



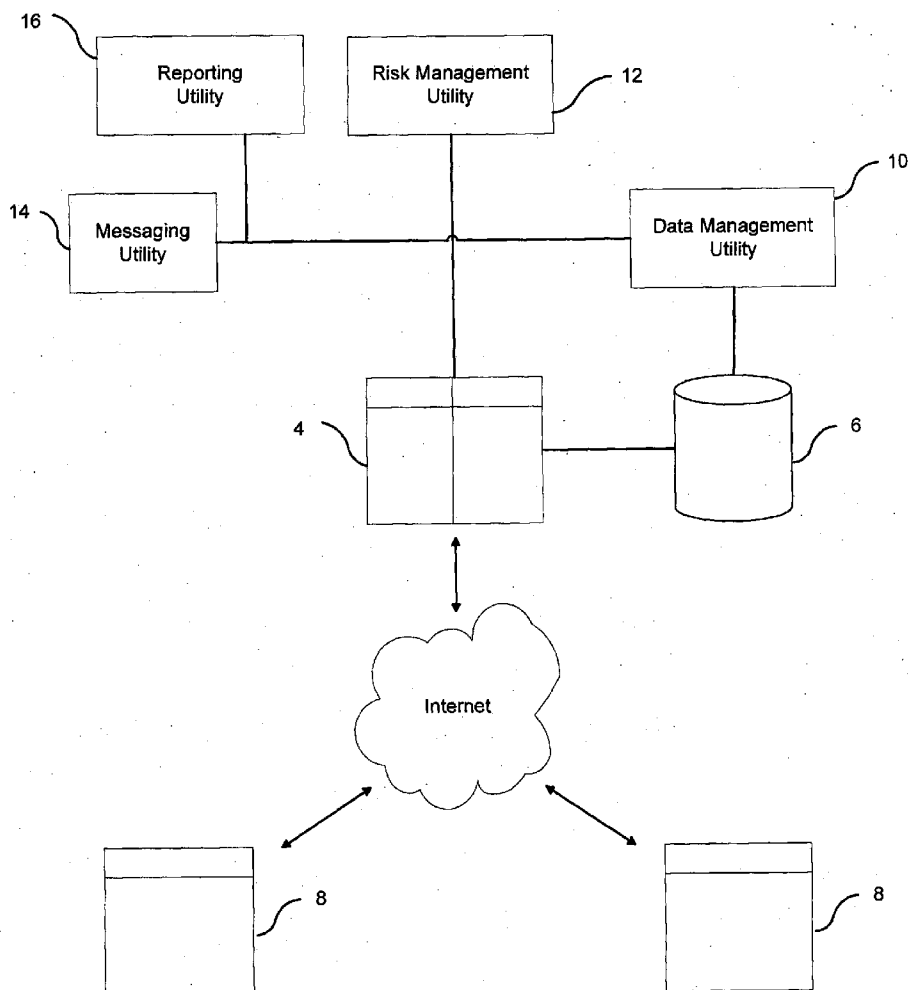
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(19) **United States**(12) **Patent Application Publication**  
**Horbay et al.**(10) **Pub. No.: US 2011/0250972 A1**(43) **Pub. Date: Oct. 13, 2011**(54) **SYSTEM, METHOD AND COMPUTER  
PROGRAM FOR RETENTION AND  
OPTIMIZATION OF GAMING REVENUE  
AND AMELIORATION OF NEGATIVE  
GAMING BEHAVIOUR****Related U.S. Application Data**

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**Publication Classification**(51) **Int. Cl.**  
**A63F 9/24** (2006.01)(52) **U.S. Cl.** ..... **463/42**(57) **ABSTRACT**

A method of ameliorating negative gaming behaviour is provided. One or more gaming users are monitored, or monitoring data regarding their gaming behaviour is obtained. The gaming behaviour is analyzed to identify behaviour that may result in potentially harmful or addictive gaming behaviour (negative gaming behaviour). In the event of occurrence of such negative gaming behaviour, based on the specific negative behaviour one or more interactions are initiated between a system and the one or more users, such interactions being directed to ameliorating the negative gaming behaviour by preventative action. The gaming behaviour is analyzed based on a plurality of gaming behaviour risk indicators.

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**Theodore Martin**, Orono (CA)(21) Appl. No.: **12/920,880**(22) PCT Filed: **Mar. 6, 2009**(86) PCT No.: **PCT/CA09/00262**§ 371 (c)(1),  
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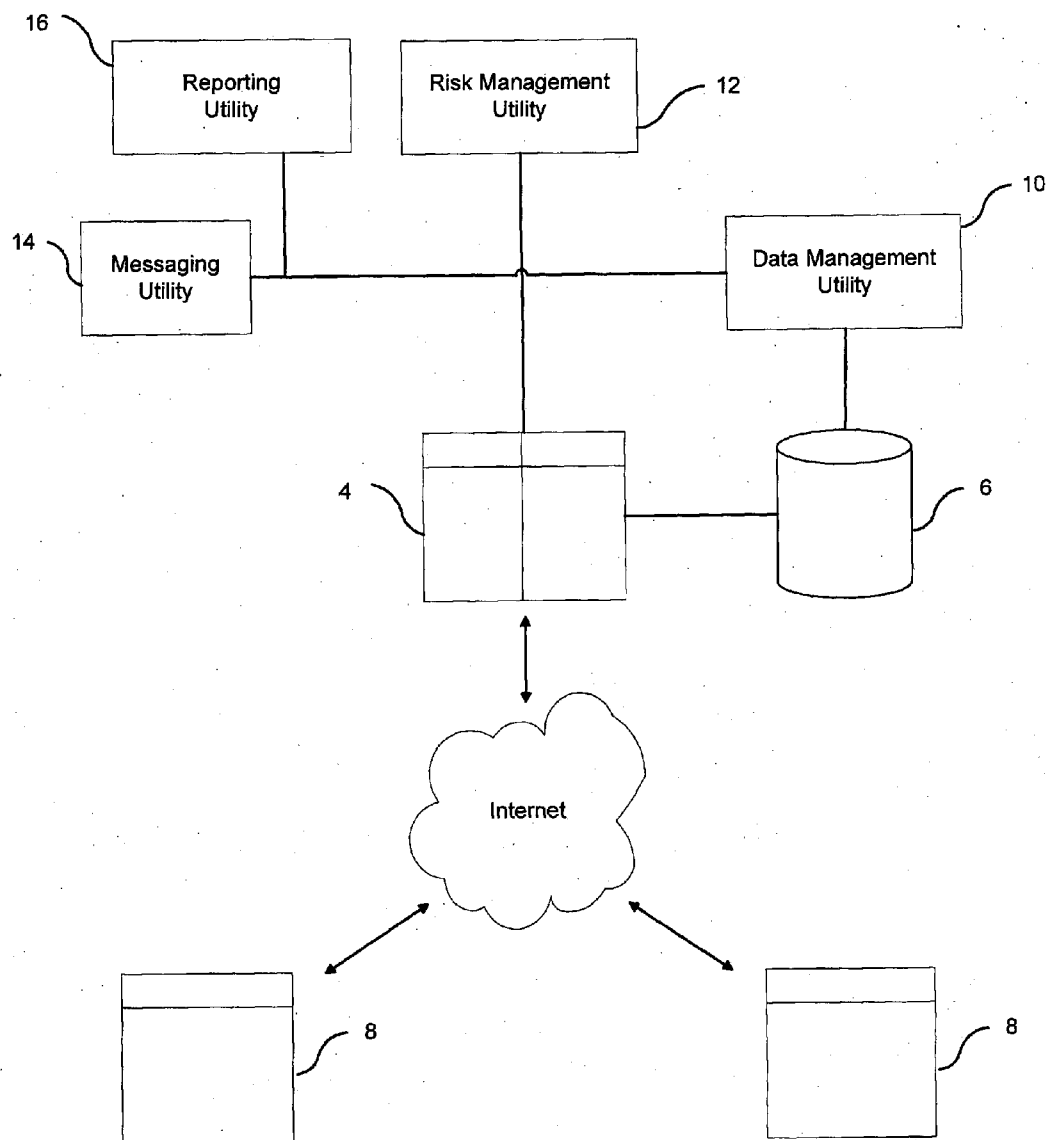
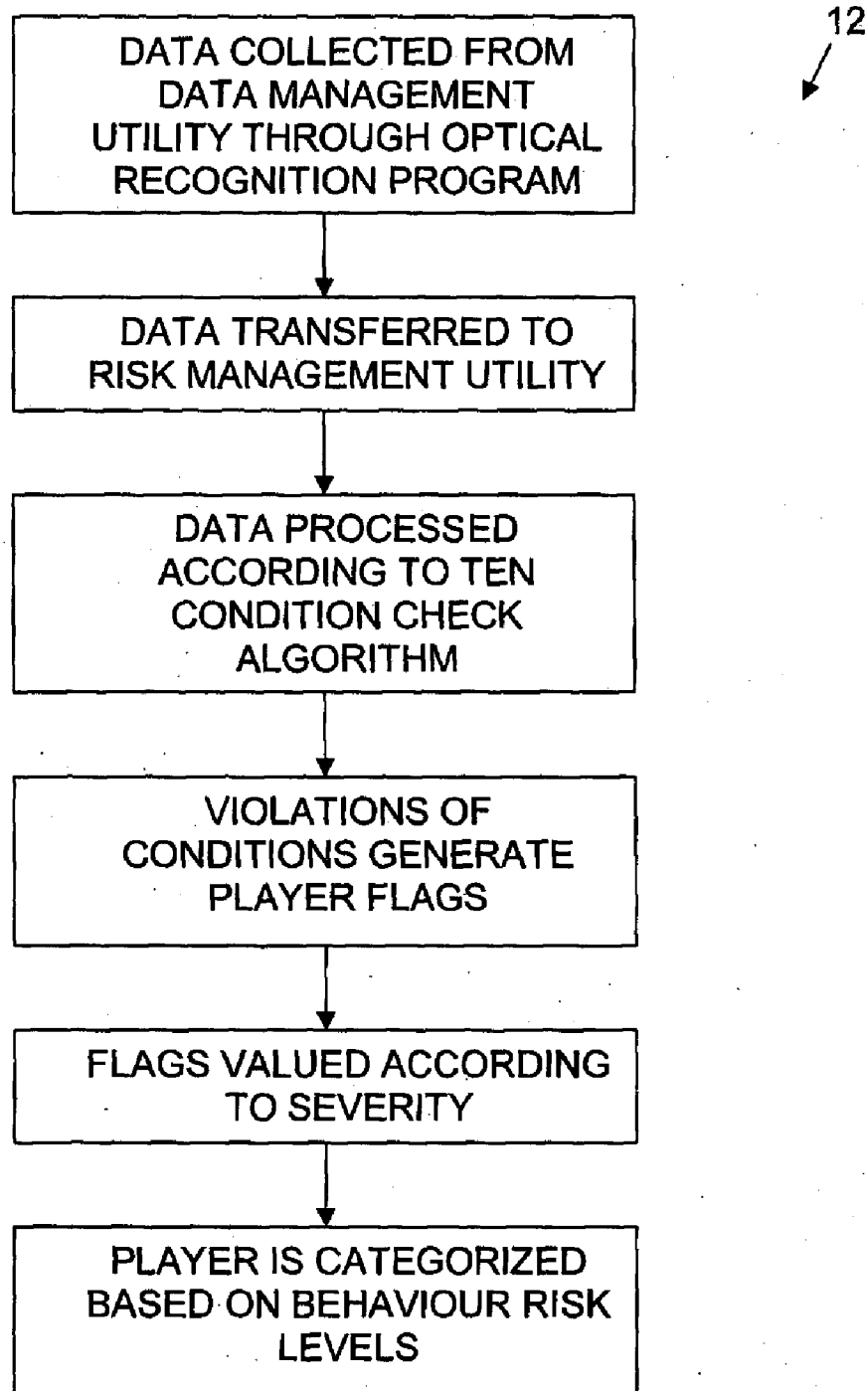
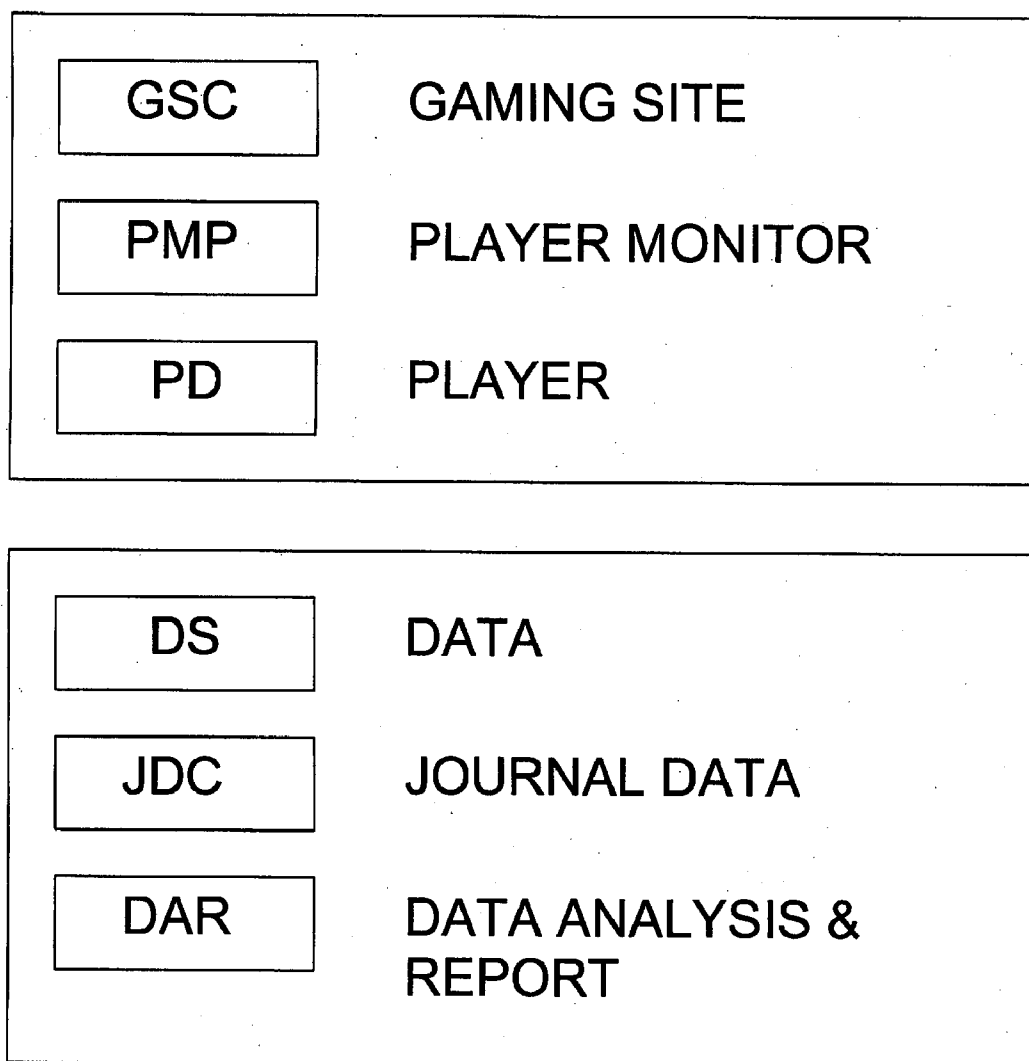


