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January 29, 2007

National Indian Gaming Commission
1441 L Street, NW,
Washington, DC 20005
Attn: Michael Gross, Senior Attorney

Re: Comments on Technical Standards

Dear Mr. Gross:

On behalf of the Sault Ste. Marie Tribe of Chippewa Indians, I am writing to comment on the Proposed Amendment to 25 CFR Part 547, Technical Standards for Class II gaming. As the Tribal Chairperson, I applaud the National Indian Gaming Commission's (hereinafter referred to as "NIGC") recent efforts to open the Tribal consultation process to include Class II gaming vendors and manufacturers (hereinafter referred to as "vendors"). By allowing the NIGC Tribal Advisory Committee the opportunity to collaborate in this process with longtime partners such as the vendors, a meaningful work product was produced.

The proposed regulation regarding Class II technical standards, as published in the Federal Register, contains fatal flaws: As published, the proposed regulations are literally, unworkable. One major problem is that the proposed standards are based on an international mix of Class III standards, not compatible with Class II gaming systems. Another major problem associated with the proposed standards is the lack of technical flexibility allowed to the industry. Tribes, vendors, and manufacturers, unanimously agree that the proposed technical standards are too restrictive and impossible to meet. In fact, not a single Class II gaming system in existence meets the technical standards as proposed. Compliance with the proposed technical standards is cost-prohibitive and would likely lead to termination of a viable Class II Tribal Gaming Industry.

I urge the Commissioners to drastically revise the proposed regulations on Class II Technical Standards. Such a revision should respect Tribal Sovereignty rights, verify game integrity, preserve the primary regulatory role of the Tribes, and protect Tribal gaming operations and Tribal assets. Revised proposal language should based on the Class II gaming "system", rather than on "machines" or on Class "III" gaming. Additionally, revised technical standards should include a reasonable

grandfather clause. Please note that my comments (below) include a revised technical standards proposal which meets each of these needs:

§ 547.1 What is the purpose of this part?

The Indian Gaming Regulatory Act, 25 U.S.C. 2703(7)(A)(i) permits the use of electronic, computer, or other technologic aids in connection with the play of Class II games. This part establishes the minimum technical standards governing the use of such aids.

§ 547.2 How do these regulations affect state jurisdiction?

Nothing in this Part shall be construed to grant to a state jurisdiction in Class II gaming or to extend a state's jurisdiction in Class III gaming.

§ 547.3 What are the definitions for this Part?

For the purposes of this Part, the following definitions apply:

Audit Mode means the mode where it is possible to view Class II Gaming System accounting functions, statistics, etc. and perform non-player related functions.

Cancel Credit means an action initiated by the Class II Gaming System where some or all of the monetary entitlements of the player are removed via an attendant paid cash out.

Cashless Account means a file, record, or other database related item electronically maintained that contains account identification information and a current amount balance held within the account.

Cashless System means a system that performs Cashless Transactions on a Class II Gaming System and securely maintains records of Cashless Accounts and associated transactions.

Cashless Transaction means a movement of money to or from a cashless account – often to or from the Class II Gaming System.

CD-ROM means Compact Disc – Read Only Memory.

Chairman means the Chairman of the National Indian Gaming Commission pursuant to the Indian Gaming Regulatory Act, 25 U.S.C. 2701 et seq.

Class II Game means the same as 25 USC 2703(7)(A).

Class II Gaming System means components, whether or not technologic aids in electronic, computer, mechanical, or other technologic form, that function together to aid the play of one or more Class II Games.

Commission means the National Indian Gaming Commission.

Coupon means paper-based instrument that allows for the addition of cashable or non-cashable credits to the Class II Gaming System.

Critical Memory means memory locations storing data essential to the functionality of the Class II Gaming System.

Download Package means approved data sent to a component of a Class II Gaming System for such purposes as changing the component software.

Electromagnetic Interference means the physical characteristic of an electronic component to emit electronic noise either into free air, onto the power lines, or communication cables.

Electrostatic Discharge means a single-event, rapid transfer of electrostatic charge between two objects, usually resulting when two objects at different potentials come into direct contact with each other.

EPROM means Electrically Programmable Read Only Memory – a storage area which may be filled with data and information, which once written is not modifiable, and which is retained even if there is no power applied to the machine.

Fault means an event that when detected by a Class II Gaming System causes a discontinuance of game play or other component functions.

Financial Instrument means any tangible item of value tendered in Class II Game play, including, but not limited to bills, coins, tickets, and vouchers.

Financial Instrument Input Component means any component that accepts financial instruments.

Financial Instrument Output Component means any component that dispenses financial instruments.

Financial Instrument Storage Component means any component that stores physical financial instruments.

Flash Memory means non-volatile memory that retains its data when the power is turned off and that can be electronically erased and reprogrammed without being removed from the circuit board.

Game Software means the operational program(s) which govern the play, display and results of Class II games.

Gaming Equipment means all electrical and mechanical physical components making up the equipment on which Class II games are played, including all technologic aids used in the implementation of Class II games.

Hardware means the same as Gaming Equipment.

Interruption means any form of miss-operation, component failure, or interference to the Class II gaming equipment.

Modification means a new version of existing hardware or software, used with the play of Class II games.

Non-cashable credit means credits given by an operator to a patron and placed on an Class II Gaming System through a coupon, electronic transfer, or other acceptable means, and capable of activating play but not being cashed out.

Player Interface means any component of a Class II Gaming System, including an electronic or technologic aid (not limited to terminals, player stations, handhelds, fixed units, etc.), that directly enables player interaction in a Class II game.

