METHOD AND SYSTEM FOR SELECTING AND DISTRIBUTING LOTTERY NUMBERS

Inventors: George Nemitz, Pennington, NJ (US); Wayne Abbou, Edison, NJ (US)

Correspondence Address:
RICHARD I. SAMUEL
GOODWIN PROCTER LLP
599 LEXINGTON AVE.
NEW YORK, NY 10022 (US)

Appl. No.: 11/127,962
Filed: May 12, 2005

Related U.S. Application Data

Provisional application No. 60/570,701, filed on May 14, 2004.

Publication Classification

Publication Date: May 18, 2006

Abstract

Provided herein are exemplary embodiments of a system, method, apparatus and program product for distributing lottery numbers generated from pattern recognition or random number generating methodology over the Internet and wireless telecommunication networks for users to use these numbers for their next lottery drawing procurement. The pattern recognition methods identify repeatable patterns found within the history of past winning numbers from any lottery game. The present invention also provides a method, system and apparatus for procurement of a lottery ticket purchase over the Internet and wireless telecommunication networks.
FIGURE 1
METHOD AND SYSTEM FOR SELECTING AND DISTRIBUTING LOTTERY NUMBERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of priority to U.S. Application No. 60/570,701 filed on May 14, 2004, the entire disclosure of which is hereby incorporated by reference as if set forth at length herein.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable

REFERENCE OF A “MICROFICHE APPENDIX”

[0003] Not applicable

BACKGROUND OF THE INVENTION

[0004] 1. Field of Invention

[0005] The present invention relates, in general, to network lottery gaming systems and methods. More particularly, the present invention relates to methods of selecting lottery numbers for a lottery drawing based upon recognized patterns of previously drawn lottery numbers.

[0006] 2. Brief Description of the Prior Art

[0007] Lotteries are games of chance, typically with an accumulating jackpot, in which participants play numbers of their choice in a random drawing. Lotteries vary in the quantity of number selections to be made, the range for each number selection, and whether number selections are single digit or double digit.

[0008] In a typical lottery, a player purchases a lottery game ticket from an authorized lottery outlet. Then the player selects a set of entry numbers in the exact format required by the game to be played, and submits the lottery ticket filled-in with the selected numbers to the lottery authority. Thereafter, the lottery authority chooses numbers at random, and if the numbers chosen at random match the one or more numbers selected by the player, the player is deemed the lottery winner, and is given the lottery prize.

[0009] Many lottery authorities offer a “quick-pick” option whereby, upon request by the player, a random number generator controlled by the lottery authority is used to select the entry numbers. Various lottery related devices have also been developed to help lottery players select numbers to play.

[0010] U.S. Pat. No. 4,586,710 to Beam teaches a portable lottery selection device comprising a base member provided with a transparent lottery card receiving slot overlying a light source, a hard surface for supporting the card, a stencil framing the entry boxes and a random number generator built into the base. The player can decide on what numbers to select with the random number generator and then mark the selected numbers on the lottery card held by the lottery card receiving slot.

[0011] Random number generators, per se, are known, which can be used in recreational devices. For example, U.S. Pat. No. 4,188,799 to Fatton teaches an electronic timepiece having a display, one part of which is capable of exhibiting a simplified image of a dice or a roulette, and a circuit for displaying at random an image of a dice or a roulette and/or a number. U.S. Pat. No. 4,151,404 to Harrington et al. teaches a random digit generator having a digital circuit for generating random digits. The circuit includes a variable modulus counter that produces in sequence a selected set of numerical values, coupled to a sampling circuit that reads one of the values when a pushbutton is activated.

[0012] U.S. Pat. No. 4,858,122 Kreisner teaches a random lottery computer for generating random numeric lottery selections. The random lottery computer can be pre-programmed for various lottery markets. A microprocessor controlled system, with random number generation, is programmed for these various lottery parameters by a game selector switch and by push button switches which increment or decrement the selection range. The lottery computer may be battery powered or light powered.