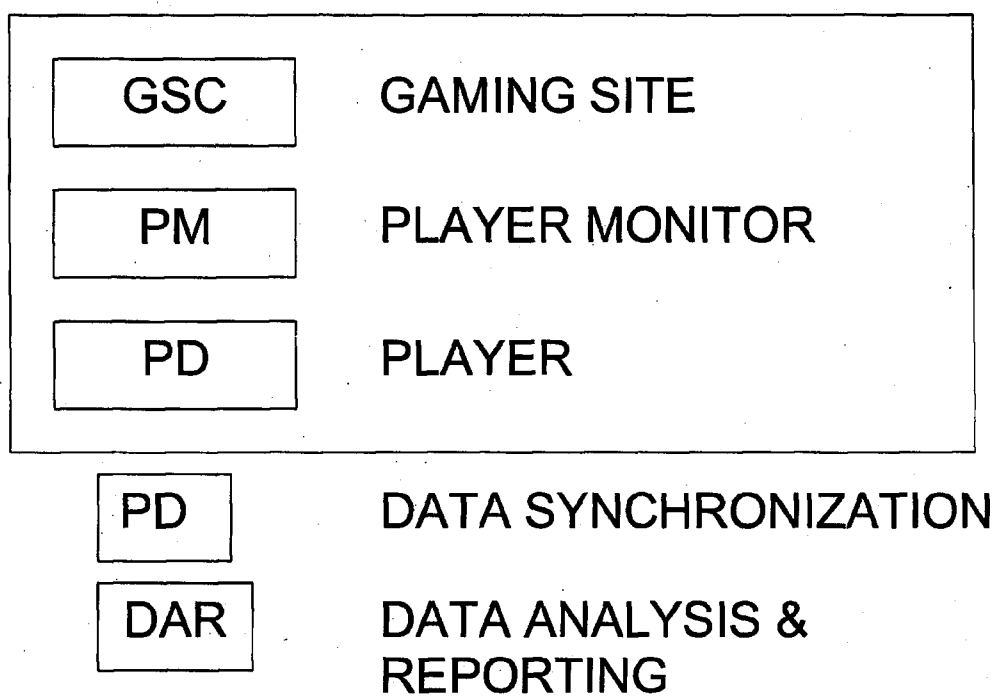
Fig. 1



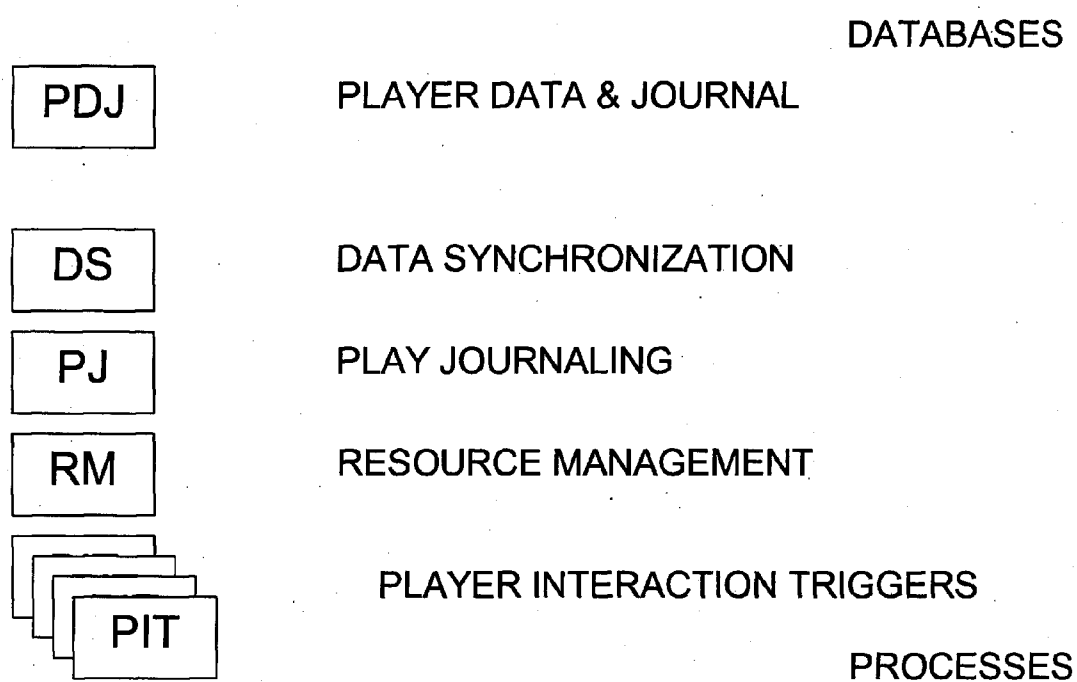
**FIG. 2**  
RISK MANAGEMENT UTILITY



**FIG. 3A**  
**THE DATABASES AND PROCESSES INCLUDED IN**  
**THE GLOBAL GAMING BEHAVIOUR MONITOR**



**FIG. 3B**  
**GAMING SITE PLAY MONITOR**



**FIG. 3C**  
**PLAYER MONITOR & MANAGER**

**SYSTEM, METHOD AND COMPUTER  
PROGRAM FOR RETENTION AND  
OPTIMIZATION OF GAMING REVENUE  
AND AMELIORATION OF NEGATIVE  
GAMING BEHAVIOUR**

**[0001]** This application claims the benefit of U.S. Patent Application No. 61/034,326, filed Mar. 6, 2008.

**FIELD OF THE INVENTION**

**[0002]** This invention relates to a system and computer program that monitors and analyses an individual's gaming behaviour to reduce the likelihood of, potentially harmful behaviour from becoming addictive behaviour, and to prevent or reduce the likelihood of burnouts and as a result, create safer long term participation that generates customer retention and revenue optimization for the gaming operator.

**BACKGROUND OF THE INVENTION**

**[0003]** Gambling is as old as human history. Yet, as we move into the third millennium there is a dramatic increase in legalized gambling worldwide, primarily because of governments' need to increase revenue without additional taxation. Other factors contributing to increased participation in gambling include the rise of new technologies, including internet gambling (e.g., online poker). This has naturally led to an increase in the number of people experiencing gambling problems as more people overall participate in gambling. Problem gambling is generally defined as gambling behaviour that creates negative consequences for the gambler, others in his or her social network, or for the community. There is also a definition for pathological gambling, the more acute element of the continuum of gambling-related problems, which is recognized as a mental disorder by the American Psychiatric Association. The main features of pathological gambling are: (1) a continuous or periodic loss of control over gambling; (2) a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and (3) a continuation of gambling involvement despite adverse consequences (American Psychiatric Association). Additionally, according to cognitive-behaviour theories of addiction, all games of chance, indeed all things that are exciting or pleasant, or provide an escape, are potentially addictive.

**[0004]** Gambling addiction treatment approaches have generally followed a disease model approach very similar to those in the substance abuse field where abstinence is the primary goal of treatment after the individual has been identified or diagnosed as a problem, compulsive, pathological or disordered gambler, which is widely considered to have a progressive course. However, the current state of the art generally indicates that the notion that gambling problems are always progressive and enduring is false. There is considerable movement in and out of more severe and less severe levels of gambling problems. The data show that the progression or worsening of gambling problems is less common than expected. Although individuals who do not gamble or gamble without problems tend to remain problem-free, transition between levels of disordered gambling is common. Understanding the variety of biological, psychological, and social factors that influence gambling problem progression will

serve as the foundation for development of effective and efficacious prevention efforts (LaPlante, D. 2008).

**[0005]** The emergence of Internet gambling has been one of the most significant and controversial developments in the gambling and problem gambling fields over the past two decades. There is strong foundation to speculate on the heightened risks associated with Internet gambling that contribute to the development of problem gambling. For instance, Griffiths has identified the use of virtual cash, unlimited accessibility, and the solitary nature of gambling on the Internet as potential risk factors for problem gambling development (Griffiths, 1999). Additionally, an individual's risk for developing a problem is enhanced by a mix of cognitive, social, emotional, biological, and genetic predispositions (Turner, 2002), all of which can be identified by monitoring for risk indicators. Though Internet gambling may increase risk factors for gambling addiction, technology can also be used to directly and effectively mitigate these risks.

