player and / or dealer must be explained, including winners declared (if any) when the limit is reached (e.g. Five Under wins).
- g) Surrender Rules must be explained, if any exist.
- h) If the player loses on "Dealer Push", this must be clearly explained.
- i) Winning hands must be clearly labeled as to the win category (e.g. "Blackjack", "Six Under", or "Push").
- j) If Pair Splits have occurred, the results for each hand must be shown (total points, resultant win or loss category, amount won, amount wagered).
- k) Special rules, if any, must be clearly explained.
- l) All player options that are available at any point in time must be shown on the artwork.

Glossary of Terms

Term	Description
%RTP	Percentage Return to Player. The %RTP is the expected percentage of wagers that a specific game will return to the player in the long run. The %RTP can be calculated via either a theoretical or simulated approach. The method used for calculation depends on the game type. The minimum %RTP for any game offered on an IGS is 75%, unless the game exactly replicates a traditional casino table game.
Background Cycling / Activity	If the software-based RNG is cycling in the background, it means that there is a constant string of random numbers being generated by the RNG, even if they are not actually required by the game at that time. Without background cycling / activity, one could predict the result of the next iteration of the function used to produce the random numbers if they knew the current values and the algorithm.
Base Website	<p>‘Base Website’ refers to IGS elements that drive the features that are common to all of the games, and form the primary interface to the IGS for both the player and IGS Operator:</p> <ul style="list-style-type: none"> • The Base Website provides the player with the means to access an account, log in to / out of their account; modify their account information; request account activity statements / reports. In addition, any web pages displayed to the player that relate to gaming offered on the IGS, but are not an actual game screen, are considered to be part of the Base Website, and • The Base Website provides TGC and IGS Operator with the means to review player accounts; enable / disable games; generate various gaming / financial transaction and account reports; input game outcomes for sports betting events; enable / disable player accounts; and set any configurable parameters.
COBIT	Control Objectives for Information and Related Technology
Diversion Pool	A secondary progressive jackpot pool to which player contributions are diverted once the primary progressive jackpot has grown to a prescribed quantity of funds. Once the primary progressive jackpot has been won, the secondary progressive jackpot (diversion pool) amount is used to seed the primary progressive jackpot in preparation for the next cycle.
DOF	Degree of Freedom. Equal to one less than the total number of possible outcomes. For example, with a 52-card deck, the DOFs are equal to 51.
Emulation	All submitted games must exhibit ‘Emulation Capability’ for testing purposes. This means that all games must have a mode of operation that is alternate to the standard / live version of the game (i.e.: to be activated and operated in the test environment only) whereby the game outcomes can be artificially introduced into the system by the user (i.e.: the tester), processed by the same game logic as the standard / live version of the game, and then displayed to the user for testing purposes.
ITL	Independent Testing Laboratory. An Accredited Testing Facility, such as Eclipse Compliance Testing , authorized to conduct testing of Internet Gaming Systems (IGS) and related products.
TGC	Tribal Gaming Commission