SYSTEMS AND METHODS FOR POINT VALUE BASED MATCH-UP IN ONLINE GAMING

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ABSTRACT
Certain embodiments provide a method for determining a value for a set of characters in an online game including selecting a set of characters, determining a point value for at least one character in the set of characters, and determining a total point value for the set of characters. The set of characters is associated with a player and is adapted to include at least one character. Each character in the set of characters includes at least one attribute adjustable by the player. The point value is determined based at least in part on at least one attribute of the at least one character. The point value represents an effective strength of the character. The total point value is determined based at least in part on the determined point value. The total point value represents an effective strength of the characters in the set of characters.
Figure 1

100

Player

110

120

Client

130

Network

150

Game Engine

160

Database

110

Player

...
Figure 3

300

Account Processor
320

Competition Processor
330

Exchange Processor
340

Development Processor
350

Matching Processor
360

Point Value Processor
370

Communication Processor
310
If the user needs to create a new army, the functionality is here. If they want to just select their army they can do so, or partially edit it. Up accepting the army - the game will start with the army to the right.

If user has spent too many points, a popup will notify them of such and direct them to remove points from their active army.

If the user's opponent cancels during this time, the game setup process will be abandoned and both users will be sent to the lobby.

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**Army Name:** 2000pt CC

**Army:**

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**Total points:** 1400
**Squads:** 2
**Units:** 7
Authenticate Player

Receive Authentication Request from a Player

Authenticate Player

Select a Developable Character from a Set of Characters Associated with the Player

Determine Point Value for Selected Character Based at Least in Part on an Attribute

Determine Point Value for Set of Characters

Match Player with Second Player Based on Point Value for Set of Characters
SYSTEMS AND METHODS FOR POINT VALUE BASED MATCH-UP IN ONLINE GAMING

BACKGROUND OF THE INVENTION

[0001] The presently described technology generally relates to computer gaming. More particularly, the presently described technology relates to systems and methods for point value based match-up in online gaming.

[0002] Role-playing games (RPGs), such as Dungeons and Dragons™, allow a player to develop a character through the course of game play. As a player uses a character during the course of an adventure or gaming session, the character gains experience points that may be used to increase characteristics or skills of the character. For example, a character may be built up from a lowly peasant to an overpowering hero by slaying numerous monsters encountered during an adventure.

[0003] Typically, a player of an RPG controls a single character for a particular adventure. Sometimes a player may utilize the character across multiple adventures. However, typically once a character is “killed” in the course of an adventure, a player must start over by creating a new character.

[0004] In RPGs, it is unlikely a player would trade a character to another player. The player invests time and effort into building up and developing a character over a series of gaming sessions. This investment generally results in a personal attachment to the character, making a player reluctant to trade the character to someone else. Additionally, a major component of an RPG, as the name implies, is the role-playing of the character by the player. A character is more than just a collection of numbers representing characteristics and skills. Rather, characters have life breathed into them by their player. Thus, a player’s attachment to a particular character, along with the role-playing elements of RPGs, results in a character rarely, if ever, being traded to another player.

[0005] In an RPG, the strength or power of a character is typically represented by a level. For example, a newly created, and relatively weak, character may begin at level 1. As experience points are accumulated through an adventure, the character may “level up.” That is, once a character has acquired a predetermined number of experience points, a new level is achieved and the player may be allowed to develop the character as discussed above. For example, once a level 1 character has obtained 1000 experience points, the character may level up to level 2. A higher level character generally represents a stronger or more powerful character.

[0006] However, characters from different classes may not be directly comparable based solely on level. A class may represent the general profession or skill set of a character, such as a fighter, cleric, or mage, for example. For example, a level 5 fighter character may have a significant advantage over a level 5 mage. The fighter’s ability to inflict damage may exceed that of the mage at a relatively low level such as level 5. In contrast, at level 15, the mage may be able to effectively dispatch the fighter before the fighter ever gets close enough to draw his sword.

[0007] Even within the same class, characters of the same level may not be directly comparable. For example, as mentioned above, different players may develop their respective characters in different ways. Thus, characters may have different distributions of values for characteristics and skills. Further, different characters may be differently equipped. At least some of these factors may dramatically affect the effective strength of a characters, with one being far more likely to best the other. For example, two players, each with a fighter character of the same level, may opt to pursue different strategies in the development of their characters. One may focus more on brute strength and sword skill, while the other concentrates on dexterity and skill with a bow and arrow. At lower levels, the archer may not be able to inflict sufficient damage to deter the swordsman before the swordsman gets close enough to strike. The archer may not be particularly accurate at a lower level, for example. In contrast, at higher levels, the swordsman may not even be aware of the archer when he is dropped by an arrow.

[0008] In addition, a party of characters in an RPG cannot be effectively evaluated solely on the level of the characters in the party. For example, a party of four level 5 fighters may not stand a chance against a party of two level 10 fighters, even though the sum total of the levels between the parties is the same.

[0009] Thus, RPGs allow a player to develop a single character. However, a player of an RPG typically does not play multiple characters at the same time. In addition, players do not typically trade characters. Further, in an RPG, the strength or power of a character, or set of characters, is not effectively evaluated based solely on the level of the character(s).