**[0006]** It has been argued that gambling is a multifaceted behaviour, strongly influenced by contextual factors that cannot be encompassed by any single theoretical perspective. Such contextual factors include variations in gambling involvement and motivation across different demographic groups, the structural characteristics of activities and the developmental or temporal nature of gambling behaviour. Therefore, clinical interventions are best served by a biopsychosocial approach that incorporates the best strands of contemporary psychology, biology and sociology (Griffiths, 2004). This suggests the need for an eclectic approach for the prevention of gambling problems. In the context of Internet gambling, recent research findings into gambling addiction risk factors and indicators, coupled with the ability to monitor all gambling behaviour, and the capability to instantly communicate with the players, opens the door to apply a range of problem gambling prevention and behavioural management techniques.

**[0007]** Paralleling innovative new approaches in the substance abuse field, harm minimization techniques have proven successful in assisting gamblers where abstinence is not their primary goal (Horbay, R, Chen, P, 1997). Harm minimization means "reducing the likelihood of harm associated with gambling," or, conversely, "increasing the safety related to continued gambling." Harm reduction or harm minimization approaches do not rely on psychometric testing to identify harm, but rather assumes certain behaviours are potentially harmful or addiction prone and strives to identify risk factors that are modifiable to reduce the likelihood of harm. This approach is applied when a person is gambling while attempting to modify their behaviors to reduce or stop any negative consequences or to modify risk factors to prevent harm. One aspect of the invention is the utilization of a harm minimization approach as a conceptual basis for communication and interactions and communications with the user. This model recognized by LaPlante that gamblers movement in and out of more severe and less severe levels of gambling problems and that through modifications in gambling behaviours, harm can be minimized and prevented, and gamblers can remain or return to safer or safe levels of gambling.

**[0008]** Potentially harmful behaviour generally refers to participation in activities that are inherently risky in nature, where the user is not cognizant of potentially negative effects of the activity that can result in negative consequences for the individual, others in his or her social network, or for the community at large.

**[0009]** An example of area of activity that can result in potentially harmful behaviour and in some cases to addictive behaviour is poker playing or poker gaming on the Internet. Potentially harmful behaviour generally refers to participation in activities that are inherently risky in nature, where the user is not cognizant of potentially negative effects of the activity that can result in negative consequences for the individual, others in his or her social network, or for the community at large. Poker gaming over the internet or wireless networks, is now a rapidly growing \$10 Billion marketplace. In online gaming environments players can generally gamble without traditional safeguards or impediments to excessive play (such as human contact, separation of cash access from play or physical removal). Players gaming in these unmonitored environments can experience potentially harmful behaviour including, but not limited to; burnout, harmful play or problem chance gaming.

**[0010]** The online gaming environment generally provides gaming operators with significantly more comprehensive and detailed gaming transaction data on each of their individual patrons. These factors elevate the operator's capacity for (and potential legal responsibility for) identifying risky or dangerous behaviours.

**[0011]** The online gaming environment therefore runs a dual risk for online gaming operators: one risk is the potential loss of revenue due to the premature burnout of online gaming site players, the second risk is the plausible legal exposure gaming operators could face where they knowingly continue to provide gaming products when it is clear or likely that the player is experiencing the potential for harm from problem gambling.

**[0012]** According to the prior art, some attempts have been made to provide methods or systems that alleviate the risks of these potentially harmful or addictive behaviours. ICU Intelligence Group AB's PLAYSCAN™ and SPELKOLL™ are examples of such products. ICU Intelligence Group AB discloses a product generally focused on the online gaming environment. The product categorizes player activity into three brackets of acceptability (red/yellow/green). The products of ICU Intelligence do not take a pro behavioural modification approach and generally the organization of players into this small number of risk categories may oversimplify the nature of player risk. Simply identifying risky or problematic play patterns and suggesting the player stop playing runs counter to gaming operators' interests and is a use of an outdated addictions paradigm that precludes effective prevention solutions offered by the present invention. The products of ICU Intelligence offers the users options to self-regulate their behaviours and does not attempt to be proactive in modifying risky or problem behaviours, but rather relies on voluntary adoption of tools presented to the user. Additionally, the product is embedded in the gaming operator's system, which may lack the objectivity and credibility of the present invention.

**[0013]** U.S. Pat. No. 6,629,890 issued to Safe Gaming Systems, uses static online data collection and player self-assessment to codify a player for risk. This system is a static and non-data driven assessment product which does not provide ongoing safeguards or "curbing" and generally relies on player input to activate the "Safe Gaming Service", which is fee based and has optional add-ons that allow limit-setting and private feedback on gaming results. The system acts as "the bank" for the player only allowing the player access to predetermined funds. This is contrary to the present invention

that does not force users to predetermine limits, but rather encourages and rewards players for modifying their limits to safe and sustainable levels.

**[0014]** In accordance with other prior art solutions, iView System markets a product that relies on land-based player card activated VLT or Slots play to build data on an individual's behaviour and analyzes the behaviour data to identify markers for addiction risks and problems using the Canadian Problem Gambling Index (CPGI). iView's system does not generally provide comprehensive monitoring and relies on voluntary use of a card system for player tracking. It does not allow for real-time communication or interacting with a player but relies on human interactions with suspected at risk or problem gamblers. It does not proactively attempt to present problems like the current invention. Also, the data that can be collected using prior art approaches to land-based casino players is very different from information that may be collected online, and therefore the iView System provides little or no insight on how to collect online data and achieve behaviour modification goals using such data.

**[0015]** Several other player-focused prevention systems are available, however, online gaming operators often provide them and therefore there may be a concern about conflict of interest, and also they generally require players to track and monitor their own performance thereby resulting in conformity to the requirements of the prevention system as the potentially harmful behaviour becomes more acute.

**[0016]** There are several industry associations such as eCOGRA, who provide programs which purport to ensure player protection and responsible operator conduct through a certification process.

**[0017]** Additionally, some Internet gambling operators, such as PartyPoker.com, do track player behaviours to identify patterns, such as identifying series of wins in "play for free" sessions and then alert the player that they have played well and won and then suggest to the user that they try playing for money. Although these systems appear to have the same functionality of the present invention, such as tracking the play behaviours and use a simple algorithm to invoke an interaction with the player, their intended purpose is for marketing and promotion, not harm minimization or reduction.

**[0018]** In view of the foregoing, what is needed is a system and method that analyses and evaluates data extracted from transactions to identify excessive or potentially harmful behaviour, and provides for one or more mechanisms to alleviate the situation. There is a further need for a system and method that is operable to reduce potentially harmful behaviour of gaming players, thereby reducing the likelihood of gambling related harm or addiction. There is a further need for a system and method that reduces player burnouts and creates a safer long-term participation, increasing gamer retention and optimizing revenue for the gaming operator.

**[0019]** The following publications are prior art in the general area of negative gaming behaviour and possible ways to address or modify this behaviour: (a) Blaszczyński, A. & Nower, L., "A pathways model of problem and pathological gambling" (2002) 97:5 *Addiction* at 487-500; (b) Horbay, R. & Chen, P., "Evaluation of an Integrated Client-Centered Approach to Problem Gambling" a paper presented at The Eleventh Annual Conference, 1997, on Problem Gambling Behaviors, New Orleans, La.; (c) LaPlante, D., "Stability and Progression of Disordered Gambling: Lessons from Longitudinal Studies" (2008) 53:1 *Can J Psychiatry* at 52-60; (c) Marlatt, G.A., "Relapse prevention: Theoretical rationale and



overview of the model” in G. A. Marlatt & J. R. Gordon (Eds.), *Relapse prevention: Maintenance strategies in the treatment of addictive behaviours* (New York: Guilford, 1985) at 3-67; (d) M. D. Griffiths, “Gambling technologies: Prospects for problem gambling” (1999) 15 *Journal of Gambling Studies* at 265-283; (e) M. D. Griffiths & Delfabbro, P., “The Biopsychosocial Approach to Gambling: Contextual Factors in Research and Clinical Interventions” (2001) 5 *Electronic Journal Of Gambling Issues*; (f) Prochaska, J. & DiClemente, C., “Toward a comprehensive, transtheoretical model of change: Stages of change and addictive behaviours” In V. Lopez (Ed.), *Treating Addictive Behaviours*, 2nd ed. (New York: Plenum Press 1998); and (g) Turner, N. E., Littman-Sharp, N., Zengeneh, M., & Spence, W., *Winners: Why do some develop gambling problems while others do not?* (2002) Available: <<http://www.gamblingresearch.org>>.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0020]** FIG. 1 is a system diagram of one implementation of the system of the present invention.

**[0021]** FIG. 2 is a flowchart illustrating the operation of the risk management utility of the present invention, in one implementation thereof.

**[0022]** FIGS. 3A, 3B and 3C illustrate three levels of monitors (processes and databases) used to capture, analyze and react to data from the gaming play environment, in one particular aspect of the present invention.

**[0023]** In the drawings, one embodiment of the invention is illustrated by way of example. It is to be expressly understood that the description and drawings are only for the purpose of illustration and as an aid to understanding, and are not intended as a definition of the limits of the invention.

#### DETAILED DESCRIPTION OF THE INVENTION

**[0024]** This invention relates to a system and computer program that monitors user behaviours, analyses behaviour, and communicates with individuals users, more specifically, users connected to any telecommunication devices or system, including, but not limited to, land-based devices, Internet and mobile devices and systems, and communicates with the user in various forms to facilitate modification of their behaviours to reduce the likelihood of potentially harmful and/or addictive user behaviour, and to prevent, or reduce the likelihood, of user “burnout” and attrition due to excessive use, and/or monetary losses, and other related unintended negative consequences. Potentially harmful behaviours generally refers to participation in activities that are inherently risky in nature, with an unawareness or disregard of potentially negative consequences involved in the activity that can result in negative consequences for the individual, others in his or her social network, or for the community. This invention relates more particularly, but not limited to, a system and computer program that monitors, analyses and facilitates modification of online poker behaviour by interacting and communicating with individuals on and through the internet or other communication means (such as a communication device, communication network or communication system) telecommunication device and system to reduce the likelihood of potentially harmful and/or addictive poker player behaviour, to prevent, or reduce the likelihood, of player burnout and attrition and/or other unintended collateral harms, and to capitalize on player retention ensuring greater revenue for the gaming operator.

**[0025]** The present invention implements in a computer system logic for identification of risk, analysis of risk indicators, and comprehensive interaction with a plurality of users in order to effectively modify player behaviours to reduce risk and potential harm.

**[0026]** One aspect of the invention is the utilization of an eclectic approach to problem and/or addictive behaviour prevention. Rather than using one theory, approach or technique, the invention utilizes best practices within the addictions field with an integrated model that incorporates the most recent research on harm minimization, known risk factors and a pathway to addiction model, couple with proven behavioural modification, motivational and reward techniques, a Trans-theoretical approach, and elements of Transactional Analysis theory. Additionally, this eclectic model may be updated and revised as new research evidence becomes available.

**[0027]** One aspect of the invention is the utilization of a risk factors and pathway model as a conceptual basis for interactions and communications with the user. The invention, in one implementation thereof, utilizes a general model of pathological gambling called the pathways model (Blaszczynski, 2002) that integrates various “causes” of gambling addiction into an overall framework. According to this model gamblers can be grouped into 3 basic types, differing in terms of their etiological history or “pathways” leading to excessive gambling: (1) otherwise “normal” (possesses misconceptions about the game and/or levels of personal skill), (2) emotionally vulnerable and (3) impulsive. Each pathway is then associated with risk indicators, which is then targeted with a specific commutation and interactions with the user in order to minimize the potential for escalation into gambling that has negative consequences. Through utilization of risk indicators that have been identified and scientifically validated using, among other assessment tools, Game Planit Interactive Corp’s Risk-Quiz™, which is a risk factor self-identification tool, the invention is operable to monitor all gambling behaviour and check for and flag gambling behaviours associated with specific risk factors. This allows for targeted communications and interactions with the user that addresses specific risk indicators. These risk indicators include, but are not limited to, excessive time, excessive wagering, win/loss patterns, gambling behaviours that indicate game and/or skill misconceptions, impulsive gambling behaviours and behaviours that indicate loss of emotional control, such as “chasing”, which is manifested in behaviours that indicate an urgency to win back losses.