Prize Schedule means the set of prizes available to players for achieving certain outcomes or patterns in the game.

Progressive Prize means an incremental prize that increases by a selectable and/or predefined amount, based on play of the Class II game.

Random Number Generator (RNG) means a software module, hardware component or combination of these designed to produce outputs that are effectively random

Reflexive Software means any software which has the ability to manipulate and or replace a Random Number Generated outcome for the purpose of changing the results of a Class II game.

Removable / Rewritable storage media means program or data storage components that can be removed from the Class II gaming equipment and written to, or rewritten by the gaming equipment or by other equipment designed for that purpose.

Server means a computer which controls one or more applications or environments within a Class II Gaming System.

Test/Diagnostics Mode means a mode on a component that allows various tests to be performed on the Class II Gaming System hardware and software.

Testing Laboratory means an organization recognized by the Commission as suitable for evaluation of submitted gaming equipment and software.

Tribal Gaming Regulatory Authority means the tribally designated entity responsible for gaming regulation.

Voucher means a printed instrument that has a fixed value.

Voucher Payment System means a system that securely maintains records of payment vouchers generated by the Class II Gaming System, validates and records successful or failed payments of vouchers by the Class II Gaming System, kiosks or cashier stations, and controls the purging of expired vouchers.

§ 547.4 How do I comply with this Part?

(a) Submission, testing, and approval. Except as provided in paragraph (b) and (c) of this section, no tribe shall offer for play or use in a tribal gaming operation any gaming equipment, game software, or material modification of gaming equipment or game software unless:

(1) The gaming equipment, game software, or modification has been submitted to a testing laboratory recognized by the Commission;

(2) The testing laboratory tests the submission to the standards established by this Part, and to any additional standards adopted by the Tribal Gaming Regulatory Authority, and provides a formal written report to the party making the submission, setting forth and certifying to its findings and conclusions; and

(3) Following receipt of the laboratory's report, the Tribal Gaming Regulatory Authority makes a finding that the gaming equipment, game software, or modification conforms to the standards established by this Part, and to any additional standards adopted by the Tribal Gaming Regulatory Authority. The Tribal Gaming Regulatory Authority shall retain a copy of the laboratory's report so long as the gaming equipment, game software, or modification that is the subject of the report remains available to the public for play in its gaming operation.

(b) Compliance deadline.

(1) The Tribal Gaming Regulatory Authority shall require that all Class II Gaming System software that affects the play of the Class II Game is submitted to a recognized testing laboratory within 90 days of the effective date of this Part to verify compliance with sections 547.8(b) and 547.14 of this Part.

(2) The Tribal Gaming Regulatory Authority shall require that all Class II Gaming Systems comply with all provisions of this Part within 12 months from the effective date of this Part.

(3) A Class II Gaming System in play pursuant to the Indian Gaming Regulatory Act on or before the effective date of this Part shall be considered as grandfathered if within sixty (60) days of the effective date:

(i) The Tribal Gaming Regulatory Authority and/or manufacturer provides the Chairman with a list of Class II Gaming Systems and/or aids including serial numbers (if any) and location, noting:

(A) Class II Gaming Systems and/or aids currently in use within the TGRA jurisdiction; or

(B) Similar Class II Gaming Systems and/or aids currently available for play.

(ii) Grandfathered Class II Gaming Systems shall be exempt from the provisions of 547.4 (b)(2).

(c) Emergency hardware and software changes.

(1) A Tribal Gaming Regulatory Authority may permit modified hardware or game software to be made available for play without prior laboratory review if, in its discretion, the modified hardware or game software is:

(i) Necessary to correct a problem affecting the fairness, security, or integrity of a game; or

(ii) Unrelated to game play.

(2) If a Tribal Gaming Regulatory Authority authorizes modified game software or hardware to be made available for play or use without prior laboratory review, the Tribal Gaming Regulatory Authority shall require the hardware or software manufacturer to:

(i) Immediately advise other users of the same hardware or software of the importance and availability of the update;

(ii) Immediately submit the new hardware or software to a test laboratory for testing and verification; and

(iii) Provide the Tribal Gaming Regulatory Authority a temporary Formal Application Configuration meeting the requirements of § 547.8 for any new software.

§ 547.5 What are the rules of interpretation and of general application for this Part?

(a) Minimum standards. A Tribal Gaming Regulatory Authority may establish and implement additional technical standards that are as stringent as, or more stringent than those set out in this Part.

(b) Only applicable standards apply. Gaming equipment and software used with play of Class II games shall meet all applicable requirements of this Part. For example, if a Class II Gaming System lacks the ability to print or accept vouchers, then the standards that govern those things do not apply.

(c) Fairness. No gaming equipment or software used with the play of Class II games shall cheat, mislead, or disadvantage users.

(d) Approved equipment and software only. All gaming equipment and software used with the play of Class II games shall be identical in all respects to a prototype reviewed and tested by a recognized gaming laboratory and approved for use by the Tribal Gaming Regulatory Authority. Unapproved software shall not be loaded onto or stored on any program storage medium used with the play of Class II games.

(e) Proper functioning. All gaming equipment and software used with the play of Class II games shall perform according to the manufacturer's design and operating specifications.

(f) No Limitation of Technology. One should be cautioned that this Part should not be read in such a way that limits the use of other technology. This Part should not be interpreted that if the technology is not mentioned, then it is not allowed.

§ 547.6 What are the minimum technical standards for facilitating the use of Class II Gaming System components?