[0010] Magic: The Gathering™ (“MTG”) combines elements of card games with RPGs. Typically, a card game includes a set number of cards, such as a deck, some or all of which are unique. For example, cards may have values, such as numbers from two to ten, jacks, kings, queens, aces, and jokers. As another example, cards may be distinguished by suits, such as hearts, clubs, spades, and diamonds. A card may be unique through a combination of value and suit, for example. Card games are limited in that the value of the cards and the rules of the game are generally fixed. In a game of MTG, two players compete against each other by taking turns playing cards, with the goal of inflicting a predetermined amount of damage on the opponent. For example, the first player to reduce their opponent’s life value from 20 to 0 wins.

[0011] In MTG, there is a universe of hundreds of cards available, although during the course of any particular game, a player uses a deck of limited size, such as 60 cards. A card in MTG may represent creatures, artifacts, and spells, for example. In addition, MTG cards may have different colors, representing a specialization in certain kinds of abilities. MTG cards are fixed. That is, a particular card describes the abilities and/or effect of a particular creature or spell, for example. The MTG card does not change or evolve over the course of multiple games. During the course of game play, one card may modify the behavior of another card, but such a modification is specific to that particular game and does not persist across multiple games.

[0012] After playing a game of MTG, a player may use his cards in a subsequent game. That is, even if a creature card is defeated in the course of one game, that creature card may be used in subsequent games.

[0013] MTG also incorporates the concept of collectibility. That is, cards in MTG are collectables. Trading cards have long been collectables. Baseball cards are an example of a type of collectable trading card. In MTG, a particular card may be part of a set, for example. Players may then
desire to collect all the cards in a set. Such a set may have greater value monetarily and/or within the game. In some instances, certain MTG cards may be scarce. As a result of scarcity, certain cards may have a higher perceived value due to the difficulty in obtaining such cards.

Another aspect of collectibility in MTG is that when a player purchases a pack of cards, the player does not know what cards are in the pack until the player opens the pack. Thus, players often end up with duplicates of cards which are more common. Players may then trade cards with each other to acquire cards they do not have.

The strength of a particular MTG card or deck is not easily evaluated. That is, given a set of MTG cards, there is no effective way to quantify how strong or powerful that deck may be in playing a game. One rough mechanism supported by MTG in specifying or limiting the strength of a deck is the concept of Type I and Type II cards. The cards in a deck may be limited to one of the categories. However, such classification is very coarse, and, because there are hundreds of kinds of cards, not particularly effective. In addition, although MTG cards do support some rough concept of value, because the game is heavily based on the combinations of cards to affect the outcome, simple measures of individual card value do not effectively reflect the value of a deck.

Thus, a player of MTG typically has multiple cards of various types. In addition, players of MTG may trade cards. However, MTG cards have fixed values and/or characteristics. Further, there is no effective way to quantify the power or strength of a set of cards.

Everquest™ ("EQ") is an online RPG. A player creates an account with a login and password. The account is associated with a particular character. The player may then participate in quests in the online environment with his character. As the player is successful in attaining goals and defeating creatures in the game environment, experience points are awarded. The player may then increase the character's abilities by "spending" the experience points. Although a player may trade or sell access to his account, and thus his character, such actions are generally discouraged. In addition, a player may only control a single character through the player's account.

EQ does not support a mechanism to transfer a character as part of the gaming system. Players may auction a login and password to a character in an online forum such as eBay. The winning bidder then receives the login and password for the character and may take control of it. However, this transfer occurs outside the scope of the EQ system.

Similar to RPGs discussed above, characters in EQ may not be directly comparable based on a simple measure such as a level. EQ suffers from similar limitations to other RPGs in that level is an ineffective way to compare the strength or might of a character, for reasons similar to those discussed above. That is, because players may choose different classes for their characters and/or may develop the skills and characteristics of their characters in different ways, level alone cannot accurately reflect the effective strength of a given character.

Thus, an EQ player controls a single character that may be developed. EQ characters are not traded as part of the game. In addition, an EQ player controls only a single character. Further, similar to RPGs, EQ does not support an effective mechanism for quantifying the strength or power of a character.

While certain aspects of the various gaming systems discussed above may be used to roughly approximate the strength of a set of characters or cards, none do so effectively. Therefore, it is highly desirable to have a gaming system that can determine an effective strength of a set of characters as those characters develop over time. Further, it is highly desirable to have a gaming system that can match players based on the determined effective strength of the respective sets of characters of the players. Thus, there is a need for systems and methods for point value based match-up in online gaming.

BRIEF SUMMARY OF THE INVENTION

Certain embodiments of the present invention provide a method for determining a value for a set of characters in an online game including selecting a set of characters, determining a point value for at least one character in the set of characters, and determining a total point value for the set of characters. The set of characters is associated with a player. The set of characters is adapted to include at least one character. Each character in the set of characters includes at least one attribute. At least one attribute is adjustable by the player. The point value is determined based at least in part on at least one attribute of the at least one character. The point value represents an effective strength of the character. The total point value is determined based at least in part on the determined point value. The total point value represents an effective strength of the characters in the set of characters.

Certain embodiments of the present invention provide a gaming system including a first character set associated with a first player, a second character set associated with a second player, and a matching component adapted to determine a first point value for the first character set and a second point value for the second character set. The first character set is adapted to include at least one character. Each character in the first character set includes at least one attribute. At least one attribute of each character in the first character set is adjustable by the first player. The second character set is adapted to include at least one character. Each character in the second character set includes at least one attribute. At least one attribute of each character in the second character set is adjustable by a first player.
second player. The first point value represents an effective strength of the first character set. The second point value represents an effective strength of the second character set.