**[0028]** Another aspect of the invention is the use of positive reinforcement behaviour modification and motivational techniques, which encourages certain behaviors through a system of rewards. Upon identification of potential risk indicators, the invention is operable to identify exceptions to these risk indicators and employ a behaviour modification reward system, such as a points system that the user can redeem for prizes, to subtly encourage desired behaviours and discourage risk behaviours.

**[0029]** Communications with users, in accordance with another aspect of the invention, follows a well researched and effective Transtheoretical model or “Stages of Change” approach (Prochaska and DiClemente, 1998) as a conceptual framework that tailors the timing, mode and content of communications with the user depending on the user’s readiness to receive the communication and act to adopt safe and healthy gambling behaviour or stop unhealthy or potentially problematic gambling behaviours. The Stages of Change

model proposes that addictive behavioural change proceeds through a predictable series of stages. The user moves from being unaware, under-aware or unwilling to do anything about his or her problems (Pre-contemplation stage), to considering making changes (Contemplation stage). Thus, the initial two stages involve building motivation. Strengthening one's motivation to change characterizes the final two stages as the user then moves to prepare to make changes (Preparation stage), to taking action and finally to maintaining the behavioural change over time (Action stage: Stages of Change Model). The Stages of Change model represents parts of a dynamic process motivating change rather than a static framework. For example, users may cycle back and forth often through the various stages before finally modifying the potentially problem behaviours and initiating new healthy play behaviours. This parallels recent research by LaPlante that found gamblers move in and out of different severity levels of problems. The invention is operable to identify which stage each user may be in and to "match" the user's readiness to make changes with the use of appropriate communication and interactions to assist them in modifying their behaviours. An example, an application of this model in the invention would be to present the user with information on their personal game history compared to other users when the system detects a potentially harmful pattern of play behaviour. The intent is to move the user from a state of precontemplation into a state of awareness that their play behaviours may pose a problem and thus they've moved into "contemplation". This may be followed by presenting the user with an incentive to motivate them to contemplate playing differently that poses lesser risks. A user's state of readiness is influenced by his or her perception of the importance of change and confidence to change. Thus, change must be intentional and rewarding so the user must appreciate the value of modifying their behaviours. The Transtheoretical model addresses willingness and readiness to modify play behaviours, therefore the timing and types of communication and interactions with the player may be tailored dependent on their readiness to change that is tied to their self-awareness of potential risks and/or problems.

**[0030]** Additionally, elements of Transactional Analysis theory may be applied to each communication with the user to ensure the proper tone, content and timing, from rewards or emotion-based information to logic/rational feedback to critical or urgent user self-awareness raising interaction styles.

**[0031]** Another aspect of the invention is to monitor and evaluate this eclectic approach to behaviour modification and problem and/or addictive behaviour prevention and modify the interactions and communication with the users to optimize the most effective communications and interactions.

## OVERVIEW

**[0032]** i. Purpose & Effects of Interactive Message Systems

**[0033]** As is well established in the art of addiction prevention and problem behaviour modification and management, addictive and problem behaviour can be better alleviated if approached in a preventative manner rather than treated as a disease or disorder once the addictive or problematic behaviour has fully manifested itself. Preventative treatment of addictive and potentially problematic behaviour involves identification of risk factors and behaviour patterns that are potentially harmful behaviours because they involve an increased likelihood of development of addictive behaviour patterns. Preventative treatment may involve identification of

risk indicators early enough such that behaviour management and modification is relatively easy to implement. For example, behaviour modification may be achieved by targeted communication methods and media depending on the risk behaviour indicators exhibited by the individual.

**[0034]** In one aspect thereof, the present invention is a system and method for tracking and preventing or modifying problem and/or addictive behaviours by means of communication and interactions with the users to facilitate modification of behaviours to less risky levels. The system and method is applicable to a range of potentially problematic or addictive behaviour associated with engaging in potentially risky activities over time. The present invention may be used for tracking and preventing or modifying problem and/or addictive behaviours by means of communication and interactions with the users so long as behaviour data for at least one affected individual can be measured over time, recorded electronically and then analyzed as described herein.

**[0035]** This behaviour data is particularly readily measured in connection with online gambling which occurs through a web interface that enables various aspects of user behaviour to be readily measured. User behaviour can be monitored over time by requiring a user to login to the website using a profile that identifies the user and thereafter tracking the web interactions of the individual. Online poker play can result in gambling addiction which in turn results overall in loss of revenue for operators of online chance gaming sites, and also collateral harm and consequential social problems.

**[0036]** It should be understood that while much of this disclosure concentrates on online poker play as an example of implementation of the invention it should be understood that other applications are possible. The system can track, analyze and assess any potentially harmful or addictive behaviour and behaviour patterns. It then interacts with the user to appropriately modify and manage undesirable behaviours when applied to other potentially risky or harmful activities such as various forms of gambling, online game playing, transacting in stock and other securities, compulsive over-spending and so on. Additionally, the present invention can detect money laundering and collusion by players through the addition of specialized algorithms designed to detect such behaviours. The present invention can also perform real-time monitoring of player win/losses and calculate percentage payback of various games, so as to provide real-time auditing of game performance for regulatory compliance.

**[0037]** In one aspect of the present invention, a method and system for preventing problematic chance gaming is provided in which a computer program monitors and analyses a player's chance gaming behaviour to anticipate problems and prevent burnouts by enabling behaviour modification, including through an interactive messaging utility. By anticipating problem behaviour and preventing burnouts, gaming operators are able to retain more players over longer periods of time.

**[0038]** The system in one aspect thereof includes a server computer (4) linked to a database (6). The server computer is provided using known hardware and software, and is preferably linked to the internet. The server computer (4) is interoperable with remote computers (8) associated with operators of chance gaming websites so as to obtain the raw data mentioned below. The server computer (4) is responsible for providing the behaviour modification described in this disclosure. The server computer (4) includes or is linked to the

utilities described in this invention. The system of the present invention is best understood by reference to FIG. 1.

**[0039]** One particular aspect of the present invention consists of a system that includes or is linked to a data management utility (10). The data management utility collects raw gaming session data from individual players. Alternatively, other means for collecting behaviour data may also be used.

**[0040]** In one particular aspect of the present invention, an individual player's behaviour data that is collected or captured includes, but is not limited to, play trends and risks the player takes in each session of play including; access time and date information; session wager activity; win/loss history; deposit amounts; and table stake amounts. The collected data is then categorized and processed in the Data Management Utility to calculate the particular player's "Individual Player Values". The Individual Player Values are next forwarded to the "Risk Management Utility" which houses an evolving collection of gaming behaviour norms and group behaviour patterns. The Individual Player Values for the given player are compared and contrasted with those housed in the Risk Management Utility (12), and this assessment leads to the calculation of the player's "Player Type Values", a determinant of the player's gaming behaviour status.

**[0041]** In one aspect thereof, the risk management utility (12) is operable to enable the definition of a plurality of gaming behaviour norms and/or group behaviour patterns, associated with a particular potentially harmful behaviour. The data associated with the behaviour norms and/or behaviour patterns may be saved to a database. The categorization of the user may occur by application of such behaviour norms and/or behaviour patterns. It should be understood that such behaviour norms and/or behaviour patterns may be defined based on applicable scientific literature, and updated from time to time based on evolution in the understanding of applicable behaviour norms and/or behaviour patterns. Measuring individual player values enables creation of a numeric categorization of that player for all measured and calculated aspects relevant to problem detection or pattern measurement. This may include absolute extremes, pattern behaviour, or individual trends or shift changes in behaviour.

**[0042]** The operation of a particular implementation of the risk management utility (12) is illustrated in FIG. 2.

**[0043]** The risk management utility (12) is operable to compare the Individual Player Value to the behaviour norms and/or behaviour patterns so as to calculate a "Player Type Value". Player Type Values would consist of grouped logical shared attributes that best define common ground across broad numbers of players, such as light/heavy play by time or dollar value, table value risk or base blind amounts, sex, age and geography demographics and game type selections.

**[0044]** In another aspect of the risk management utility (12), the raw gaming session data, Individual Player Values and Player Type Values are processed in accordance with a player monitoring routine, which may be implemented as a player monitoring utility. One particular example of a player monitoring routine is a "Condition Check Calculation", which is further described below. The purpose of the Condition Check Calculation is to characterize when a player is exhibiting risky gaming behaviour.

**[0045]** If the result of the Condition Check Calculation is in fact that the player is exhibiting relatively risky gaming behaviour, then the risk management utility (12) is operable to trigger one or more interactions depending on the parameters of the risky behaviour. Examples of the interactions are

described below in greater detail. The interactions relate to means for initiating behaviour modification in connection with the individual player. In one particular aspect of the present invention, the interactions are initiated by a "Player Interaction Trigger" (also referred to as the "PIT") which is essentially a software routine which initiates the application of the interactions below in response to parameters defining risky behaviour.

**[0046]** The interactions are designed to keep the players from burnout or 'tilting' by alleviating their risky behaviour, severity level and player type. The interactions may consist of target communications delivered by means of a messaging utility (14) that is part of, or linked to the system. An individual interaction launched by the PIT sends a targeted interaction message to a player at a prescribed time and by a prescribed medium.

**[0047]** There are currently about 90 interactions utilized by the system, which are stored to the database (6). The interactions are each specifically designed to target a particular risky behaviour. The interactions are based on the latest literature regarding behaviour modification for the particular risk behaviour.

**[0048]** The final step of the process involves launching the applicable interaction and updating the player type value. This system continuously loops and recalculates the various player values to combat the potentially harmful behaviour and promote responsible gaming.

**[0049]** A reporting utility (16) updates the operator of the gaming site, and optionally the technology operator (operator of the gaming technology and server computer), of the status of players.

**[0050]** In one aspect of this invention a method of ameliorating negative gaming behaviour is provided comprising the steps of: (a) monitoring the gaming behaviour of one or more users; (b) analyzing the gaming behaviour to identify behaviour that may result in potentially harmful or addictive gaming behaviour (negative gaming behaviour); and (c) in the event of occurrence of such negative gaming behaviour, initiating based on the specific negative behaviour one or more interactions between a system and the one or more users, such interactions being directed to ameliorating the negative gaming behaviour by preventative action.

**[0051]** In another aspect of this invention a system for ameliorating negative gaming behaviour is provided wherein the system comprises: (a) a server computer linked to one or more remote computers for obtaining gaming behaviour data for one or more users; (b) the server computer including or being linked to a risk management utility that embodies a plurality of risk indicators for identifying gaming behaviour that may result in potentially harmful or addictive gaming behaviour or negative gaming behaviour, wherein the risk management utility is operable to analyze the gaming behaviour data to identify negative gaming behaviour based on the risk indicators; and (c) the server computer further including or being linked to a communication utility that is operable to initiate one or more communications between the user and the server computer, such communications defining one or more interactions defined by the risk management utility for ameliorating the negative gaming behaviour by preventative action.