[0013] U.S. Pat. No. 5,893,797 to Marino et al. teaches a hand-held multi-function electronic lottery device including a housing, a keypad, a magnifier ticket reader window and an L.E.D display. The ticket reader window is disposed on the housing and allows the user lottery ticket number on the user lottery ticket to be magnified and viewed therethrough when the lottery ticket is inserted through the slot in the housing. The hand-held multi-function electronic lottery device further includes a “main” routine that is utilized to input data, a “pick” sub-routine that is utilized to randomly pick numbers, a “best” sub-routine that is utilized to display the most frequently occurring winning lottery numbers, and a “replay” sub-routine that is utilized to store a selected group of lottery numbers.

[0014] Although the above devices may be easily carried by lottery players, they generate numbers randomly without any basis on which the numbers are to be selected.

[0015] Various Internet websites are designed to help lottery players select entry numbers based on certain parameters. In one example, a website at http://luckypicks.com developed by CPC Systems, Inc. allows a player to get an online personal lucky lottery numbers by entering the date of birth of the player and submitting a request for lucky numbers. However, the player needs a computer with Internet access to get on the website and after getting one or more sets of lucky lottery numbers from the website, the player has to print out or write down the numbers and take the printout or note to an authorized lottery outlet to purchase one ore more tickets with the numbers. This is very inconvenient for a player.

[0016] Lottery systems utilizing telecommunication networks have been developed to make lotteries more convenient for players.

[0017] For example, U.S. Pat. No. 5,354,069 to Guttmann et al. teaches a lottery by phone system which permits a caller to place bets with a state’s existing lottery computer system via a telephone call from a touch-tone telephone which is connected via the public telephone network to a voice response unit which decodes touch-tones entered by the caller.

[0018] U.S. Pat. No. 6,554,710 to Olson teaches a lotto gaming apparatus for playing a lottery type game through a personal computer, or home video game terminal via an electronic communications network. The lotto gaming appa-
The present invention addresses the aforementioned limitations of the prior art by providing, in accordance with one aspect of the present invention, an alternative mechanism to select numbers to be played in a lottery game which comprises generating lottery numbers based on the history of previous winning numbers from one or more lottery games.

In accordance with a second aspect, there is provided a method, system and apparatus for distributing numbers generated on the Internet over wireless telecommunication networks so that a player can carry a portable wireless telecommunication device to a lottery ticket outlet, and receive the numbers generated on the Internet at the portable device for his or her next lottery drawing procurement.

In accordance with a third aspect, there is provided a method of selecting and distributing numbers for playing a lottery, comprising the steps of using a hand-held device to transmit a request to select numbers for playing a lottery game, receiving the request at a server from the hand-held device, generating numbers based on a pattern of previous winning numbers, and delivering the generated numbers in a readable form to the hand-held device.

In accordance with a fourth aspect, there is provided a system for selecting and distributing numbers for playing a lottery, comprising means for using a hand-held device to transmit a request to select numbers for playing a lottery game, means for receiving the request at a server from the hand-held device, means for generating numbers based on a pattern of previous winning numbers, and means for delivering the generated numbers in a readable form to the hand-held device.

In accordance with a fifth aspect, there is provided an apparatus for selecting and distributing numbers for playing a lottery, comprising a processor, and a storage device coupled to the processor and storing instructions adapted to be executed by the processor to receive a request to select numbers for playing a lottery game transmitted from a hand-held device at a server, generate numbers based on a pattern of previous winning numbers, and deliver the generated numbers in a readable form to the hand-held device.

In accordance with a sixth aspect, there is provided a system for selecting and distributing numbers for playing a lottery, comprising means for using a hand-held device to transmit a request to select numbers for playing a lottery game, means for receiving the request at a server from the hand-held device, means for the server to become a clearing house for the procurement of a lottery ticket purchase, and means for delivering the purchased lottery number in a secure and reliable form to the hand-held device followed by a secured proof of purchase available to the users pre-registered account.