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

0025 FIG. 1 illustrates an online, multi-player gaming system according to an embodiment of the present invention.

0026 FIG. 2 illustrates a server for a gaming system according to an embodiment of the present invention.

0027 FIG. 3 illustrates a functional view of a gaming system according to an embodiment of the present invention.

0028 FIGS. 4A-4B illustrate examples of various screen configurations for a client to a gaming system according to embodiments of the present invention.

0029 FIG. 5 illustrates a flow diagram for a method for matching a player with another player in accordance with an embodiment of the present invention.

0030 The foregoing summary, as well as the following detailed description of certain embodiments of the present invention, will be better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, certain embodiments are shown in the drawings. It should be understood, however, that the present invention is not limited to the arrangements and instrumentality shown in the attached drawings.

DETAILED DESCRIPTION OF THE INVENTION

0031 Certain embodiments of the presently described technology include systems and methods for point value based match-up in online gaming. Certain embodiments dynamically determine a point value for a character in a set of characters. In addition, certain embodiments further match-up two or more players for a competition based at least in part on the dynamically determined point values.

0032 For example, in one embodiment, a gaming system called The Continuum™, collectibility, character development, trading, war gaming, customization, online distribution, and online game play are combined to create a gaming experience. The Continuum™ is an online, collectible, war game where the characters in the game develop like in a role-playing game, are customized to a player’s tastes, and are traded like cards.

0033 In The Continuum™, a player has a collection. The collection includes the characters associated with the player. Each character has one or more attributes. The attributes may include characteristics, statistics, and/or abilities, for example. For example, a character may have ratings for intelligence, strength, speed, and/or dexterity. As another example, a character may have attributes indicating offensive and/or defensive capabilities, skills, and strengths. These attributes may affect the character’s performance in a competition such as a battle, for example. The characters in a player’s collection may be grouped into one or more armies. A character may be in multiple armies. The armies may be configured for different types of competitions, for example.

0034 A character in The Continuum™ has a point value. The point value may initially be fixed or predetermined when the character is purchased. The point value may reflect, in part, the rarity or scarcity of the character. For example, the more rare and/or powerful the character, the more points the character may be worth. In addition, the point value may reflect and/or be based at least in part on one or more attributes of the character, such as type, level, characteristics, abilities, ability levels, and/or equipment. As a character develops and its attribute values change, the point value of the character may change as well. Thus, the point value of a character in The Continuum™ may represent the effective strength of the character. The point values associated with characters may be used to level the playing field for battles. For example, each player may agree to play a certain point value game (e.g., a 100, 500, or 1000 point game). The gaming system then allows a player to field an army from the player’s collection of any size up to the point value of the game.

0035 After a battle, each player may be awarded a certain amount of experience points. The experience points may be used to increase the value of the character’s attributes. That is, experience points may be “spent” to increase one or more attributes of a character at the player’s discretion. Alternatively, the player may choose to have the experience points spent automatically, letting the gaming system determine how the points should be allocated. As a player is developed, the point value of the character may change.

0036 Players of The Continuum™ may buy, sell, trade, and auction characters. For example, a player may purchase one or more new characters from the gaming system. The purchased characters may be determined randomly. Players may also swap characters with each other. Characters may be wagered as stakes and the winner of a battle may acquire the wagered character from the loser.

0037 FIG. 1 illustrates an online, multi-player gaming system 100 according to an embodiment of the present invention. The gaming system 100 includes one or more players 110, one or more clients 120, a network 130, and a server 140. In certain embodiments, the server 140 includes a game engine 150 and a database 160.

0038 A player 110 communicates with a client 120. In certain embodiments, a particular player 110 in a plurality of players communicates with a particular client 120 in a plurality of clients. In certain embodiments, more than one player 110 is in communication with a particular client 120. In certain embodiments, the player(s) 110 communicate with the client(s) 120 over a network. For example, a player 110 may communicate using a Web browser over the Internet with a client 120.

0039 The client(s) 120 are in communication with the server 140. A client 120 may communicate with the server 140 over a network, such as network 130. The game engine 150 is in communication with the database 160.

0040 In operation, a player 110 communicates with a particular client 120 to participate in the gaming system 100. As mentioned above, one or more players 110 may use one or more clients 120 to participate in the gaming system 100. The one or more players 110 may participate simultaneously, for example. The client 120 is adapted to provide the player 110 with an interface to the gaming system 100. That is, the player 110 may use the client 120 to interact with the gaming system 100. The player 110 may communicate commands and/or actions to be performed in the gaming system 100 using the client 120, for example. The client 120 may include a graphical user interface, for example.
In certain embodiments, the client 120 may be an application running on the computing system of the player 110. For example, the client 120 may include an executable program downloaded by the player 110. In certain embodiments, the client 120 may include a Web browser. The Web browser may run an Adobe/Macromedia Flash™ program to provide, at least in part, an interface for the player 120. In certain embodiments, at least a portion of the client 120 is downloaded. For example, the client 120 may be an application program downloaded from the server 140 across the network 130. As another example, a player 110 may download the client 120 from a distribution Web site.