**[0052]** In a further aspect of this invention a method of ameliorating negative gaming behaviour, is provided comprising the steps of: (a) monitoring the gaming behaviour of one or more users; (b) analyzing the gaming behaviour to identify behaviour that may result in potentially harmful or

addictive gaming behaviour (negative gaming behaviour); (c) in the event of occurrence of such negative gaming behaviour, initiating based on the specific negative behaviour one or more interactions between a system and the one or more users, such interactions being directed to ameliorating the negative gaming behaviour by preventative action; and (d) generating a report to a gaming operator and/or a government entity or government appointed entity detailing the potentially harmful and addictive gaming behaviour of one or more users of the gaming operator's services.

**[0053]** In another aspect of this invention a system for ameliorating negative gaming behaviour is provided wherein the system comprises: (a) a server computer linked to one or more remote computers for obtaining gaming behaviour data for one or more users; (b) the server computer including or being linked to a risk management utility that embodies a plurality of risk indicators for identifying gaming behaviour that may result in potentially harmful or addictive gaming behaviour or negative gaming behaviour, wherein the risk management utility is operable to analyze the gaming behaviour data to identify negative gaming behaviour based on the risk indicators; (c) the server computer further including or being linked to a communication utility that is operable to initiate one or more communications between the user and the server computer, such communications defining one or more interactions defined by the risk management utility for ameliorating the negative gaming behaviour by preventative action; and (d) the server computer further including or being linked to a reporting utility that generates reports for a gaming operator and/or a government entity or government appointed entity detailing the potentially harmful and addictive gaming behaviour of one or more users of the gaming operator's services.

#### Data Management Utility

**[0054]** This section provides additional detail concerning the data management utility (10). In one aspect of the invention, the data management utility (10) collects data from a given player from the conception of their gaming account and continuously through time. In one implementation of the invention, the player generally is required to first consent to the collection of the data, and agrees to participate. The information collected may include: (a) player background information; (b) third party information checks; (c) deposit information; (d) play session information; (e) session to session individual comparisons; (f) player behaviour versus group and population norms; (g) research evidence norms and; (h) problem pattern predictors. The system establishes real time collection and monitoring of all aspects of a particular player's online chance gaming or gaming behaviour.

**[0055]** Player background information may include profile data as entered at signup (i.e. age, sex, location (immediately correlated to HHI database to provide HHI estimate (HHI=Household income, a measure of earned dollars in the household by all residents), player choice controls (wager sessions limits, stop losses, deposit limits, win targets), and games played (poker, casino, sportsbook).

**[0056]** Third party database checks may refer to information available regarding the player's history and may include credit risk scores, VISA/MasterCard credit rating, delinquency data, and site linking co-mobility factors (player came from a gaming site, just checked bank account, came from an adult/alcohol/tobacco site).

**[0057]** The player's deposit information may include the initial deposit amount, subsequent deposit patterns and trends, and exceptional deposits.

**[0058]** Play session information may also be collected and may include data such as start time, wager frequency, average session wager, high session wager, cumulative session wager, games played, average time per game, win totals, high win, wager amount following win, total session time, time of day/week login, voluntary login information (risk quiz completion/feeling well inquiry etc.), and/or game switching behaviour (linked to significant wager/outcome events).

**[0059]** Data regarding the session to session individual comparisons may include average session wager versus norm, initial deposit versus norm, wager frequency versus norm, time of day/week access versus norm, frequency of access versus norm, wager variation in session versus norm, session length versus norm, wager amount following win versus norm, and/or wager amount following series of losses.

**[0060]** The data management utility (10) also takes into consideration the player's behaviour versus group and population norms such as average individual wager/session time/access frequency versus subgroup (sex, age, HHI, credit standing, player style) and versus site player population.

**[0061]** Research evidence norms and problem pattern predictors are another aspect of the data management utility (10). They refer to chasing patterns, escalating frequency of access patterns, monthly wagering average as percentage of HHI, wager behaviour after bonusing, and/or faulty cognition responses.

**[0062]** The server computer (4) is either linked to the gaming site operator's remote computer (8) software and resides on the player's computer alongside the gaming software that has been downloaded, or resides at a thin client server of either the site operator or the technology operator, continuously updating that player's activity.

**[0063]** In a particular aspect of implementation of a present invention, a synchronization utility (not shown) may be used to synchronize player related data as between the server computer (4) and a remote server computer (8). It should be understood that the present invention is not merely limited to an online context, to the extent that the above data can be collected, the invention can then in fact be applied to other gaming environments such as slotting and non-electronic gaming.

#### Risk Management Utility

**[0064]** This section discusses further aspects of the risk management utility (12). In a particular implementation of the present invention a known Optical Character Recognition program is used to retrieve the collected data from the data management utility (10). The data may then be transferred to the risk management utility (12) where it may then be processed and characterized to identify a player's individual values. In order to sort and characterize the information into the four identified risk factor groups, a Ten Condition Check algorithm system may then be applied. This process identifies a player's specific behavioural patterns and assesses the player's potential for harmful gaming. Violations of the conditions create flags by player, the flags may be valued according to severity and accumulated within a given session and within a monthly period and assessed versus group behavioural norms. The system may use a severity risk measure defined as the 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> occurrence of severity risk, it categorizes players based on their behaviour risk levels and how likely

they are to engage in risky behaviour. The individual player's information may then be used to calculate player type values wherein average values are calculated for players with like habits.

[0065] i. Global Gaming Behaviour Monitor, GGBM

[0066] In a further aspect of the present invention the player's calculated values (i.e. player type, play trends, and severity) may be compared to the gaming behaviour norms and group behaviour patterns, as mentioned above. These behaviour norms and group behaviour patterns implemented to the database (6) is referred to as the Global Gaming Behaviour Monitor (GGBM). This aspect may be achieved through comparison of each calculated value with an ongoing update of extensively and scientifically researched norms and algorithms in the GGBM to identify specific risk factors of potential problems. Based on this comparison, the system then addresses the likelihood that a player may drift between stages of vulnerability, problem gaming and not. The database (6), which is linked to the risk management utility (12) may be populated through player monitoring over an initial start-up period of the software service creating norms of play behaviour that may form the basis of player type definitions and tolerance levels (levels within which it is considered normal or acceptable, versus extreme) within the condition check algorithms. As multiple gaming site operators join the technology operator's software service, the various data of the risk management utility (12) may be continuously fed to the GGBM, providing norms data across industry-wide types of online gaming (e.g. no limit Texas Hold'em poker, roulette, blackjack, slots, sports betting) and industry wide player type definitions. A particular implementation of the GGBM is illustrated in FIG. 3A.

#### Player Monitoring Utility

[0067] One aspect of the risk management utility (12) is monitoring players, which may also be referred to as a player monitoring utility (not specifically shown). As described above that happens in part through the application of the condition checks. A particular implementation of player monitoring is illustrated in FIG. 3B and consists of monitoring of the gaming site; another is illustrated in FIG. 3C and consists of a player monitor & manager.

[0068] In one particular implementation of the present invention, there are 10 condition checks.

[0069] i. Condition Checks

[0070] In yet a further aspect of the present invention, the three data inputs, the player's raw gaming session data, updated calculated player values and player type values, are obtained and a variety of calculations are made for each player at the end of each session. The initial 10 Condition Checks utilize four groups of risk factors—extreme time issues, extreme wager behaviour, uncharacteristic behaviour within player type, and risky play type:

[0071] 1. Absolute Time Excesses and Shifts

[0072] (i) Extreme time

[0073] (ii) Escalating Sessions

[0074] (iii) Access Times

[0075] 2. Absolute Extreme Wagering

[0076] (iv) Chasing—Rush to Return

[0077] (v) Chasing—Extreme wagering

[0078] (vi) Extreme wagering amounts

[0079] 3. Player Type Extremes

[0080] (vii) Escalating Player Type Profile

[0081] (viii) Extreme Play in Player Type

[0082] 4. Risky Play Style

[0083] (ix) Extreme Table Activity

[0084] (x) Reckless Aggressiveness.

[0085] In addition, the Ten Condition Checks monitor a player for two types of variance; one is the shifts and escalations in an individual's behaviour, and the other is the extreme behaviour versus a player group norm. This set of condition checks emerges through time using learning on player responsiveness and relative severity of abnormal behaviour or patterns as tracked in the master database.

[0086] ii. Bonusing System

[0087] In a further aspect of the present invention, player bonusing, a framework for rewarding safer, smarter play is employed. This involves an overarching reward point accumulator that allows individuals to collect points based on their actions (such as cashing out ahead when recommended), positive behaviour (such as leaving the table before an all-in loss) or willingness to explore information fed to them (such as a review of their play time statistics compared with other groups). Accumulated points are redeemable for items of value and relevance (watches, cars, expert sessions with pro players, travel etc.). The reward redemption process is a distinctly separate management component of the bonusing system and is not integral to the present invention.

[0088] The point system can be a standalone component of the invention or be integrated with points awarded by a site operator point system and reward program, but the structure and awarding of points as earned by harm reduction play styles are determined by the GPI invention and its PIT algorithms. Certain actions may be rewarded at higher or lower levels of points than others, depending on the condition severity and the response effectiveness.

[0089] The purpose of the reward system is to reward positive behaviour and change, rather than to solely interact with negative or 'telling-style' communication. This is important to the success of the interactions in being productively received by the player and in building a positive outlook from the player on the interactions themselves and the player's opinion and loyalty for the site overall.

[0090] iii. Player Intervention Trigger, PIT

[0091] The system uses the processed information in applying to calculate the Player Interaction Trigger (PIT) for the particular gambler. In one particular implementation of the present invention, the PIT is a self contained program that uses the binary data stored on a player's computer, it may perform a check and then signal the requirement for an 'Interaction'. This type of software is usually referred to as an agent. The PITs are active agents individualized for each player, with intelligence built into them to enable one or more of:

[0092] 1. checking that player's status for any algorithmic condition check, including whether they have 'tripped' a condition and what severity risk level (occurrences of this condition incurred) they have progressed to;

[0093] 2. authorizing a prescribed interaction for that player type, condition and severity risk level and create the command that may send the right Interaction at the time, place and method set in the Interaction's design (e.g. send email to this player with the following content immediately after session logoff, or launch popup screen with the following content when the player next attempts to make an account deposit, etc.);

[0094] 3. updating itself from the GGBM on any changes to the condition check algorithms; and

[0095] 4. updating the risk management utility (12) and the GGBM based on player data resulting from application of the interactions.

[0096] The output of each calculation, or PIT, is a decision on launching a command or Interaction to the player at their next session. Each of the system's specifically designed algorithms for potentially risky play behaviour has its own PIT, in one implementation of the invention. The PIT objects may be controlled to utilize low periods of activity on the player computer for checks. This forms an important part of the resource management aspects of the invention. The player computer may trigger an interaction through the Internet connection with the remote computer operator computer and thereby bypass any block software. The actual format of the interaction is not limited by the current design. The system continuously analyses norms and group behaviour patterns and updates software with revised norms and PITs.

[0097] In this way, each PIT may have access to a player's complete gaming data profile on the player's computer to perform its checks. Also, through the use of checksums the data can be synchronized with a minimal amount of data transfer.

[0098] For each site, there may be a data set of Individual Player Values (raw and calculated) in addition to a data set of Calculated Player Type Values. A third sector may house all possible Interactions in a three-dimensional library.

#### Messaging Utility

[0099] This section described in greater detail the messaging utility (14), as well as its cooperation with the risk management utility (12).

##### [0100] i. Interactions

[0101] In a further aspect of the present invention history and trends of a particular player's style are taken into account and the system then acts as a multi-dimensional safety device. In metaphorical terms, the system provides a rumble strip effect on a player's online highway gaming experience, effectively alerting and psychologically instilling unconscious and conscious Interactions to revert the player to normal activity. It also provides related safety measures: seat belt warning lamps, road sign information, operating advice for situational hazards, and to some extent, air-bag deployment capability. While ultimate 'shutdown' of players through suspension of play accounts is fully the responsibility of the gaming operator, the system dynamically addresses known problem behaviours of any gaming situation and customizes the Interactions with players according to those shifting dynamics, norms and emerging patterns.