(a) General requirements. Class II Gaming Systems shall provide a method to:

(1) Enroll and un-enroll system components;

(2) Enable and disable specific system components;

(3) Ensure that only enrolled and enabled system components participate in gaming; and

(4) Ensure that the default condition for components added to the system shall be un-enrolled and disabled.

§ 547.7 What are the minimum technical hardware standards applicable to Class II Gaming Systems?

(a) General Requirements.

(1) FCC compliance. The Class II Gaming System shall operate in compliance with applicable FCC regulations.

(2) UL certification. The Class II Gaming System shall have obtained the relevant UL certification(s), including but not limited to liquid spills, EMI (electro magnetic interference), etc or equivalent, required for equipment of its type prior to approval by the Tribal Gaming Regulatory Authority.

(3) Printed Circuit Boards.

(i) Printed circuit boards that have the potential to affect the outcome or integrity of the game and are specially manufactured or proprietary and not off-the-shelf shall display a unique identifier such as a part number and/or revision number, which shall be updated to reflect new revisions or modifications of the board.

(ii) Switches or jumpers on all circuit boards that have the potential to affect the outcome or integrity of any game, progressive award, financial instrument, or cashless transaction shall be capable of being sealed.

(4) Electrostatic Discharge. Class II Gaming System components accessible to the public shall be constructed so that they exhibit immunity to human body electrostatic discharges on areas exposed to contact. Static discharges of ±15 kV for air discharges and ±7.5 kV for contact discharges may not cause damage, inhibit operation or integrity of the Class II Gaming System.

(b) Security and Functionality.

(1) Physical Enclosures. Shall be of a robust construction designed to resist determined illegal entry. All protuberances and attachments such as buttons, identification plates, and labels shall be sufficiently robust to avoid unauthorized removal.

(2) Player Interface. The Player Interface shall include a method or means to:

(i) Display information to a player.

(ii) Allow the player to interact with the Class II Gaming System.

(3) Account Access Component. A Class II Gaming System component that reads account access media shall be located within a secure, locked or tamper evident area or in a cabinet or housing which is of a robust construction designed to resist determined illegal entry and to protect internal components. In addition, the Account Access Component:

(i) Shall be constructed so that physical tampering leaves evidence of such tampering.

(ii) Shall provide a method to enable the Class II Gaming System to interpret and act upon valid or invalid input or error condition.

(4) Financial Instrument Storage Components. The Class II Gaming System components that store financial instruments shall be located within a secure or locked area or in a locked cabinet or housing which is of a robust construction designed to resist determined illegal entry and to protect internal components.

(5) Financial Instrument Input Components. The Class II Gaming System components that handle financial instruments shall be located within a secure, locked or tamper evident area or in a cabinet or housing which is of a robust construction designed to resist determined illegal entry and to protect internal components. In addition the Financial Instrument Input Component:

(i) Shall be of a robust construction designed to resist determined illegal entry or contained within a cabinet or housing that is of a robust construction designed to resist determined illegal entry.

(ii) Shall be constructed so that physical tampering leaves evidence of such tampering.

(iii) Shall be able to detect the entry of valid financial instruments and to provide a method to enable the Class II Gaming System to interpret and act upon valid or invalid input or error condition.

(iv) Prior to completion of a valid financial instrument transaction by the Class II Gaming System, no monetary amount related to that instrument shall be available for play.

(6) Financial Instrument Output Components. The Class II Gaming System components that dispense financial instruments shall:

(i) Be of a robust construction designed to resist determined illegal entry or contained within a cabinet or housing that is of a robust construction designed to resist determined illegal entry.

(ii) Be constructed so that physical tampering leaves evidence of such tampering.

(iii) Have mechanism(s) to allow the Class II Gaming System to interpret and act upon error conditions.

(7) Game Outcome Determination Components. The Class II Gaming System logic components that affect the game outcome shall be located within a secure, locked or tamper evident area or in a cabinet or housing which is of a robust construction designed to resist determined illegal entry and to protect internal components.

(8) Door access detection. All areas of the Class II Gaming System that are locked in order to meet these Technical Standards shall be equipped with a sensor or other means to detect an open door. In addition:

(i) A door open sensor, and its components or cables, shall be secure against attempts to disable them or interfere with their normal mode of operation.

(ii) It shall not be possible to disable a door open sensor, or access components within, without first properly opening the door.

(9) External mechanisms affecting play. There shall be no external mechanisms such as DIP switches or jumpers that can affect the integrity of the Class II Gaming System unless capable of being sealed by the Tribal Gaming Regulatory Authority.

(10) Clarifications.

(i) Nothing herein shall prohibit the Account Access Component, Financial Instrument Storage component, Financial Instrument Input component, and Financial Instrument Output Component from being included within the same component, or separated into individual components.

(ii) The Class II Gaming System and its components shall comply with the applicable sections addressing electronically linked class II games in the current NIGC MICS, 25CFR part 542, pertaining to physical security, data security, and communications security.

§ 547.8 What are the minimum technical software standards applicable to Class II Gaming Systems?

This section provides general software standards for Class II Gaming Systems for the play of Class II games.

(a) Player Interface Displays.

(1) If not otherwise provided to the player, the Player Interface software shall display the following information, if applicable:

(i) The purchase amount;

(ii) Game results; and

(iii) The player credit balance.

(2) Between plays of any game and until the start of the next play, or until the player selects a new game option such as purchase amount or card selection, whichever is earlier, if not otherwise provided to the player, the Player Interface shall display:

(i) The total purchase amounts and all prizes and total credits won for the last play;

(ii) The final results for the last game played, including alternate displays of results, if any; and

(iii) The default purchase amount for the next play.