The client 120 is adapted to communicate with the server 140. The client 120 may communicate with the server 140 over network 130. That is, the network 130 is adapted to facilitate communication between the client 120 and the server 140. The network 130 may be and/or include a local area network (LAN), for example. As another example, the network 130 may be and/or include the Internet.

The client 120 may communicate information, such as commands, data, and/or requests, to the server 140. The information to be communicated may be based at least in part on input from the player 110, for example. For example, the player 110 may use an interface of the client 120 to indicate that the player 110 wishes to purchase a new character. As another example, the player 110 may indicate with the client 120 to the server 140 to enter into a competition with another player.

In addition, the client 120 may receive data, such as commands, responses, and/or notifications, from the server 140. For example, the client 120 may receive account information from the server 140 to display to the user 110. As another example, the client 120 may receive updates regarding the position of characters belonging to the player 110 when the player 110 is involved in a competition with another player.

The server 140 is adapted to communicate with the client 120. As mentioned above, the server 140 may communicate with the client 120 over network 130. The server 140 receives information, such as commands, data, and/or requests, from the client 120. The server 140 transmits information, such as commands, responses, and/or notifications, to the client 120.

The server 140 is adapted to process the information communicated with the client 120. Processing the information may include allowing a player 110 to manage characters, exchange characters, initiate a competition, participate in a competition, and update account information, for example. Processing may include updating the state of a competition, acknowledging a request from the client 120, and delivering messages from other players 110, for example.

The server 140 is adapted to manage characters. A collection may be associated with a player 110. The collection may include one or more characters. A character may be in only one collection. That is, a given character may only be associated with a particular player 110 at any given time. Thus, the collections of players are disjoint. Characters may be exchanged from one collection to another, as discussed below. In addition, some characters may not be associated with a collection. For example, computer controlled characters may not be part of the collection of any player 110. As another example, characters for sale from the gaming system 100 may not be associated with a collection.

The characters in the collection of a player 110 may be grouped into one or more subsets. That is, the player 110 may be associated with one or more sets of characters. Each set of characters may contain one or more characters from the player’s 110 collection. A character from the collection of the player 110 may be in more than one set of characters. For example, a player 110 may create multiple sets of characters, such as armies, for use in different situations while playing the game.

Each character has and/or is associated with one or more attributes. The attributes may include characteristics, statistics, and/or abilities, for example. For example, a character may have ratings for intelligence, strength, speed, and/or dexterity. As another example, a character may have attributes indicating offensive and/or defensive capabilities and strengths. As another example, a character may have attributes indicating a particular skill, such as lock-picking. These attributes may affect the character’s performance in a competition such as a battle, for example. In certain embodiments, one or more of the attributes are adapted to be adjustable. That is, the attribute value associated with the attribute may be adjusted. The attribute value may be adjusted by a player 110, for example. As another example, the attribute value may be adjusted by the gaming system 100.

Similarly, a character may have and/or be associated with one or more ancillary characteristics. The ancillary characteristics may include a title and/or appearance, for example. For example, a character may have a title ancillary characteristic that reflects weapon specialization and/or class, such as “swordsman” or “archer.” As another example, a character may have an appearance ancillary characteristic including an image or three-dimensional model of the character. The appearance ancillary characteristic may be visible to one or more of the players 110 during game play, for example. An ancillary characteristic is ornamental and serves to enhance the gaming environment for the player. However, an ancillary characteristic does not affect the character’s performance in the gaming system 100. In certain embodiments, one or more of the ancillary characteristics are adapted to be adjustable. That is, the ancillary characteristic value associated with the ancillary characteristic may be adjusted. The ancillary characteristic may be adjusted by a player 110, for example. As another example, the ancillary characteristic value may be adjusted by the gaming system 100.

In certain embodiments, a character may be associated with a point value. The point value may reflect, in part, the rarity or scarcity of the character. For example, the more rare and/or powerful the character, the more points the character may be worth. In addition, the point value may reflect and/or be based at least in part on one or more attributes of the character, such as type, level, characteristics, abilities, ability levels, and/or equipment. Thus, the point value of a character may represent the effective strength of the character.

The server 140 is adapted to allow character exchange. For example, the server 140 may allow a player 110 to purchase, acquire, bid, request, and/or trade for one or more characters. As another example, the server 140 may allow a player 110 to sell, relinquish, auction, offer, and/or exchange one or more characters.

In certain embodiments, the character(s) involved in the exchange are, at least in part, randomly determined.
That is, the server 140 may determine and/or select a character involved in an exchange at least in part out of the control of a player 110. For example, a player 110 may request that the server 140 provide a random character to be purchased by the player 110. As another example, a player 110 may purchase a set of five characters without knowing which five characters the player 110 will receive. As another example, two players may agree to exchange random characters of equal point value. As another example, the server 140 may randomly award one or more characters with a particular attribute, such as belong to a specific class or having a given ability, to a player 110.

In certain embodiments, the exchange is based at least in part on an auction. For example, a player 110 may acquire a character by providing the winning bid for the character. As another example, a character may be offered to a bidder in an auction.

In certain embodiments, one or more characters may be exchanged by transfer and/or trade. For example, one player 110 may agree to trade an associated character for a character associated with another player 110. As another example, a player 110 may direct the server 140 to transfer a character to another player 110.