[0102] Another aspect of the present invention provides a targeted progression of player Interactions. The Interactions may reside in a library of algorithms stored to the database (6) and maintained by the technology operator as previously described. The algorithms are essentially mathematical calculations that check for behaviour that can contribute to problematic play being formed or to risky play behaviour already occurring. The Interactions are player-specific media-based 'engagements'—information or actions to respond to emerging risks as identified by the algorithms, based on therapy models and behavioural psychology approaches used in the fields of addiction and risky behaviour. They are designed by

problem chance gaming treatment professionals and behavioural scientists and their objective is to keep the players from burnout or 'tilting'.

[0103] The algorithms generally focus on conditions that are the leading 'risky behaviour' contributors, such as: (a) Extreme time involvement; (b) Extreme wagering amounts; (c) Forms of chasing wins or losses; or (d) Deviations from normal habits. As such, the algorithms check a cross-section of data on a player and compare it with group norms. The algorithms either deal with trend variations or with absolute extremes.

[0104] Using classic field therapy treatment procedures, the Interactions generally follow a goal-oriented approach for each condition that successively makes a player aware of his actions, the risk of a problem arising from these actions, and the options to current actions.

[0105] Based on research that includes behavioural change models and communication methods most effective to achieve behaviour modification, the interactions are specific to a player's categorization by the data management utility's database based on overall play type grouping and are specific to the condition algorithm that has been 'tripped'. The interactions are intended to be constructive and non-invasive from a privacy standpoint, maintaining the trust and involvement of a player. The goals include: (a) pre-empting player attrition otherwise arising from frustration or burnout; (b) increasing sustainable revenue flows for gaming operators; (c) attracting new players by reducing intimidation or potential extreme risks.

[0106] Interactions may take the form of recommendations and requirements a particular at risk player may have to overcome in order to proceed with the game. Such hurdles may include: (a) next session game recommendations (based on less addictive properties); (b) next session in-session responsible behaviour bonus; (c) next session forced quiz responses; (d) next session cash-out recommendations; or (e) next session introduction to limit setting tools. Interactions may be measured for effectiveness and modified accordingly, and new interactions may be added for new algorithms.

[0107] The initial set of interactions may be customizable for operator preferences in design and integration with their site.

[0108] Individual Interactions may be launched by the applicable PIT and the messaging utility (14) and deliver a targeted Interaction message to a player at a prescribed time and by a prescribed medium.

[0109] The system is operable to learn and adjust its algorithms to provide the most beneficial Interactions to each particular player. This automated learning system ensures non-static response to extremes and new populations of players. Algorithms may evolve, including the addition of new condition checks based on emerging data and modification of tolerances in existing algorithms based on breadth of players affected.

[0110] There may be an initial data population period during which data is stored to the database (6) which provides a store of data of effective operation of some or all of the algorithms described.

[0111] The algorithms themselves are either known algorithms or implemented in a manner that is known based on the description of interactions herein.

[0112] The interactions are generally based on several models of effectiveness to overcome pre-problem risk indicators (emotional involvement, early wins, misconceptions

and impulsiveness, as identified by the technology operator's algorithms). The models include a Transtheoretical Model of Change that addresses player moods and receptiveness at different times through their experience. This allows more effective timing of the interaction to be properly received when players are either in a contemplative state or considering their next actions. The Interactions may also rely on Transactional Analysis theory to ensure each communication uses the proper tone and content, from emotion-based information to logic/rational feedback to critical or urgent interaction styles. It should be understood that the present invention contemplates updating the interactions based on analyzing research publications in the area from time to time, or based on feedback from expert consultants.

[0113] Some categories of the Interactions may include:

[0114] A. Exit Interactions—In response to a condition where the trend to risky play styles has been increasing, as a player exits the site program software, a sub-screen may appear on their screen offering an opportunity to 'win' a seat at an expert/star session on bad beats. This first level interaction may report on player follow-up and determine messaging at subsequent severity level if the behaviour continues to escalate.

[0115] B. Out of Session Interactions—To provide a cathartic outlet for frustration that initially makes a player aware of their state of mind, when all-in-loss behaviour is escalating and table deposits are also rising, by providing a 'tantrum wall' link to a website-based interactive screen that allows a player to bang drums and throw paint bombs at a wall, with subsequent information links to community-based support/advice forums.

[0116] C. Logon Interactions—In response to a condition where a trend to all-in losses has been escalating, at a new session logon, an overlay screen with forced closure will 'advertise' the Hold'em Limit style games offered by the site and provide an option to try them for the first time.

[0117] D. Email Interactions—In response to a chasing trend where a player experiences an early large win followed by a series of losses that are made in an attempt and belief of repeating the significant win, for example, an offer by email to view through a linking window their personal game history and overlay it with expert techniques and results. The encouragement to a more in-control style can be integrated with the site's personalities or be delivered through the technology operator's expert persona character.

[0118] E. In-Play Interactions—As subtle reinforcements to positive behaviour observed following interactions that had highlighted risky play, interactions may appear while a player is at a poker table, for example. A player in a previous interaction may have been offered to activate a caution signal for a particular position in their play, such as opting to protect a win rather than continue to play to zero. When that player reaches a certain amount above their 'stake' at a table, a floating green \$ symbol may, for example, lap the poker screen one time, and would make a second appearance in either green or yellow if the player plays another winning or losing hand respectively.

[0119] F. Post-Login Account Screen Interactions—Specific to control setting options, when a player is adding funds at an increasing rate to his account, a button

option to additional play controls may appear in the account panel offering the player the option to pre-set session and deposit limits.

[0120] These are just examples of interactions. The current version of the system includes 90 interactions, each implemented as algorithms. The present invention contemplates that these may expand in an interaction library (not shown) created on database (6). There are currently 90 Interaction algorithms utilized by the system, however this number may grow as the system library evolves over time.

[0121] The interactions, in one aspect thereof, correspond to 3 player type definitions×10 condition checks×3 levels of escalating severity risk (i.e. 9 interactions possible for any condition). The risk management utility (12) is operable to determine which interaction is to be launched for a player, based on the current behaviour data for that player, along with its media, message and timing.

[0122] Each of the interactions is operable to act as a measure to alleviate the potentially harmful chance gaming behaviour of the player. The specific interaction launched for the targeted player is pre-designed to alleviate the player's risky behaviour, severity level and player type. One particular aspect of the invention is that the risk management utility (12) is operable to optimize customer revenue through extended player participation.

[0123] In another aspect of the invention, the interactions are divided into plurality of escalation levels whereby the interactions provide an escalation of warnings to players. In an implementation, the interactions define a five level escalation sequence from gentle warnings to more severe inhibitions on the player's gaming choices based on the particular player's current behaviour data:

[0124] 1. Educate→general messages on problem behaviours and promotion of self-control options;

[0125] 2. Inform→targeted feedback related to play activity, overlaid during play with no play interruptions;

[0126] 3. Moderate→bonusing offers for completion of awareness assessments, sign-on reminders for self-control options;

[0127] 4. Intervene→stealth speed of play breaking, in-play targeted messaging on wager flags, forced clearing interaction on support services; and

[0128] 5. Exclude→pre-approved management-based (management of online gaming site) suspension of play and forced contact with site for clearance.

[0129] The interaction library may be modular, allowing for interactions to be modified and reinserted through time, as well as enabling more player type categorizations and severity levels to be added based on data learning. Equally, as stated earlier, the algorithms may be customizable and can be added or subtracted from the software as dictated by the market behaviour.

[0130] For each type of gaming or market product monitored by the technology operator's system, a new and independent set of algorithms and interactions may be designed, corresponding to the particular data set and behavioural nuances of that product (e.g. casino table games, slot machines, stock market trading behaviour, bingo etc.).

[0131] The system targets its prescriptive Interactions based on two dimensions. It assesses the player type, and it escalates risk level of the current behaviour data based on historical behaviour data stored to the database (6) for the particular player. It should be understood that the system includes a database management utility (not shown) that is



operable to manage the storage and retrieval of data for example to create a profile for each player associated with the system, in order to create files containing historical behaviour data, and so on. The database management utility may also enable various features that ensure privacy and security of data, for example, by implementing field level encryption in the database (6).

**[0132]** The risk management utility (12) by embodying the processes herein, enables the selection between the interactions in the interaction library of one or more interactions that have a high degree of relevance for providing effective behaviour modification based on the current behaviour data for the player, which determines the current risk conditions of the player at the relevant time. This enhances the ability of the system to affect change in the particular player's behaviour.

**[0133]** It should be understood that the risk management utility (12) acts in "stealth mode" for players registered with the system of the present invention until their behaviour invokes an interaction. The interactions are processes in a private and secure manner ensuring that player privacy is not compromised. The present invention contemplates use of various privacy and security technologies and processes to this end, including encrypted email, web content delivered via secure channels and the like.

**[0134]** In a further aspect of the invention, the interactions consist of prescriptive measures to control or curb potentially harmful behaviour with most players, with built in escalation if behaviour modification efforts do not have the desired result. As the system monitors activity on an ongoing basis, interactions for higher severity levels are automatically triggered if desired behaviour modification results are not achieved. Specifically, the interactions of between the risk management utility (12) and the various players are further refined by the player's evolving profile and history, including the degree of risk or recurrence of a condition. In essence, the risk management utility (12) is operable to act adaptively in its selection of interactions based on player type, severity of risk and other factors. In a particular implementation of this aspect, when a Condition Check triggers that an interaction should be sent to the player, it first rotates to the indicate level of progression of the interaction for that player (e.g. 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> occurrence degree of risk) and then pivots to select the nature of the Interaction based on the Player Type (High Roller, Medium to Heavy Play, Light Play/Beginner, week-end, chaser, system player, sampler, budgeter, streaker etc.). The result is an interaction designed for the specific player at the particular time.

**[0135]** The system of the present invention provides the chance gaming operator friendly and independent solutions to real-time monitoring of risk factors and potentially harmful play behaviour. The monitoring enables launching of specifically targeted interactions with individual players using the leading models of change and behavioural management to build, reinforce or otherwise improve responsible play. It has specific application to all forms of online gaming/chance gaming and delivery methods of Internet, mobile and linked terminal networks. It may be provided to interact in online, land-based and wireless applications of gaming. By ensuring targeted and specific interactions directed at individual player, the gaming operator can reduce burnout and retain revenue generating players

**[0136]** ii. Evolution of the Interactions

**[0137]** The system itself has a dynamic learning ability, shifting its involvement and prescriptions for players based

on evolving norms and identified gains in effectiveness. The evolution takes place as a result of changing norms and player responses; it grows based on conditions, player types and Interactions

**[0138]** The invention actively improves its accuracy and effectiveness over time by gathering data on a broad cross section of players and also gathering results-tracking data on the subset of players that receive an interaction, where changes to their play styles are recorded and compared to pre-interaction play styles.

**[0139]** This is the basis of the invention's learning system. The purpose of this is to refine the system's algorithms and to test and modify the library of interactions, bonusing structures, media interfaces and player type definitions.

**[0140]** In one aspect of the invention, it has static PIT definitions and interactions. While these are customizable and modifiable, the statistical basis for changes is based on tolerance levels for launching interactions (i.e. setting limits on how many customers the invention communicates with). As soon as interactions are launched however, the invention begins a new level of data collection that monitors each PIT's effectiveness and each interaction's effectiveness within the GPI Global Gaming Database Monitor. The GGBM holds individual player and summary records of Pre-Post play styles on a given set of monitored play habits for each Interaction, and tests for achievement of desired moderation or curbing of potentially problematic play. Where PITs or interactions are not resulting in targets being met, the system is operable to flag that PIT or interaction for its ineffectiveness and initiate a GPI-managed modification.