In accordance with a seventh aspect, there is provided a system for selecting and distributing numbers for playing a lottery, comprising means for using a hand-held device to transmit a request to select numbers for playing a lottery game, means for receiving the request at a server from the hand-held device, means for generating numbers based on a pattern of previous winning numbers, means for the server to become a clearing house for the procurement of a lottery ticket purchase from the server generated number, and means for delivering the purchased lottery number in a secure and reliable form to the hand-held device followed by a secured proof of purchase available to the users pre-registered account.

These and other aspects, features and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings.
following description with reference to the accompanying drawing(s). What follows are preferred embodiments of the present invention. It should be apparent to those skilled in the art that these embodiments are illustrative only and not limiting, having been presented by way of example only. All the features disclosed in this description may be replaced by alternative features serving the same purpose, and equivalents or similar purpose, unless expressly stated otherwise. Therefore, numerous other embodiments of the modifications herein are contemplated as falling within the scope of the present invention as defined herein and equivalents thereto.

[0034] Overview

[0035] The present invention provides a method, system and apparatus for distributing over the Internet and wireless telecommunication networks lottery numbers generated from pattern recognition methodologies for use by a player in a lottery drawing. The pattern recognition methods identify repeatable patterns found within the history of past winning number from any lottery game. The process of selecting numbers based on frequent and repeating patterns delivers an alternative mechanism for selecting numbers for lottery playing.

[0036] The present invention also provides a method, system and apparatus for procurement of a lottery ticket purchase over the Internet and wireless telecommunication networks. The lottery numbers to be purchased are either entered by the purchase or can be generated from pattern recognition or random number generating methods.

[0037] FIG. 1

[0038] FIG. 1 is a high-level block diagram of an exemplary system 100 according to the principles of this invention. Generally, the system 100 includes at least one communications medium 105, one or more clients 110 and a centralized server 115. In one embodiment, the preferred architecture of the overall system 100 is a-tier architecture and as shown, is a traditional 2-tier client/server model.

[0039] The communications medium 105 can be any appropriate network configuration that provides effective data communication among network components. Suitable examples, include, but are not limited to, a local area network, the Internet or other wide area/global area network, a satellite or wireless communications network, a commercial value added network (VAN), ordinary telephone lines, private leased lines or any combination of the foregoing.

[0040] A client 110 can be any form of computer system having requisite processing power, input/output functionality and video capability, including but not limited to, mainframe system, super-mini system, mini-computer system, work station, desktop system, laptop system, hand held device, or other mobile/portable device, etc.

[0041] A client 110 also comprises a user interface that is designed to be simple, intuitive and informative, preferably, employing a low number of clicks to generate lottery numbers, e.g., a "3-click" experience for obtaining lottery numbers. The client user interface can be text based, graphical based or a combination of the two. Suitable examples, include browser-based interfaces, such as Internet Explorer™ and Mozilla™ browser applications or wireless application (WAP) based browsers such as the WINWap™ browser application, gaming interfaces, such as Brew™ or J2ME™ applications, non-interacting e-mail applications or non-interacting short messaging services (SMS) applications.

[0042] A client 110 communicates with the server 115 to deliver to the client 110 patterns generated by server 115 for user selection. At the client, a user can select a lottery game of interest, input a quantity of numbers to be generated and select from one of the delivered patterns. Quantity selection can be any suitable value, such as, for example, 1 to 50 per transaction.

[0043] Server 115 can be any form of computer system having requisite server processing capabilities, including but not limited to, main-frame system, super-mini system, mini-computer system, work station, laptop system, etc.

[0044] Server 115 also includes and executes server software. The server software comprises support software, including product support software and non-production support software. The server software receives a user's request which selects one of a plurality of patterns and the quantity of lottery numbers of interest. The server software then processes the request by randomly selecting the lottery plays that fall into the pattern selected, and subsequently delivering selected lottery numbers to the client interface. Optionally, the server software will not deliver duplicate lottery numbers.

[0045] Product support software is operated periodically, for example, on a daily basis, to obtain winning lottery numbers from the Internet, to parse data for the client/server software and to execute pattern recognition algorithms to create periodically caching data files.