In certain embodiments, a character is exchanged for money. For example, a player 110 may purchase a character from another player 110 by paying real-world cash using a credit card. As another example, a player 110 may acquire a character from the server 140 using an in-game currency such as gold pieces.

In certain embodiments, a fee is assessed on the exchange of a character. For example, a fee may be assessed to the player 110 acquiring a character. As another example, a fee may be assessed to the player 110 relinquishing a character. The fee may be money, as described above. For example, a player 110 may purchase a character from another player using cash and may be assessed a transaction fee. As another example, a player 110 may transfer a character to the winner of an auction for the character and be assessed a fixed-price fee of in-game currency. The fee may be assessed in a different form of money from the money used in an exchange. For example, players may trade characters along with other items and/or in-game currency. A fee may be assessed to one or both players in the form of real-world cash, even though no real-world cash was involved in the exchange.

In certain embodiments, a player 110 acquires one or more characters based at least in part on a subscription. That is, a player 110 may indicate to the server 140 that the player 110 desires to acquire one or more characters based on a subscription. The player 110 may indicate the subscription by registering, for example. The subscription provides one or more characters to the player 110 at some time interval. For example, a player 110 may sign up for a monthly subscription where the player 110 acquires a pack of 5 characters every month. As another example, a player 110 may sign up for a subscription where the player 110 acquires a character every time a predetermined surplus of in-game currency is achieved.

The account of the player 110 may be automatically debited and/or charged based on the subscription, for example. Alternatively, a player 110 may be prompted whether an acquisition based on the subscription should be performed. The prompt may indicate default behavior. For example, the acquisition may occur within five days of a notification unless the player 110 indicates the contrary to the server 140.

As is discussed in more detail below, in certain embodiments, an exchange can occur based at least in part on competition. For example, an exchange may occur based at least in part on the result of a competition. As another example, an exchange may occur based at least in part on an occurrence during a competition, such as the capture of an item, geographic location, or character.

The server 140 is adapted to allow a competition. That is, the server 140 supports at least one competition involving at least one player 110. For example, a first player 110 may compete with a second player 110. The players compete using one or more characters associated with each player. The players may compete with each other and/or against other players, for example. That is, one or more players 110 may compete using their associated characters against characters associated with one or more other players 110. For example, three players 110 may be involved in a three-way, every-player-for-themselves battle. As another example, two players 110 may compete co-operatively against two other players 110.

In certain embodiments, a player 110 may manually select other participants in a competition. For example, a player 110 may select a buddy to compete with. In certain embodiments, a player 110 may request a competition where the other participants are similarly matched. That is, a player 110 may request to be matched with one or more other players 110 who are also looked to be matched for a competition. The matching of players for a competition may be based on one or more competition parameters specified by the player 110 requesting the match. For example, the player may request a competition with a particular minimum, maximum, or range of point values. That is, as discussed above, characters may have associated point values and the match may limit the sum of the point values of the characters participating in the competition. For example, a player 110 may request to be matched for a competition with another player, where each player is allowed to participate with characters having point values up to 1000. The player 110 may use a set of characters, such as an army, that the player 110 has previously constructed for use in a 1000 point maximum value competition. Other parameters may be specified for the match, such as types of stakes to be wagered (discussed below), length of game, and/or map size.

The competition may include a battle between the characters, for example. As another example, the competition may include a game. The game may be similar to capture-the-flag, king-of-the-hill, annihilation, or an objective-based assault, for example.

In certain embodiments, the competition includes one or more characters controlled by a computer, such as an artificial intelligence. The computer may be the server 140, for example. For example, a player 110 may battle against characters controlled by the server 140. As another example, one or more players 110 may compete in cooperation with and/or against characters controlled by the server 140.

In certain embodiments, the competition is turn-based. For example, three players 110 competing against each other may take turns issuing commands to their respective characters involved in the competition. In certain embodiments, the competition is substantially real-time. For
example, two players 110 competing against each other may issue orders to their associated characters simultaneously.

[0066] In certain embodiments, one or more players 110 may wager stakes on the outcome of a competition. For example, two players 110 competing in a battle against each other may wager an agreed-upon amount of money on the outcome of the battle. The money may be in-game currency and/or real-world cash, for example. The amount wagered may be a fixed amount or a computed amount. For example, a player 110 may wager 10% of the player’s in-game currency at the end of the competition. As another example, a player 110 may wager money based on the number of characters left standing at the end of the competition. Thus, if a player 110 wins by a larger margin, more money is won, for example.

[0067] In certain embodiments, the stakes include one or more characters in the collection of the player 110. For example, two players 110 may each select one of their opponent’s characters to be awarded upon winning the contest. As another example, each player 110 participating in a competition may designate one or more characters to wager on the outcome of the competition. As another example, the characters wagered may be specified by a percentage of the total point value of the collection of the player 110.

[0068] When stakes include one or more characters, the exchange capabilities of the server 140 described above may be invoked. For example, the winner of a battle may acquire a character that has been wagered as stakes in the battle by another player. In certain embodiments, the exchange capabilities of the server 140 are at least partially integrated with the competition capabilities of the server 140.