**[0141]** In addition, the GGBM is operable to accumulate Player Type category data and use fuzzy logic or human-driven statistical analysis to identify new commonalities or suggested new groupings of players based on common traits and reactions to interactions. This learning system refinement enables possible modifications of initial static player types to suit the most prevalent common factors in tripping of PITs, such as geography, time of day access, sex, age, or other input factors. The learning system's identification of potential groups may lead to a circular and ongoing update of player types and related 'best interaction practices' that improves overall effectiveness of the system through time.

#### Reporting Utility

**[0142]** This section describes additional functions of reporting utility (16). The reporting utility is operable to provide a plurality of reports, mainly to the operator of the server computer (4) but also to the remote computers (8) and thereby the operators of the chance gaming websites. It should be understood that the present invention contemplates implementing various reporting technologies as part of the reporting utility (16) such as for example reporting technology marketed by SAS and others.

**[0143]** In a particular implementation of the reporting utility (16), two levels of reporting are provided:

**[0144]** 1. Customer Reports (geared to the operators of the chance gaming websites)—with basic standardized reports that may be interactive, with the possibility of custom reports as well. In a particular implementations the reports provide features such as drill downs etc.

**[0145]** 2. Technology Operator Learning System Analysis Reports (geared to enabling the operator of the server computer (4) to improve performance of the system)—designed to aid the technology operator in monitoring



and adjusting the effectiveness of PIT's and interactions, along with their associated settings.

**[0146]** The reports may include information such as: the percentage of problem play on the site, proportion of problem play through time, problem play by game type, index of site problem play versus comparative group, interaction activity, projected lifetime of player pre/post interaction and lifetime customer value analysis, and game introduction recommended mix by postal code and profile. These reports may be useful to the gaming operators to determine which at risk players may need to be targeted and how to increase player retention over time.

**[0147]** In addition, the present invention also contemplates the reporting utility (16) generating reports for individual, which they may view either during play, at logout, in the lobby or account screen, by e-mail, at the next login or other relevant communication points. Technology operator reports may be made available via email or a web interface, or via other means. Management reports on particular players are also forwarded to the gaming operator.

**[0148]** These reports are generated as a specific set type for the gaming operator, with a different set of reports generated for use by the owner of the harm prevention technology invention.

#### System Architecture

**[0149]** The system's architecture is operator friendly, integrating on a very controlled and limited basis with the primary gaming software and actively managing computer resources and network bandwidth. The result is a seamless system of transactional analysis designed specifically to bring the most positive play involvement for each customer of a gaming operator's site. This drives an increased capacity for a gaming brand to retain a player through time and grow their overall profitability.

**[0150]** Data may be retrieved using a standard approach across all operator sites and therefore all data may appear in the same format. Encryption may be provided using various third party products, implemented to the server computer (4) or otherwise. Various security technologies may also be implemented as between the server computer (4) and the various remote computers (8).

**[0151]** In another aspect of the present invention a binary file may be used to create the most efficient format to be stored and transmitted between the computers of the player, operator, and the Global Gaming Behaviour Monitor system. It is expected that the system computer/server would process the binary data to create a 'standard' database for analysis.

**[0152]** The system of the present invention, in one aspect of its implementation, is provided such that it is customizable to fit a given site operators unique needs. One aspect of the risk management utility (12) is that it enables definition of rules for capturing behaviour data, and deploying interactions, for players for specific sites. For example, the operator of the system of the present invention can determine the specific data to be collected, the level of risk to be addressed and the sequence of the interactions. Accordingly, the site operator and the system's operator may interact in an open manner to balance the player's needs and the site operator's objectives.

**[0153]** The Player Interaction Trigger design and modifications are part of the data process and player database with centralized condition checks in the system server.

**[0154]** The present invention contemplates deployment of the interactions in a way that does not materially affect the

player's user experience by slowing down operation of the chance gaming site for the user, or otherwise. This can be achieved known techniques, technologies, and by efficient allocation of relevant resources, in a manner that is known.

#### Gaming Product Type

**[0155]** Specific prevention measures by gaming product type—sports betting, poker, casino table games (blackjack, roulette, craps, pai gow, variations on each), VLT's and slots, bingo, horse-racing, stock market/prognostication, bingo, lottery, mah-jong, backgammon, and emerging skill/social chance gaming games on indicated platforms of Internet, mobile and centrally monitored player systems.

#### Additional Applications of the Patent

**[0156]** The invention may be extended in a manner that is obvious to a person skilled in the art in a number of different applications including:

**[0157]** Real time monitoring for regulatory compliance—the invention can be used to provide licensing or gaming authorities with real time data on revenue, pay-outs, rake values, and wagering activity for automated reporting and review of compliance with regulatory standards and levies. In addition, the real-time monitoring of the invention can be used for analysis of pattern issues related to gaming integrity concerns such as money-laundering or presence of automated wagering logic 'bots' using algorithms within the invention or from 3rd party providers.

**[0158]** Internet and mobile applications of casinos and sportswagering, where player accounts and activities are tracked for potentially harmful patterns specific to the game types involved. For example, internet casino tracking may apply algorithms that are specific to individual game types such as blackjack, craps, roulette and video slot machines, as well as algorithms for cross-play of these games and global behaviour. Equally the system may present different tracking algorithms for sports wagering behaviour that are specific to the sporting industry, seasonality, geographical sports preferences and event influences.

**[0159]** Internet gambling extensions into emerging and traditional gaming forms, such as iBingo, iBackgammon, event wagering (non-sports) and pool-related community online wagering. These variations may have specific game-related checks that take into consideration the nuances of play style for each.

**[0160]** Land-based card-tracking gaming, such as Player Loyalty cards used at casinos would offer an immediate extension of this product and its casino versions, tracking individual play habits and extremes of all Loyalty groups.

**[0161]** Online gambling money-laundering pattern detection. Specific patterns of behaviour may be tracked on wager and cashout amounts and volumes to detect play that has an only intention of exchanging illicit funds for gambling 'wins'

**[0162]** Electronic trackable consumer and money purchase behaviour controls. This includes applications for stock market traders, both industrial and consumer, that use electronic trading registrable to their individual profile. Our system extension would search for abnormal volumes or trends and extremes that may indicate

impending sizable personal or corporate losses or dangerous exposure and offer both prescriptive interactions to the trader and monitoring to the corporation.

**[0163]** Further application of trackable online and electronically traceable consumer behaviour would also apply to extreme and dangerous purchase habits on consumer sites such as eBay or Amazon as well as to transaction providers such as VISA or MasterCard.

#### Example 1

**[0164]** The following sequential summary depicts a typical flow of screens and decisions facing a player as he launches his online poker game software, as one example of implementation of the present invention. This description presumes that the player is already an active member of a poker site and therefore does not include details about account creation. The summary represents one possible implementation of the present invention.

#### 1. Screen: Login

**[0165]** After a player selects the software from his desktop application icon, two screens are launched—the poker ‘lobby’, and a superimposed ‘login’ screen. The latter is the only ‘actionable’ screen until login is completed successfully.

**[0166]** (a) Data Captured

**[0167]** (i) User Identification (player ID, not player table name)

**[0168]** (ii) Password

**[0169]** (iii) Login ‘Button’ Activation

**[0170]** (b) Technology Operator’s Software Link

**[0171]** (i) User Identification must be captured to establish the technology operator’s individual player file. Encryption of this ID may be important in protecting anonymity/privacy rights for the player, but the site operator may need to be able to match our encrypted ID with their ID system.

**[0172]** (ii) In order to preserve the player’s account security passwords are not collected (they are suppressed from the technology operator’s files).

**[0173]** (iii) When player hits login, the technology operator’s software may record account access as an event, and login time/date. This is not to be equated to Session Start, which may be launched when a player selects to join a table AND put money on the table. The software login may not be indicating a play session as a player has different options at the poker lobby screen.

#### 2. Screen: Poker Lobby

**[0174]** This screen presents a set of multiple possible paths for a player, and the screen remains accessible after a selection is made. In essence, parallel popup screens are possible from the lobby (e.g. the player can launch multiple tables and play all of them simultaneously; or the player can access their account and launch a table for play, etc.)

**[0175]** (a) Data Captured:

**[0176]** (i) Game Type/Ante Selection Group (displays a different set of available tables in poker lobby screen)

**[0177]** (ii) Table Selection (launches a popup screen of the selected table)

**[0178]** (iii) ‘My Account’ button (launches a popup screen enabling selection of multiple transaction history options)

**[0179]** (iv) Logout/Exit

**[0180]** (b) Technology Operator’s Software Link

**[0181]** (i) Game Type/Ante Selection Group—Condition 9 Check calculation raw data value for table ante ring value; tracked escalation (player needs to select a ring/ante value AND select a table in that ring AND make a deposit at that table to be participating in that ante value)

**[0182]** (ii) Table Selection—No direct influence until player seats and deposits at a table. Prerequisite to gathering play session data.

**[0183]** (iii) ‘My Account’ button—No direct influence until ‘make a deposit or withdrawal’ is selected.

**[0184]** (iv) Logout/Exit—Provides alternative to summation of Table Activity as a method of calculating Session time, but not desirable

#### 3. Screen: Selected Game Table

**[0185]** Several simultaneous game tables can be launched from the lobby menu under one player account a popup overlay screen displays ‘live’ game action and participating players at a table. Session data may be captured from each game table session data may be captured.

**[0186]** (a) Data Captured

**[0187]** (i) ‘Seat Open’ button

**[0188]** (ii) Table Deposit Amount and OK

**[0189]** (iii) Play Action—Auto Post Blind

**[0190]** (iv) Pre-Flop Play Action—Call/Raise/Check/Fold/All-In; Flop, Turn, River same.

**[0191]** (v) Re-Buy Chips Option

**[0192]** (vi) Sit Out Button

**[0193]** (vii) I’m Back Button

**[0194]** (viii) Stand-Up/Leave Table (session end time; session end \$ amount)

**[0195]** (b) Technology Operator’s Software Link

**[0196]** (i) ‘Seat Open’ button—Triggers session deposit option

**[0197]** (ii) Table Deposit Amount and OK—Critical data capture point for Session Start Time and Money Wager raw data and for Table Ante Value data. Conditions 1 to 6 inclusive and Player Type Calculations affected, leading to Calculations 8 and 9.

**[0198]** (iii) Play Action—Not significant but may commit player to wager when ‘Small Blind’ or ‘Large Blind’ rotates to his position

**[0199]** (iv) Pre-Flop Play Action—Accumulate data on activity for Condition Check 10

**[0200]** (v) Re-Buy Chips Option—Add to Money Wager Raw data

**[0201]** (vi) Sit Out Button—Effectively a pause button for a table session; may be used as a time marker for reducing overall session time calculation

**[0202]** (vii) I’m Back Button—Session restart from sit-out

**[0203]** (viii) Stand-Up/Leave Table—Significant data trigger for play session length calculation and for session win/loss calculation. Conditions 1,4,6 and 9 directly affected, and Player Type calculations that affect Conditions 7 and 8.