(b) Game initiation and play.

(1) Each game played on the Class II Gaming System shall follow and not deviate from a constant set of rules for each game. Any change in rules constitutes a different game.

(2) For bingo games and games similar to bingo, the Class II gaming system shall not alter or allow to be altered the card permutations or game rules used for play of a Class II game unless specifically chosen by the player prior to commitment to participate in the game.

(3) No game play shall commence and no money or credit shall be accepted on the affected player interface, in the presence of any fault condition that affects the outcome of the game, open door, or while in test, audit, or lock-up mode.

(4) The player must choose to participate in the play of a game.

(c) Audit Mode.

(1) If an audit mode is provided, the Class II Gaming System shall provide for those components actively involved in the audit:

(i) All accounting functions required by 547.9;

(ii) Display player Interface identification;

(iii) Display software version or game identification;

(iv) Any audit mode shall be accessible by a secure method.

(2) Accounting function data shall be accessible by an authorized person at any time, except during a payout, during a handpay, or during play.

(3) The Class II Gaming System shall disable credit acceptance on the affected Player Interface while in audit mode, except during credit acceptance testing.

(4) Last game recall shall include the information required in subsection (d) below, and shall adhere to the following:

(i) The Class II Gaming System shall make the game recall information retrievable at all times, other than when the recall component is involved in the play of a game, upon the operation of an external key-switch, entry of an audit card, or a similar method.

(ii) The Class II Gaming System shall be able to show the player the results of recalled games as the player originally saw them or in text representation, and enable the Tribal Gaming Regulatory Authority or operator to clearly identify the game sequences and results that occurred.

(iii) The Class II Gaming System component providing game recall shall, upon return to normal game play mode, restore any affected display to the positions, forms and values displayed before access to the game recall information.

(d) Game recall information.

(1) Class II Gaming System shall be able to provide the following information for the current and previous four games played and shall display if applicable:

(i) Game start time, end time, and date;

(ii) The total number of credits at the start of play, less credits bet;

(iii) The total number of credits bet;

(iv) The total number of credits at the end of play; and

(v) The total number of credits won as a result of the game recalled, and the value in dollars and cents for progressive prizes, if different.

(2) For bingo games and games similar to bingo only:

(i) The card(s) used by each player;

(ii) The number of the bingo game played;

(iii) The numbers drawn, in the order that they were drawn;

(iv) The numbers and prize patterns covered on each card;

(v) All prizes won and winning patterns; and

(vi) The identifier of the card on which prizes were won;

(3) For pull-tabs games only:

(i) The result(s) of each pull-tab, displayed in the same pattern as on the tangible pull-tab;

(ii) All prizes won; and

(iii) Any other information necessary to fully reconstruct the current and four previous plays.

(e) Voucher and credit transfer recall. Notwithstanding the requirements of any other section in this Part, a Class II Gaming System shall have the capacity to:

(1) Display the information specified in § 547.11(b)(4)(ii) through (vi) for the last five vouchers printed and the last five vouchers accepted; and

(2) Display a complete transaction history for the last five cashless transfers made and the last five cashless transfers accepted.

(f) Software Signature Verification. A methodology must be provided to the Independent Testing Laboratory as well as the Tribal Gaming Regulatory Authority for the means of software signature verification.

(g) Test, diagnostic, and demonstration modes. If test, diagnostic, and/or demonstration modes are provided, the Class II Gaming System shall for those components actively involved in the test, diagnostic, or demonstration mode:

(1) Clearly indicate when that component is in the test, diagnostic, or demonstration mode;

(2) Not alter financial data on that component other than temporary data;

(3) Only be available after entering a specific mode;

(4) Disable credit acceptance unless credit acceptance is being tested; and

(5) Terminate all mode specific functions upon exiting a mode.

(h) Multi-Game. If Multiple Games are offered for Player Selection at the Player Interface, the Player Interface shall:

(1) Provide a display of available games;

(2) Provide the means of selecting among them;

(3) Display the full amount of the player's credit balance;

(4) Identify the game selected or being played;

(5) Not force the play of a game after its selection.

(i) Program interruption and resumption.

(1) The Class II Gaming System software shall be designed so that upon resumption following any interruption it is able to return to a known state and at a minimum:

(i) Check for any fault condition upon power resumption; and

(ii) Verify the integrity data stored in critical memory within the Class II Gaming System.

(2) The Class II Gaming System software shall detect any change or corruption in the software since the interruption occurred.

(j) Class II Gaming System Components acting as progressive controllers. This subsection applies to progressive controllers, components acting as progressive controllers used with the play of Class II games.

(1) Modification of progressive parameters shall be conducted in a secure manner approved by the TGC. Such parameters may include:

(i) Increment value;

(ii) Secondary pool increment(s);

(iii) Reset amount(s);

(iv) Maximum value(s); and

(v) Identity of participating Player Interfaces.

(2) The Class II Gaming System component or other progressive controller shall provide a means of creating a progressive balancing report for each progressive it controls. At a minimum, that report shall provide balancing of the changes of the progressive amount for all participating Player Interfaces versus current progressive amount(s), plus progressive prizes. In addition, the report shall account for, and not be made inaccurate by, unusual events such as:

(i) Class II Gaming System critical memory clears;

(ii) Modification, alteration, or deletion of progressive prizes;

(iii) Offline equipment; or

(iv) Multiple site progressive prizes.

(k) Critical memory.