[0069] Based on the outcome of a competition, experience points may be awarded. Alternatively, in certain embodiments, experience points may be purchased with money. In certain embodiments, experience points may be acquired from another player 110. As mentioned above, a character may be developed over the course of game play. The experience points may be used to adjust the attributes of one or more characters. For example, a player 110 may use experience points to improve the characteristics and/or abilities of one or more characters in the collection of the player 110. In certain embodiments, the player 110 may manually allocate the experience points to adjust a character’s attributes. In certain embodiments, the player 110 may have the experience points automatically allocated by the gaming system 100.

[0070] In certain embodiments, the server 140 is adapted to match-up two or more players 110. The players 110 may be matched-up to participate in a competition, for example. The players 110 may be matched-up based on one or more competition parameters. In certain embodiments, the server 140 is adapted to match-up the players 110 to participate in an exchange.

[0071] In certain embodiments, the server 140 is adapted to determine a point value for one or more characters. The point value may reflect, in part, the rarity or scarcity of the character. For example, the more rare and/or powerful the character, the more points the character may be worth. In addition, the point value may reflect and/or be based at least in part on one or more attributes of the character, such as type, level, characteristics, abilities, ability levels, and/or equipment. Thus, the point value of a character may represent the effective strength of the character. The point value may base at least in part on one or more attributes of the character.

[0072] In certain embodiments, before a competition, a player 110 may receive a scouting report on the characters of another player 110 participating in the competition. The scouting report may include details of the number of the characters in the other player’s collection, the attributes of those characters, the types of those characters, the point values of those characters, the levels of those characters, and/or outcomes of prior competitions the other player has been involved in, for example.

[0073] In certain embodiments, the server 140 is adapted to support merchandising. That is, the gaming system 100 may provide merchandise using, at least in part, the server 140. The merchandise may be at least in part on a character. For example, the gaming system 100 may allow a player 110 to purchase merchandise, such as a toy, action figure, poster, trading card, comic book, clothing, animation, and/or apparel, based on one or more of the player’s characters. For example, the gaming system 100 may allow a player 110 to purchase an action figure similar in appearance to a character in the collection of the player 110. As another example, the gaming system 100 may allow a player 110 to purchase a comic book illustrating a competition the player 110, or a particular character of the player 110, was involved in.

[0074] In certain embodiments, the processing by the server 140 described above is performed at least in part by the game engine 150 and/or the database 160. For example, the game engine 150 may be adapted to provide character exchange and/or competition capabilities. As another example, character data and/or account information for a player 110 may be stored in the database 160.

[0075] The game engine 150 may include one or more components for tasks such as communicating with the client 120, exchanging one or more characters, handling competitions between one or more players 110, matching one or more players 110, and determining a point value for a character or set of characters. The game engine 150 may be implemented on a single computing system or across multiple computing systems. The game engine 150 may include fault tolerant features to allow continued operation in the event that one or more components fail.

[0076] The database 160 may be utilized by the game engine 150. The database 160 may store information regarding the state of the gaming system 100, for example. For example, account information for the players 110 may be stored in the database 160 and referenced by the game engine 150 for authorization and billing purposes. As another example, the database 160 may store information relating to the characters and collection of a player 110.

[0077] As discussed above, the components, elements, and/or functionality of the gaming system 100 may be implemented alone or in combination in various forms in hardware, firmware, and/or as a set of instructions in software, for example. Certain embodiments may be provided as a set of instructions residing on a computer-readable medium, such as a memory, hard disk, DVD, or CD, for execution on a general purpose computer or other processing device.

[0078] FIG. 2 illustrates a server 200 for a gaming system according to an embodiment of the present invention. The server 200 may be similar to the server 140, discussed
above, for example. The server 200 includes a gaming engine 250 and a database 260. The gaming engine 250 may be similar to the gaming engine 150, discussed above, for example. The database 260 may be similar to the database 160, discussed above, for example.

[0079] The gaming engine 250 includes a communication component 252, an exchange component 254, a competition component 256, and a matching component 258. The database 260 includes one or more character sets 265.

[0080] The gaming engine 250 is in communication with the database 260. The communication component 252 is in communication with the exchange component 254 and the competition component 256. The competition component 256 is in communication with the matching component 258. In certain embodiments, the matching component 258 is in communication with the communication component 252. In certain embodiments, the matching component 258 is in communication with the exchange component 254.

[0081] In operation, a player communicates with the server 200 using a client. The player may be similar to the player 110, described above, for example. The client may be similar to the client 120, described above, for example. For example, the player may communicate with the server 200 to sign on to the gaming system. As another example, the player may communicate with the gaming engine 250 as part of playing the game, including activities such as trading characters, developing characters, and engaging in competitions with other players.

[0082] The gaming engine 250 is adapted to allow one or more players, such as players 110, to participate in the game. The gaming engine 250 is adapted to communicate with the players. The communication may be handled at least in part by communication component 252, for example. The communication may be between the server 200 and one or more clients. The clients may be similar to the clients 120, described above, for example. Information such as commands, data, requests, responses, acknowledgements, and notifications may be communicated between the gaming engine 250 and the players.

[0083] The gaming engine 250 is adapted to process information communicated with the players. The processing may be performed at least in part by the exchange component 254, the competition component 256, and/or the matching component 258, for example. For example, a player 110 may request a character be exchanged for in-game currency associated with the player’s account. The request may be processed by the exchange component 254. As another example, the competition component 256 may send an update to the player indicating the current state of a battle between the player and another player. As another example, the player 110 may request to be matched with another player in a competition using the matching component 258.