## 4. Screen: My Account Page (optional for player to activate)

- [0204] (a) Data Captured
  - [0205] (i) Deposit—Add Funds (launches separate transaction window and financial exchange process; this is excluded from our tracking for security and privacy principles)
  - [0206] (ii) My History (launches a sequential or separate window)
  - [0207] (iii) Problem Chance gaming Help Link
  - [0208] (iv) Settings/Options
- [0209] (b) Technology Operator's Software Link
  - [0210] (i) Deposit—Player Type Definition (Deposit Frequency)
  - [0211] (ii) My History—No direct application to condition checks or player type calculations, but may be useful as an originating database on signup date, deposit frequency, table win/loss history, table ante value, session date history etc.
  - [0212] (iii) Problem Chance gaming Help Link—No direct application but choice to access this link may be recorded for future aspects of the Technology Operator's 'Learning System'
  - [0213] (iv) Settings/Options—No direct application but choices made on this link such as session time limits, deposit amount weekly limits, self-exclusion option etc. need to be recorded for future aspects of the Technology Operator's 'Learning System'

## Example 2

[0214] The specific concept reports for each of these two levels are outlined below. Some sample considerations are:

## [0215] Customer Reports

- [0216] a. Interaction Activity: This may show how a customer's base is performing on overall PIT activation. It may have three components
  - [0217] Interaction Status: Dashboard gauge—percent of customers triggering interactions (e.g. blue 0-10, green 11-25, yellow 26-40, red 41+)
  - [0218] Interaction Trend: Historical timeline chart, shaded for escalations and declines, possibly overlaid with customer data on signup activity. Trend lines by player type.
  - [0219] Comparison to Competitors: A second Dashboard gauge to give a status on the customer's Interaction Activity Index versus the category (e.g. all poker sites), such as blue zone for an index of 85 or less, green for an index 86-100, yellow 111-130, red for 130+
- [0220] b. Value of Interactions to the Customer: This would show how a customer is making money off the Operator's System through increased Rake value and player activity.
  - [0221] Hold levels and splits 1 mo/2-3 mo/3+mo and comparison to industry standard
  - [0222] Hold trends by player type styles versus eCogra definitions (% of account wagered, average time etc.)
  - [0223] Player value definitions versus iGaming Business standards (at peak, monthly average, average per hour.
- [0224] c. Harm Time Zones: Identifying the most problematic access times, to assist operator in harm reduction support efforts. Using 'normalized' time that adjusts for player time zone at access point.

- [0225] Danger Days bar chart—Mon-Sun triggered PIT's versus safe play
- [0226] Pie Chart PIT's triggered as % of total PIT's in the week.
- [0227] Harm Hours—Top 5 normalized hours as percent of total harm as measured by PIT triggering play and as gross value for all PIT's
- [0228] d. PIT Tendencies: The most significant mistakes by players in harmful behaviour
- [0229] PIT Index versus same site types (Generalized categories i.e. excessive behaviour, chasing, misconceptions).

## Technology Operator Reports

[0230] These are performance oriented for internal analysis. As such, they may be less of an issue for demonstration system purposes, but essential as one of the steps to finalizing the production system.

- [0231] a. PIT Tendencies for All Players/Player Groups/Sites:
  - [0232] Much like the customer report (d) but in full detail across all reporting sites. This may serve to identify which PIT's are over-triggering and which sites and player types are out of an expected range.
  - [0233] Bar chart snapshot of percent of players at each severity level of each PIT, with drill-down on each PIT to show player type splits
  - [0234] Customer-based summary of PIT activity stated as index to norm
  - [0235] Player Type summary of index of PIT to share of play
  - [0236] Historical master trend on PIT activation level through time, stated as % of players triggering PIT on a weekly basis
- [0237] b. Player Responsiveness to PIT: An effectiveness report summarizing the movement of players to higher or lower severity levels after receiving an Interaction.
  - [0238] By PIT, pie charts or dashboard gauge showing percentage of players staying at triggered severity level versus decreasing versus increasing, using weekly average figures.
  - [0239] By region, same as above, to identify regional relevance issues.
  - [0240] Top 10 list of most effective and most ineffective Interactions from library grid.
- [0241] c. Player Clustering: A monitor report to help the technology operator constantly evaluate player type definitions, this report seeks top 3 common play type factors by each PIT.
  - [0242] Bubble map/cluster map of top 3 play factors—1 map per PIT
- [0243] d. Cross-Play Super System: An advanced report for sites with players playing multiple gaming products (poker, casino, sportsbook) that identifies overall cross-play problem behaviour such as switching, combined time etc.
  - [0244] PIT commonalities by player game combinations (poker-sports; poker-table games; poker-slots; sports-table games; sports-slots)
  - [0245] Games Summary Report: A dashboard of total PIT activity frequency for each game type, with trend line below.
- [0246] The disclosure discusses certain system components, software components, or other utilities, as means for

illustrating the operation and implementation of the present invention. It should be understood that the present invention may not be limited to particular software, system, or network architectures or configurations, or to specific allocations of resources or functionality as between particular system components, software components, or other utilities. It should be understood that one or more system components, software components, or other utilities, could be provided as a greater or lesser number of system components, software components, or other utilities. A number of software components described (for example the subscriber application) could be pre-loaded on a personal communication device. The present invention is not limited to any particular software structure, including any modular structure. It would be obvious to a person skilled in the art that various additional features could be included in the system and computer program of the invention.

What is claimed is:

**1.** A computer implemented method of ameliorating negative gaming behaviour, characterized in that the method comprises the steps of:

- (a) monitoring the gaming behaviour of one or more users;
- (b) analyzing the gaming behaviour to identify behaviour that may result in potentially harmful or addictive gaming behaviour (negative gaming behaviour); and
- (c) in the event of occurrence of such negative gaming behaviour, initiating based on the specific negative behaviour one or more interactions between a system and the one or more users, such interactions being directed to ameliorating the negative gaming behaviour by preventative action.

**2.** The computer implemented method claimed in claim **1** characterized in that the gaming behaviour is analyzed based on a plurality of gaming behaviour risk indicators.

**3.** The computer implemented method claimed in claim **2** characterized in that the plurality of gaming behaviour risk indicators include a user's individual player values and player type values as input parameters for the analysis.

**4.** The computer implemented method claimed in claim **1** characterized in that the interactions are targeted at the one or more users based on the one or more users' player type, risk level and outcome of a plurality of condition checks.

**5.** The computer implemented method claimed in claim **4** characterized in that the plurality of condition checks are obtained by operation of one or more processes for calculating one or more of the users' raw gaming session data, updated calculated player values and player type values as input parameters.

**6.** The computer implemented method claimed in claim **4** characterized in that the interaction is initiated by a player interaction trigger wherein the player interaction trigger is an active individualized agent designed to analyze the gaming behaviour for a specific user.

**7.** The computer implemented method claimed in claim **1** characterized in that the monitoring and analyzing of the gaming behaviour and the interaction between the system and the one or more users occur in real-time.

**8.** A system for ameliorating negative gaming behaviour characterized in that the system comprises:

- (a) a server computer linked to one or more remote computers for obtaining gaming behaviour data for one or more users;
- (b) the server computer including or being linked to a risk management utility that embodies a plurality of risk

indicators for identifying gaming behaviour that may result in potentially harmful or addictive gaming behaviour or negative gaming behaviour;

- (i) wherein the risk management utility is operable to analyze the gaming behaviour data to identify negative gaming behaviour based on the risk indicators; and
- (c) the server computer further including or being linked to a communication utility that is operable to initiate one or more communications between the user and the server computer, such communications defining one or more interactions defined by the risk management utility for ameliorating the negative gaming behaviour by preventative action.

**9.** The system of claim **8** characterized in that the risk management utility is operable to define a player type value for a user, and the system is operable to monitor the user's gaming behaviour relative to the player type value.

**10.** The system of claim **8** characterized in that the communications utility is operable to define the interactions such that they are targeted to the one or more users based on the one or more users' player type, risk level and outcome of a plurality of condition checks.

**11.** The system of claim **10** characterized in that the communications utility is operable to define the plurality of condition checks obtained by operation of one or more processes for calculating one or more of the users' raw gaming session data, updated calculated player values and player type values as input parameters.

**12.** The system of claim **8** characterized in that the interaction is initiated by a player interaction trigger wherein the player interaction trigger is an active individualized agent designed to analyze the gaming behaviour for a specific user.

**13.** The system of claim **8** characterized in that the obtaining and identifying of gaming behaviour data and the initiating of interactions between the user and the server computer occur in real-time.

**14.** A computer implemented method of ameliorating negative gaming behaviour, characterized in that the method comprises the steps of:

- (a) monitoring the gaming behaviour of one or more users;
- (b) analyzing the gaming behaviour to identify behaviour that may result in potentially harmful or addictive gaming behaviour (negative gaming behaviour);
- (c) in the event of occurrence of such negative gaming behaviour, initiating based on the specific negative behaviour one or more interactions between a system and the one or more users, such interactions being directed to ameliorating the negative gaming behaviour by preventative action; and
- (d) generating a report to a gaming operator and/or a government entity or government appointed entity detailing the potentially harmful and addictive gaming behaviour of one or more users of the gaming operator's services.

**15.** The computer implemented method claimed in claim **14** characterized in that the gaming behaviour is analyzed based on a plurality of gaming behaviour risk indicators.

**16.** The computer implemented method claimed in claim **15** characterized in that the plurality of gaming behaviour risk indicators include a user's individual player values and player type values as input parameters for the analysis.

**17.** The computer implemented method claimed in claim **14** characterized in that the interactions are targeted at the one

or more users based on the one or more users' player type, risk level and outcome of a plurality of condition checks.

**18.** The computer implemented method claimed in claim **17** characterized in that the plurality of condition checks are obtained by operation of one or more processes for calculating one or more of the users' raw gaming session data, updated calculated player values and player type values as input parameters.

**19.** The computer implemented method claimed in claim **17** characterized in that the interaction is initiated by a player interaction trigger wherein the player interaction trigger is an active individualized agent designed to analyze the gaming behaviour for a specific user.

**20.** The computer implemented method claimed in claim **14** characterized in that the report details are designed to aid in the monitoring and adjusting the gaming behaviour of one or more users of the gaming operator's services.

**21.** The computer implemented method claimed in claim **14** characterized in that the monitoring and analyzing of the gaming behaviour and the interaction between the system and the one or more users occur in real-time.

**22.** A system for ameliorating negative gaming behaviour characterized in that the system comprises:

- (a) a server computer linked to one or more remote computers for obtaining gaming behaviour data for one or more users;
- (b) the server computer including or being linked to a risk management utility that embodies a plurality of risk indicators for identifying gaming behaviour that may result in potentially harmful or addictive gaming behaviour or negative gaming behaviour;
  - (i) wherein the risk management utility is operable to analyze the gaming behaviour data to identify negative gaming behaviour based on the risk indicators;
- (c) the server computer further including or being linked to a communication utility that is operable to initiate one or more communications between the user and the server computer, such communications defining one or more

interactions defined by the risk management utility for ameliorating the negative gaming behaviour by preventative action; and

- (d) the server computer further including or being linked to a reporting utility that generates reports for a gaming operator and/or a government entity or government appointed entity detailing the potentially harmful and addictive gaming behaviour of one or more users of the gaming operator's services.

**23.** The system of claim **22** characterized in that the risk management utility is operable to define a player type value for a user, and the system is operable to monitor the user's gaming behaviour relative to the player type value.

**24.** The system of claim **22** characterized in that the communications utility is operable to define the interactions such that they are targeted to the one or more users based on the one or more users' player type, risk level and outcome of a plurality of condition checks.

**25.** The system of claim **24** characterized in that the communications utility is operable to define the plurality of condition checks obtained by operation of one or more processes for calculating one or more of the users' raw gaming session data, updated calculated player values and player type values as input parameters.

**26.** The system of claim **22** characterized in that the interaction is initiated by a player interaction trigger wherein the player interaction trigger is an active individualized agent designed to analyze the gaming behaviour for a specific user.

**27.** The system of claim **22** characterized in that the reporting utility is operable to make the report details which are designed to aid in the monitoring and adjusting the gaming behaviour of one or more users of the gaming operator's services.

**28.** The system of claim **22** characterized in that the obtaining and identifying of gaming behaviour data and the initiating of interactions between the user and the server computer occur in real-time.

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