(1) Critical memory may be anywhere within the Class II Gaming System and shall maintain all of the following data, if applicable:

(i) Accounting data;

(ii) Current credits;

(iii) Configuration data;

(iv) Last game recall information required by § 547.8(d);

(v) Game recall information for the current game, if incomplete;

(vi) Software state (the last normal state software was in before interruption);

(vii) RNG seed(s), if necessary for maintaining integrity;

(viii) Encryption keys, if necessary for maintaining integrity;

(ix) Progressive prize parameters and current values;

(x) The five most recent Financial Instrument Input transactions, excluding coins and tokens, by type; and

(xi) The five last Financial Instrument Output transactions, excluding coins and tokens, by type.

(2) Critical memory shall be maintained using a methodology that enables errors to be identified and acted upon. All accounting and recall functions will be verified as necessary to ensure their ongoing integrity.

(3) The validity of affected critical memory shall be checked after:

(i) Every restart;

(ii) Each of the following transactions:

(A) Handpay win;

(B) Progressive win;

(C) Sensored door closure; and

(D) Any reconfiguration, download, or change of game prize schedule or denomination requiring operator intervention or action.

§ 547.9 What are the minimum technical standards for Class II Gaming System Accounting functions?

This section provides standards for accounting functions used in connection with the play of Class II games.

(a) Required accounting data. The following minimum accounting data shall be maintained by the Class II Gaming System. The accounting data specified is not necessarily the title or organization of the accounting data as it should exist in the system.

Title	Description
Amount In	The total value of all Financial Instruments accepted by the Class II Gaming System.
Amount Out	The total value of all Financial Instruments paid by the Class II Gaming System, plus the total value of attendant pay.

(b) Accounting data storage. If the Class II Gaming System electronically maintains accounting data:

(1) Accounting data shall be stored with at least eight decimal digits.

(2) Player credit balances shall have sufficient digits to accommodate the design of the game.

(c) Rollover. Accounting data maintained by a Class II Gaming System that rolls over to zero shall not corrupt data.

(d) Credit balance display and function.

(1) The player credit balance shall be prominently displayed at all times in all modes except:

(i) In audit, configuration, and test modes; or

(ii) Temporarily, during alternate displays of game results.

(2) Progressives may be added to the players credit balance provided:

(i) The player credit balance is maintained in dollars and cents;

(ii) The progressive accounting data is incremented in number of credits; or

(iii) The prize in dollars and cents is converted to player credits or transferred to the player's credit balance in a manner that does not mislead the player or cause accounting imbalances.

(3) If the player credit balance displays in credits while maintaining a balance that includes fractional credits, then the player credit balance shall display the remaining fraction of a credit, either in dollars and cent, or as a fraction of a credit, when the player credit balance drops below one credit.

(4) Accounting data displayed to the player may be incremented or decremented using visual effects, but the internal storage of this data shall be immediately updated in full.

(5) Accounting data updates. Accounting data shall be updated upon the occurrence of the relevant accounting event.

§ 547.10 What are the minimum standards for Class II Gaming System critical events?

This section provides standards for events such as Class II System critical faults, deactivation, door open or other changes of states, and lockup within the Class II Gaming System used in the play of Class II games.

(a) Fault Events.

(1) The following events are to be treated as described below, if applicable:

Events	Definition and action to be taken
Component Fault	Reported when a fault on a component is detected. When possible, this event message should indicate what the nature of the fault is.
Financial Storage Component Full	Reported when a Financial Instrument Input Component includes storage, and it becomes full. This event message should indicate what Financial Storage Component is full.

Financial Output Component Empty	Reported when a Financial Instrument Output Component is empty. The event message should indicate which Financial Output Component is affected, and whether it is empty.
Financial Component Fault	Reported when an occurrence on a Financial Component results in a known fault state.
Critical Memory Error	Some critical memory error has occurred: When a non-correctable critical memory error has occurred, the data on Class II gaming System component can no longer be considered reliable. Accordingly, any game play on the affected component shall cease immediately, and an appropriate message shall be displayed, if possible.
Progressive Communication fault	If applicable; when communications with a progressive controller component is in a known fault state.
Program storage medium fault	The software has failed its own internal security check or the medium itself has some fault Any game play on the affected component shall cease immediately, and an appropriate message shall be displayed, if possible.

(2) Upon the occurrence of any event identified in paragraph (a)(1) of this section the event shall be recorded.

(3) Upon clearing any event identified in paragraph (a)(1) of this section:

(i) Record that the fault condition has been cleared; and

(ii) Ensure the integrity of all related accounting data.

(b) Door open/close events.

(1) In addition to the requirements of (a)(1) above, the Class II Gaming System shall perform the following for any component affected by any Sensored door open event:

(i) Indicate that a Sensored door is open;

(ii) Disable all Financial Instrument acceptances, unless a test mode is entered;

(iii) Disable game play on the affected Player Interface;

(iv) Disable player inputs on the affected Player Interface, unless the test mode is entered; and

(v) Disable all Financial Instrument disbursement.

(2) The Class II Gaming System may return the component to a ready to play state when all Sensored doors are closed.

(c) Non-fault events.

(1) The following non-fault events are to be treated as described below, if applicable:

Event	Definition and action to be taken
Player Interface Power Off During Play	This condition is reported by the affected component(s) to indicate power has been lost during game play.
Player Interface Power On	This condition is reported by the affected component(s) to indicate it has been turned on.
Sensored Door Event	This condition is reported when the state of the door changes from open to closed, or closed to open.
Financial Instrument Storage Component Container/Stacker Removed	This condition is reported when a Financial Instrument Storage Component storage container has been removed. The event message should indicate which Financial Instrument Storage Component storage container was removed.