[0084] The communications with the player and/or the client may be handled by the communication component 252. The communication component 252 is adapted to communicate with one or more clients, such as clients 120. The communications component 252 may communicate with the player 110 through the client 120, for example. The communication with the player may be over a network such as the Internet or a LAN, for example. Information, such as commands, data, and/or requests, may be received from the player 110 and/or the client 120, for example. Information, such as commands, responses, and/or notifications, may be communicated to the player 110 and/or the client 120, for example.

[0085] The exchange component 254 is adapted to allow a character to be exchanged. For example, the exchange component 254 may allow a player 110 to purchase, acquire, bid, request, and/or trade for one or more characters. As another example, the exchange component 254 may allow a player 110 to sell, relinquish, auction, offer, and/or exchange one or more characters. The character may be a new character for the player 110, for example. The character may be exchanged for money, such as in-game currency and/or real-world cash, for example. In certain embodiments, the exchange component 254 may utilize the matching component 258, discussed below, to match-up two or more players seeking a trade. For example, two players, who do not know each other, may wish to arrange a trade of characters having similar point values. The matching component 258 may then be utilized by the exchange component 254 to match these two players for the exchange.

[0086] In certain embodiments, the character(s) involved in the exchange are, at least in part, randomly determined. That is, the exchange component 254 may determine and/or select a character involved in an exchange at least in part randomly. For example, a player 110 may request that the server 200 provide a random character to be purchased by the player 110. The server 200, in turn, utilizes the exchange component 254 to determine the random character and initiate the exchange to the player 110. As another example, two players may agree to exchange random characters of equal point value. After each player’s assert is signaled to the server 200, the exchange component 254 may perform the exchange.

[0087] In certain embodiments, the exchange component 254 is adapted to allow an exchange based at least in part on an auction. For example, a player 110 may acquire a character by providing the winning bid for the character. The exchange component 254 may then exchange the character from the offering player’s collection to the winning player’s collection.

[0088] In certain embodiments, the exchange component 254 is adapted to allow a character to be exchanged for money. As discussed above, money may include, for example, in-game currency and/or real-world cash. For example, a player 110 may purchase a character from another player 110 by paying real-world cash using a credit card. As another example, a player 110 may acquire a character from the server 200 using an in-game currency such as gold pieces. The exchange component 254 is adapted to perform the exchange and assign the character to the proper player’s character set and debit the money from the appropriate account.

[0089] In certain embodiments, the exchange component 254 assesses a fee on the exchange of a character. For example, a fee may be assessed to the player 110 acquiring a character. As another example, a fee may be assessed to the player 110 relinquishing a character. The fee may be money, as described above. For example, a player 110 may purchase a character from another player using cash and may be assessed a transaction fee. As another example, a player 110 may transfer a character to the winner of an auction for the character and be assessed a fixed-price fee of in-game currency. The fee may be assessed in a different form of money from the money used in an exchange. For example,
two players may trade characters along with other items and/or in-game currency. A fee may be assessed to one or both players in the form of real-world cash, even though no real-world cash was involved in the exchange.

[0090] The competition component 256 is adapted to allow one or more players to compete in a competition. That is, the competition component 256 supports at least one competition involving at least one player 110. For example, a first player 110 may compete with a second player 110. The players compete using one or more characters associated with each player. The players may compete with each other and/or against other players, for example. That is, one or more players 110 may compete using their associated characters against characters associated with one or more other players 110. For example, three players 110 may be involved in a three-way, every-player-for-themselves battle. As another example, two players 110 may compete co-operatively against two other players 110.

[0091] In certain embodiments, a player 110 may manually select other participants in a competition. For example, a player 110 may select a buddy to compete with. In certain embodiments, a player 110 may request a competition where the other participants are similarly matched. That is, a player 110 may request to be matched with one or more other players 110 who are also looked to be matched for a competition. The matching of players for a competition may be based on one or more competition parameters specified to the competition component 256 by the player 110 requesting the match. For example, the player may request a competition with a particular minimum, maximum, or range of point values. That is, as discussed above, characters may have associated point values and the match may limit the sum of the point values of the characters participating in the competition. For example, a player 110 may request to be matched for a competition with another player, where each player is allowed to participate with characters having point values up to 1000. The player 110 may use a set of characters, such as an army, that the player 110 has previously constructed for use in a 1000 point maximum value competition. Other parameters may be specified for the match, such as types of stakes to be wagered, length of game, and/or map size.

[0092] The competition may include a battle between the characters, for example. As another example, the competition may include a game. The game may be similar to capture-the-flag, king-of-the-hill, annihilation, or an objective-based assault, for example.

[0093] In certain embodiments, the competition includes one or more characters controlled by the competition component 256. For example, a player 110 may battle against characters controlled by the competition component 256. As another example, one or more players 110 may compete in cooperation with and/or against characters controlled by the competition component 256.

[0094] In certain embodiments, the competition is turn-based. For example, three players 110 competing against each other may take turns issuing commands to their respective characters involved in the competition. In certain embodiments, the competition is substantially real-time. For example, two players 110 competing against each other may issue orders to their associated characters simultaneously.