[0046] Non-production support software may deliver, for example, a pattern identifier, pattern statistics, pattern data mining algorithms, a profit/loss pattern analyzer and lottery quick-pick simulator for testing patterns. The non-production support software is utilized when needed to determine the best patterns to publicly host.

[0047] Referring back to FIG. 1, in one embodiment the server 115 comprises several cooperating software components that identify and utilize repetitive patterns:

[0048] Parsing Component: The parsing program component receives winning lottery data and parses the data to a suitable data format for further processing by the other server components.

[0049] Pattern Search Component: The pattern search program component receives a complete history of winning data of a lottery system and virtually maps all winning numbers into patterns.

[0050] Pattern Statistic Component: The pattern statistic program component provides pattern statistics of all patterns and formats, and supplies data files need for data mining algorithms.

[0051] Data Mining Component: The data mining program component mines received data and identifies pattern combinations for optimization.

[0052] Profit/Lose Component: The profit/lose program component tests for profitability of pattern combinations.
Quick-Pick Generator Component: The quick-pick program component utilizes a random number generator algorithm that is tied to patterns for providing “quick-pick” numbers for a next lottery number selection. Each number set generated, whether by a user on the Internet, mobile phone over a wireless network, or self-computer generated, are all stored in pre-dated computer files. These dated files may be sent to an off-site auditing firm prior to each lottery drawing for the purpose of auditing winning lottery results generated by the Quick-Pick programs.

Audit Program Component: The audit program component analyze files generated from the Quick-Pick Generator programs for the purpose of identifying and auditing winning results. Quick-Pick number data files may be sent to an off-site auditing firm prior to a lottery drawing occurrence. The Audit programs are self contained and are designed to be used by an off-site auditing firm for auditing winning lottery number results after a lottery has been drawn.

Caching Program Component: The caching program component identifies numbers that fall into a pattern. Caching programs take time and consume processing resources. Caching algorithms of this component have been designed specifically for patterns in order for the Quick-Pick Generator programs to scale for a large user base.

Simulator Program Component: The simulator program component determines winning characteristics of patterns and also provides a proof of concept for patterns when simulating a large user base.

CONCLUSION

Having now described preferred embodiments of the invention, it should be apparent to those skilled in the art that the foregoing is illustrative only and not limiting, having been presented by way of example only. All the features disclosed in this specification (including any accompanying claims, abstract, and drawings) may be replaced by alternative features serving the same purpose, and equivalents or similar purpose, unless expressly stated otherwise. Therefore, numerous other embodiments of the modifications thereof are contemplated as falling within the scope of the present invention as defined by the appended claims and equivalents thereto.

For example, the present invention may be implemented in hardware or software, or a combination of the two. Preferably, aspects of the present invention are implemented in one or more computer programs executing on programmable computers that each include a processor, a storage medium readable by the processor (including volatile and non-volatile memory and/or storage elements), at least one input device and one or more output devices. Program code is applied to data entered using the input device to perform the functions described and to generate output information. The output information is applied to one or more output devices.

Each program is preferably implemented in a high level procedural or object oriented programming language to communicate with a computer system, however, the programs can be implemented in assembly or machine language, if desired. In any case, the language may be a compiled or interpreted language.

What is claimed is:

1. A method of selecting and distributing numbers for playing a lottery, comprising the steps of:
   - using a hand-held device to transmit a request to a server to select numbers for playing a lottery game;
   - receiving said request at said server;
   - generating numbers based on a selected pattern of previous winning numbers or utilizing a random number generating algorithm;
   - delivering the generated numbers in a readable form to said hand-held device.

2. The method of claim 1, wherein said request comprises a type of lottery game to be played, one of a plurality of patterns and a quantity of numbers to be played.

3. The method of claim 1, wherein said request for receiving said request and said step of delivering the generated numbers are conducted over an Internet and wireless telecommunication network.

4. The method of claim 1, wherein said wireless telecommunication network is a cell phone network.

5. The method of claim 1, wherein said step of generating numbers comprises:
   - obtaining previous winning lottery numbers of one or more lottery games from the Internet; and
   - identifying repeatable patterns found within said previous winning numbers from one or more lottery games.