§ 547.11 What are the minimum technical standards for money and credit handling?

This section provides standards for money and credit handling by a Class II Gaming System used in the play of Class II games.

(a) Credit acceptance, generally.

(1) The Class II Gaming System shall register the correct number of credits on the players credit balance upon any credit acceptance.

(2) The Class II Gaming System shall reject Financial Instruments deemed invalid.

(b) Credit redemption generally.

(1) Players shall be allowed to cash out and/or redeem credits:

(i) At any time at the Class II Gaming System; and/or

(ii) At the Player Interface, except when that Player Interface is:

(A) Involved in the play of a game;

(B) In audit mode or any test mode;

(C) Detecting any Sensored door open condition;

(D) Updating the player credit balance or total win accounting data; or

(E) Displaying a fault condition which would prevent cash-out and/or credit redemption. In this case a fault indication shall be displayed.

(2) A Class II Gaming System shall not automatically pay a W2G award.

(3) Credit redemption, vouchers. Credit redemption by ticket voucher shall conform to the following:

(i) A Class II Gaming System may redeem credits by printed voucher when it communicates with a Voucher Payment System that validates the voucher.

(ii) A Class II Gaming System that redeems credits with printed vouchers shall either:

(A) Maintain an electronic record of all information required by § 547.11(b)(4)(ii) through (vi); or

(B) Generate two identical copies of each voucher printed, one to be provided to the player and the other to be retained within the machine for audit purposes.

(4) Valid vouchers shall contain the following:

(i) Gaming operation name, city and state, reservation, or territory;

(ii) The Class II Gaming System number or printer station number, as applicable;

(iii) Date and time of issuance;

(iv) Alpha and numeric dollar amount;

(v) A sequence number.

(vi) A validation number, though a Class II Gaming System should be designed in such a manner to prevent repetition of validation numbers.

(A) Ticket validation numbers shall have some form of checkcode or other form of information redundancy to prevent prediction of subsequent validation numbers without knowledge of the checkcode algorithm and parameters;

(vii) A bar code or other form of machine readable markings, which shall have enough redundancy and error checking to ensure that 99.9% of all misreads are flagged as errors; Transaction type or other method of differentiating ticket types; and

(viii) Expiration period or date when voucher or coupon will expire.

(5) Cashless credit transfers.

Transfers from a cashless account may not exceed the balance of that account.

(6) Credit transfers not multiples of game denomination. For games not using dollars and cents accounting and not having odd cents accounting, the Class II Gaming system shall handle credit transfers from voucher systems or cashless systems that are not multiples of the game denomination in one of the following ways:

(i) Reject the transfer or voucher; or

(ii) Redeem the odd cents by printing a voucher or by cashless transfer back to the cashless system. The Class II Gaming system may redeem the odd cents in accordance with § 547.9(d) (3).

§ 547.12 What are the minimum technical standards for downloading on a Class II Gaming System?

This section provides standards for the downloading on a Class II Gaming System.

(a) Downloads.

(1) Downloads are an acceptable alternate means of transporting approved content including but not limited to: software, files, data, and prize schedules.

(2) Downloads of software, games, prize schedules, or other download packages shall be conducted only as authorized by the Tribal Gaming Regulatory Authority.

Downloads shall use secure methodologies that will deliver the download data without alteration or modification.

(3) Downloads conducted during operational periods shall be performed in a manner that will not affect game play.

(4) Downloads shall not impact the integrity of accounting data.

(5) The Class II Gaming system and/or the Tribal Gaming Regulatory Authority shall log each download of any Download Package. Each log record shall contain as a minimum:

(i) The time and date of the initiation of the download;

(ii) The time and date of the completion of the download;

(iii) The Class II Gaming System Components to which software was downloaded;

(iv) The version(s) of download package and any embedded software downloaded. Logging of the unique software signature will satisfy this requirement;

(v) The outcome of any software verification following the download (success or failure).

§ 547.13 What are the minimum technical standards for program storage media?

This section provides minimum standards for removable, (re-)writable, and non-writable storage for programs used with the play of Class II game software.

(a) Removable program storage media. All removable program storage media shall maintain an internal checksum or signature of its contents. Verification of this checksum or signature is to be performed after every restart and, if the verification fails, the affected Class II Gaming System component(s) shall enter a fault state.

(b) Non-writeable program storage media.

(1) All EPROMs and Programmable Logic Devices (PLDs) that have erasure windows shall be fitted with covers over their erasure windows.

(2) All unused areas of EPROMs shall be written with the inverse of the erased state, e.g., zero bits (00 hex) for most EPROMs, random data, or repeats of the program data.

(3) Flash memory storage components intended to have the same logical function as ROM, i.e. not to be dynamically written, shall be write protected or otherwise protected from unauthorized modification.

(4) The write cycle shall be closed or finished for all CD-ROMs such that it is not possible to write any further data to the CD.

(5) Write protected hard disks are permitted if the means of enabling the write protect is easily viewable and can be sealed in place.

(c) (Re-)Writeable program storage media.

(1) (Re-)writable program storage, such as hard disk drives, Flash memory, writable CD-ROMs, and writable DVDs, may be used provided that the verification requirements of § 547.8 (f) are met.

(2) Program storage is structured so there is a verifiable separation of fixed data (e.g. program, fixed parameters, DLLs) and variable data.

(d) Identification of program storage media.

(1) All program storage media that is not re-writable in circuit, (e.g. EPROM, CD-ROM) shall be uniquely identified, displaying:

(i) Manufacturer;

(ii) Program identifier;

(iii) Program version number(s); and

(iv) Location information, if critical (e.g. socket position 3 on PCB).

§ 547.14 What are the minimum technical standards for electronic random number generation?

This section provides minimum standards for electronic random number generators (RNGs) used with the play of Class II games.

(a) Properties.

(1) All RNGs shall produce output having the following properties:

(i) Statistical randomness;

(ii) Unpredictability; and

(iii) Non-repeatability.

(b) Statistical Randomness.

(1) Numbers produced by an RNG shall be statistically random individually and in the permutations and combination used in the application under the rules of the game. For example, if a Bingo game with 75 balls has a progressive winning pattern of the five numbers on the bottom of the card and the winning of this prize is defined to be the five numbers are matched in the first five balls drawn, the likelihood of each of the 75C5 combinations are to be verified to be statistically equal.

(2) Numbers produced by an RNG shall pass the statistical tests for randomness to a 99% confidence level, which may include:

(i) Chi-square test;

(ii) Equi-distribution (frequency) test;

(iii) Gap test;

(iv) Poker test;

(v) Coupon collector's test;

(vi) Permutation test;

(vii) Run test (patterns of occurrences shall not be recurrent);

(viii) Spectral test;

(ix) Serial correlation test potency and degree of serial correlation (outcomes shall be independent from the previous game); and

(x) Test on subsequences.

(c) Unpredictability.

(1) It shall not be feasible to predict future outputs of an RNG, even if the algorithm and the past sequence of outputs are known.

(2) Unpredictability shall be ensured by re-seeding or by continuously cycling the RNG, and by providing a sufficient number of RNG states for the applications supported.

(3) Re-seeding may be used where the re-seeding input is at least as statistically random as, and independent of, the output of the RNG being re-seeded.

(d) Non-repeatability. The RNG shall not be initialized to reproduce the same output stream that it has produced before, nor shall any two instances of an RNG produce the same stream as each other. This property shall be ensured by initial seeding that comes from:

(i) A source of "true" randomness, such as a hardware random noise generator; or

(ii) A combination of timestamps, parameters unique to a Class II Gaming System, previous RNG outputs, or other, similar method.

(e) General requirements.

(1) Software that calls an RNG to derive game outcome events shall immediately use the output returned in accordance with the game rules.

(2) The use of multiple RNG's is permitted as long as they operate in accordance with this section 547.14.

(3) RNG outputs shall not be arbitrarily discarded or selected.

(4) Where a sequence of outputs is required, the whole of the sequence in the order generated shall be used in accordance with the game rules.

(5) The Class II Gaming System shall not adjust the RNG process or game outcomes based on the history of prizes obtained in previous games or any other "reflexive" or other type of secondary decision process.

(f) Scaling algorithms and scaled numbers. An RNG that provides output scaled to given ranges shall:

(1) Be independent and uniform over the range;

(2) Provide numbers scaled to the ranges required by game rules, and notwithstanding the requirements of paragraph (e)(3) of this section, may discard numbers that do not map uniformly onto the required range but shall use the first number in sequence which does map correctly to the range;

(3) Be capable of producing every possible outcome of a game according to its rules; and

(4) Use an unbiased algorithm. A scaling algorithm is considered to unbiased if the measured bias is no greater than 1 in 100 million.

§ 547.15 What are the minimum technical standards for electronic data communications between system components?

This section provides minimum standards for electronic data communications with gaming equipment, or components, used with the play of Class II games. This section also provides minimum standards for communications between the Class II gaming equipment and any equipment external to it.

(a) Data communication shall be secure.

(1) Reasonable precautions shall be taken to prevent eavesdropping, access, tampering or intrusion unauthorized by the Tribal Gaming Regulatory Agency of sensitive data. Sensitive data shall include, but not be limited to:

(i) RNG seeds and outcomes;

(ii) Encryption keys, where the implementation chosen requires transmission of keys;

(iii) PINs;

(iv) Passwords;

(v) Voucher transactions;

(vi) Transfers of money to/from player accounts;

(vii) Transfer of money between gaming equipment; and

(viii) Player tracking information.

(2) Detectable unauthorized access or intrusion attempts shall be logged.

(3) Remote communications shall only be allowed if authorized by the Tribal Gaming Regulatory Authority.

(4) Failure of data communications shall not affect the integrity of Critical Memory.

(5) The Class II Gaming System shall log the establishment, loss, and re-establishment of data communications between sensitive Class II Gaming system components.

§ 547.16 What are the minimum standards for game artwork, glass, and rules?

This section provides standards for the display of game artwork, the displays on belly or top glass, and the display and disclosure of game rules, whether in physical or electronic form.

(a) Rules, instructions, and prize schedules, generally. The Class II Gaming System shall at all times display and/or the Tribal Gaming Regulatory Agency shall, make readily available to the player upon request, the following:

(1) Game name, rules, and options such as the purchase amount stated clearly and unambiguously. All prizes advertised shall be available to win;

(2) Denomination;

(3) Instructions for play on, and use of, the player interface, including the functions of all buttons;

(4) A prize schedule or other explanation, sufficient to allow a player to determine the correctness of all prizes awarded, including;

(i) The range and values obtainable for any variable prize;

(ii) Whether the value of a prize depends on the purchase amount;

(iii) The means of division of any pari-mutual prizes; and

(iv) The prize schedule or other explanation need not state, however, that subsets of winning patterns are not awarded additional prizes (e.g. five in a row does not also pay three in a row or four in a row) unless there are exceptions, which shall be clearly stated.