6. The method of claim 1, wherein said hand-held device is a cell phone, portable digital assistant, or other portable network enabled device.

7. The method of claim 1, further comprising the steps of:
   - storing generated numbers in a computer file; and
   - analyzing said generated numbers stored in said computer file for auditing winning lottery results.

8. A system for selecting and distributing numbers for playing a lottery, comprising:
   - means for using a hand-held device to transmit a request to select numbers for playing a lottery game;
   - means for receiving said request at a server from said hand-held device;
means for generating numbers based on a pattern of
previous winning numbers; and
means for delivering the generated numbers in a readable
form to said hand-held device.
9. The system of claim 8, wherein said request to select
numbers for playing a lottery game comprises selection one
of a plurality of patterns, the quantity of numbers to be
selected and/or a type of lottery games to be played.
10. The system of claim 8, wherein said means for
receiving said request and said means for delivering the
generated numbers are operated over an Internet and wire-
less telecommunication network.
11. The system of claim 10, wherein said wireless tele-
communication network is a cell phone network.
12. The system of claim 8, wherein said means for
generating numbers comprises:
means for obtaining previous winning lottery numbers of
one or more lottery games from the Internet; and
means for identifying repeatable patterns found within
said previous winning numbers from one or more
lottery games.
13. The system of claim 8, wherein said hand-held device
is a cell phone, portable digital assistant, or other portable
network enabled device.
14. The system of claim 8, further comprising:
means for storing generated numbers in a computer file;
and
means for analyzing said generated numbers stored in said
computer file for auditing winning lottery results.
15. An apparatus for selecting and distributing numbers
for playing a lottery, comprising:
a processor; and
a storage device coupled to the processor and storing
instructions adapted to be executed by the processor to:
receive a request to select numbers for playing a lottery
game transmitted from a hand-held device at a server;
generate numbers based on a pattern of previous win-
ing numbers; and
deliver the generated numbers in a readable form to
said hand-held device.
16. The apparatus of claim 15, wherein said request to
select numbers for playing a lottery game comprises selec-
tion one of a plurality of patterns, the quantity of numbers
to be selected and/or a type of lottery games to be played.
17. The apparatus of claim 15, wherein said request is
received at said server and the generated numbers are
delivered to said hand-held device over an Internet and
wireless telecommunication network.
18. The apparatus of claim 17, wherein said wireless
telecommunication network is a cell phone network.
19. The apparatus of claim 15, wherein the numbers are
generated by:
obtaining previous winning lottery numbers of one or
more lottery games from the Internet; and
identifying repeatable patterns found within said previous
winning numbers from one or more lottery games.
20. The apparatus of claim 15, wherein said hand-held
device is a cell phone, portable digital assistant, or other
portable network enabled device.
21. The apparatus of claim 15, wherein said storage
device coupled to said processor and storing instructions
adapted to be executed by the processor to:
store generated numbers.
22. A method of procurement of a lottery ticket purchase
over the Internet, comprising the steps of:
using a hand-held device to transmit a request to purchase
a lottery ticket;
receiving said request at a server from said hand-held
device;
determining lottery numbers to be purchased;
delivering said lottery numbers in a secure and reliable
form to said hand-held device.
23. The method of claim 22, wherein said step of receiv-
ing said request and said step of delivering the generated
numbers are conducted over an Internet and wireless tele-
communication network.
24. The method of claim 23, wherein said wireless tele-
communication network is a cell phone network.
25. The method of claim 22, wherein said step of deter-
mining lottery numbers to be purchased comprises:
genrating numbers based on a pattern of previous win-
ing numbers.
26. The method of claim 22, wherein said step of deter-
mining lottery numbers to be purchased comprises:
utilizing a random number generating algorithm.
27. The method of claim 22, wherein said hand-held
device is a cell phone, portable digital assistant, or other
portable network enabled device.
28. A system for procurement of a lottery ticket purchase
over the Internet, comprising:
means for using a hand-held device to transmit a request
a request to purchase a lottery ticket;
means for receiving said request at a server from said
hand-held device;
means for determining lottery numbers to be purchased;
and
means for delivering said lottery numbers in a secure and
reliable form to said hand-held device.
29. The system of claim 28, wherein said request to
purchase a lottery ticket comprises selection of a method of
generating lottery numbers to be purchased, the quantity of
numbers to be selected and/or a type of lottery games to be
played.
30. The system of claim 28, wherein said means for
receiving said request and said means for delivering said
lottery numbers are operated over an Internet and wireless
telecommunication network.
31. The system of claim 30, wherein said wireless tele-
communication network is a cell phone network.
32. The system of claim 28, wherein said means for
determining lottery numbers to be purchased comprises:
genrating numbers based on a pattern of
previous winning numbers.
33. The system of claim 32, wherein said means for generating numbers based on a pattern of previous winning numbers comprises:

means for obtaining previous winning lottery numbers of one or more lottery games from the Internet; and

means for identifying repeatable patterns found within said previous winning numbers from one or more lottery games.

34. The system of claim 28, wherein said hand-held device is a cell phone.

35. The system of claim 28, wherein said means for determining lottery numbers to be purchased comprises:

means for generating lottery numbers by utilizing a random number generating algorithm.

36. The system of claim 28, further comprising:

means for storing generated numbers in a computer file; and

means for analyzing said generated numbers stored in said computer file for auditing winning lottery results.

37. An apparatus for procurement of a lottery ticket purchase over the Internet, comprising:

a processor; and

a storage device coupled to the processor and storing instructions adapted to be executed by the processor to:

receive a request to purchase a lottery ticket transmitted from a hand-held device at a server;

determine lottery numbers to be purchased; and

deliver the lottery numbers in a secure and reliable form to said hand-held device.

38. The apparatus of claim 37, wherein said request to purchase a lottery ticket comprises selection of a method of generating lottery numbers to be purchased, the quantity of numbers to be selected and/or a type of lottery games to be played.

39. The apparatus of claim 37, wherein said request is received at said server and the lottery numbers are delivered to said hand-held device over an Internet and wireless telecommunication network.

40. The apparatus of claim 39, wherein said wireless telecommunication network is a cell phone network.

41. The apparatus of claim 37, wherein the numbers are determined by:

obtaining previous winning lottery numbers of one or more lottery games from the Internet; and

identifying repeatable patterns found within said previous winning numbers from one or more lottery games.

42. The apparatus of claim 37, wherein said hand-held device is a cell phone, portable digital assistant, or other portable network enabled device.

43. A method of selecting and distributing numbers for playing a lottery game, comprising the steps of:

defining a database comprising pre-determined patterns of previous winning lottery numbers associated with a plurality of lottery games;

selecting one of said plurality of lottery games using a hand-held device;

identifying one or more optimal patterns of previous winning numbers associated with said selected lottery game;

selecting one of said optimal patterns using said hand-held device;

generating numbers based on said selected optimal pattern; and

delivering said generated numbers in a readable form to said hand-held device.

44. The method as in claim 43 wherein the step of defining said pattern database further comprises:

obtaining previous winning lottery numbers for a first type of lottery game;

identifying one or more repeatable patterns found within said previous winning lottery numbers; and

associating and said identified one or more repeatable patterns with said first type of lottery game.

45. The method as in claim 44 wherein the step of defining said pattern database further comprises:

obtaining previous winning lottery numbers for a second type of lottery game;

identifying one or more repeatable patterns found within said previous winning lottery numbers; and

associating and said identified one or more repeatable patterns with said second type of lottery game.

46. The method as in claim further 45 further comprising:

caching said pattern-game associations at pre-determined time intervals.

47. The method as in claim 43 further comprising:

selecting a quantity of numbers to be generated using said hand-held device; and

generating numbers based on said selected optimal pattern and quantity.

48. The method as in claim 43 wherein said hand-held device is a cell phone, portable digital assistant, or other portable network enabled device.