(b) Disclaimers. The Class II Gaming System shall display:

(1) "Malfunctions void all prizes and plays" or equivalent

(2) "Actual Prizes Determined by Bingo [or other applicable Class II game] Play. Other Displays for Entertainment Only." or equivalent.

§ 547.17 How does a gaming operation apply for a variance from these standards?

(a) Tribal Gaming Regulatory Authority approval.

(1) A Tribal Gaming Regulatory Authority may approve a variance from the requirements of this Part for a game if it has determined that the variance will achieve a level of security and game integrity sufficient to accomplish the purpose of the standard it is to replace.

(2) For each enumerated standard for which the Tribal Gaming Regulatory Authority approves a variance, it shall submit to the Chairman within 30 days, a detailed report, which shall include the following:

(i) An explanation of how the variance achieves a level of security sufficient to accomplish the purpose of the standard it is to replace and of any equipment or software to be implemented with the variance;

(ii) The variance as granted and the record on which it is based.

(3) In the event that the Tribal Gaming Regulatory Authority or the tribe's government chooses to submit a variance request directly to the Chairman for joint government to government review, the Tribal Gaming Regulatory Authority or tribal government may do so without the approval requirement set forth in paragraph (a) (2) of this section.

(b) Chairman challenge.

(1) The Chairman may object to a variance granted by a Tribal Gaming Regulatory Authority.

(2) Any objection by the Chairman shall be in written form, contain a complete explanation and demonstrate that the variance as approved by the Tribal Gaming Regulatory Authority does not provide a level of security or game integrity sufficient to accomplish the purpose of the standard it is to replace.

(3) If the Chairman fails to object in writing within 60 days after the date of receipt of a complete submission, the variance shall be considered concurred with by the Chairman.

(c) Responses to Chairman's Objection.

(1) Following objection by the Chairman to the issuance of a variance, the Tribal Gaming Regulatory Authority shall have the opportunity to cure by:

(i) Rescinding its initial approval of the variance, or

(ii) Rescinding its initial approval, revising the variance, approving it, and resubmitting it to the Chairman.

(iii) Upon any re-submission of a revised variance approval, the Chairman shall consider the same as a new variance approval by the Tribal Gaming Regulatory Authority.

(d) Commission Review.

(1) Should the Tribal Gaming Regulatory Authority stand on its decision after written objection by the Chairman, the Tribal Gaming Regulatory Authority shall advise the Chairman within twenty (20) days of receipt of the Chairman's objection, in which case the Chairman may withdraw his objection to the Tribal Gaming Regulatory Authority stand by a failure to initiate any written response for thirty (30) days; or:

(i) The Chairman may convene an En Banc review by the entire National Indian Gaming Commission in writing and noticing the Tribal Gaming Regulatory Authority of such action.

(ii) The Chairman shall provide the other members of the Commission full administrative record.

(iii) The Chairman shall produce the reasons for challenging the variance within ten (10) days of Notice of En Banc review to the Tribal Gaming Regulatory Authority and other members of the Commission. Such reasons shall include a specific statement of how the variance granted violates the Indian Gaming Regulatory Act, 25 USC § 2701 et seq.

(iv) The Tribal Gaming Regulatory Authority shall have thirty (30) days from service of Chairman's reason for En Banc review to submit a written response.

(v) Either the Tribal Gaming Regulatory Authority or the Chairman may request a hearing to address the En Banc review. Such hearing request shall be made within ten (10) days of the Tribal Gaming Regulatory Authority response noted in (ii) of this Part (d) Appeal of Chairman.

(vi) Hearing En Banc shall be conducted within thirty (30) days of request and a record shall be made.

(vii) Within thirty (30) days of last response provided in (ii) of this Part (d) or of hearing by the En Banc Commission whichever is longer, the Commission shall determine whether to uphold the Chairman's challenge.

(viii) In the absence of a decision within the time provided by the Commission, the Tribal Gaming Regulatory Authority's decision shall be determined upheld.

(ix) The Tribal Gaming Regulatory Authority may appeal an adverse decision of the Commission to the granted variance as a final agency action.

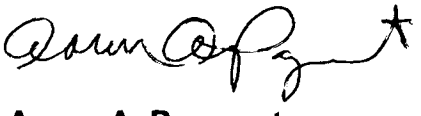
In closing, I recognize that my comments include a drastically revised technical standards proposal. The revised proposal was created by several groups working in partnership: Tribal leaders, Tribal Gaming Experts, Class II Gaming Manufacturers,

Class II Gaming Vendors, and Attorneys. **The National Indian Gaming Commission, specifically Joe Valandra and yourself, cooperated in the effort and provided comments throughout the process.**

The importance of Indian Gaming to Tribal economies cannot be overstated. Since the passage of the Indian Gaming Regulatory Act, Gaming Tribes have been able to make inroads in their fight against pervasive unemployment and poverty on reservations and surrounding communities. The revised technical standards proposal, contained in my comments, negates the need of the NIGC to utilize the proposed Classification Standards and revised Facsimile Definition. The proposal meets every goal originally set forth by the NIGC at the beginning of the process, over two years ago.

Thank you for this opportunity to comment. If you have any questions, comments, or wish for additional information, please do not hesitate to contact me, or the Tribal Federal Liaison, Meghan Kelly Powell at federalliaison@yahoo.com or by phone (757) 336-5929.

Sincerely,



Aaron A. Payment
Tribal Chairperson
Sault Ste. Marie Tribe of Chippewa Indians