[0095] In certain embodiments, the competition component 256 supports wagering stakes on the competition. For example, two players 110 competing in a battle against each other may wager an agreed-upon amount of money on the outcome of the battle. The money may be in-game currency and/or real-world cash, for example. The amount wagered may be a fixed amount or a computed amount. For example, a player 110 may wager 10% of the player's in-game currency at the end of the competition. As another example, a player 110 may wager money based on the number of characters left standing at the end of the competition. Thus, if a player 110 wins by a larger margin, more money is won, for example.

[0096] In certain embodiments, the stakes include one or more characters in the character set of the player 110. For example, two players 110 may each select one of their opponent's characters to be awarded upon winning the contest. As another example, each player 110 participating in a competition may designate one or more characters to wager on the outcome of the competition.

[0097] When stakes include one or more characters, the exchange capabilities of the exchange component 254, described above, may be utilized. For example, the winner of a battle may acquire a character that has been wagered as stakes in the battle by another player. In certain embodiments, the exchange component 254 is at least partially integrated with the competition component 256.

[0098] In certain embodiments, when a character is defeated in a competition, the character is still available for use in subsequent competitions. That is, the character persists across competitions. In certain embodiments, when a character is defeated in a competition, the character is "dead" and may not be subsequently utilized. In certain embodiments, when a character is defeated in a competition, the character is captured by the victorious player and is placed into the character set of the victorious player and removed from the collection of the losing player. The result of a defeat of a character during a competition may be determined based on the stakes wagered for the competition. The transfer of a character may be facilitated by the exchange component 254, for example.

[0099] The matching component 258 is adapted to match-up two or more players 110. The matching component 258 may match-up the players to participate in a competition, for example. The competition may be supported by the competition component 256, for example. The matching component 258 may utilize one or more competition parameters to match-up the players 110. The competition parameters may be similar to the competition parameters discussed above, for example. For example, a player 110 may request a competition with a particular minimum, maximum, or range of point values. The competition component 256 may receive the request for a competition and/or the competition parameter(s). The competition component 256 may provide the competition parameter(s) to the matching component 258 and then utilize the matching component 258 to match-up the player with a second player, for example. In certain embodiments, the matching component 258 may match-up the players to participate in an exchange.

[0100] The matching component 258 is adapted to determine a point value for one or more characters. When a match-up for a competition is desired, the matching component 258 may determine a total point value for a set of characters associated with a player seeking to participate in the competition. The set of characters may be the collection of the player. Alternatively, the set of characters may include a subset of the collection of the player, such as an army.
Similar to how the point value of a single character may represent an effective strength of that character, the total point value for a set of characters may represent an effective strength of that set of characters.

[0101] The total point value for the set of characters is determined based on the point value of at least one character in the set of characters. For example, the total point value for the set of characters may be determined by summing the point value of each character in the set of characters. As another example, the total point value may be determined based on the combination of two or more characters in the set of characters. As another example, the point value of certain characters, such as lower point value characters, may be excluded from the determination of the total point value for the set of characters.

[0102] The matching component 258 is adapted to determine the point value of a character in the set of characters. As described above, the point value for the character may represent an effective strength of the character. The point value of a character in the set of characters may be determined dynamically. For example, the point value of the character may be determined as part of the matching process. As another example, the point value for the character may be determined prior to the matching process. The point value for the character may be determined after an attribute value of the character has been adjusted, for example.

[0103] In certain embodiments, the point value of a character in a set of characters is based at least in part on one or more attributes of the character. For example, the point value of a character may be determined by summing the attribute value of each attribute of the character. As another example, the attribute value of certain attributes may be given disproportionate weight based on, for example, the class or type of the character. For example, a character with a class of fighter may have extra weight given (e.g., a factor of 1.5 or 2) to attributes that are of particular importance to the fighter class, such as strength and melee weapon skills.

[0104] In certain embodiments, attributes used in determining the point value of a character may include equipment. That is, equipment of the character may be considered as an attribute for the purposes of determining the point value of a character. Alternatively, the effect of the equipment on one or more attribute values of a character may be included when determining the point value of a character. For example, a character may be equipped with a sword that increases the value of the character’s sword skill attribute.

[0105] In certain embodiments, the point value of a character in the set of characters may be based at least in part on one or more other characters in the set of characters. For example, certain combinations of characters of different types and/or abilities may result in increased or decreased point values for those characters because of the advantage or disadvantage of their combination. For example, a fighter character and a mage character in the same character set may each amplify the point value of the other character due to the broader coverage of attributes they present. That is, the combination of the characters may make for a more effective fighting force. As another example, a set of characters consisting of characters of the same type and/or attributes, may hinder the point value determination of one or more characters in the set because each additional character of the same type may bring less overall benefit. In certain embodiments, the point value of a character in the set of characters may be based at least in part on one or more other characters in the set of characters of another player participating in the competition. For example, the point value of a first character in one set of characters may be reduced when another set of characters includes a second character with attributes that effectively counter the first character.

[0106] In certain embodiments, the point value of a character and/or the total point value of a set of characters may be based at least in part on a preference. The preference may be specified by the player associated with the character(s), for example. For example, a relatively new player 110 who has acquired a particularly powerful character may set a preference indicating the novice level of the player 110. Thus, the point value determination for the powerful character may be adjusted downward to reflect that the player may not be skilled enough to utilize the powerful character to its full potential. Alternatively, the matching component 258 may automatically determine the skill of the player 110 based on, for example, the outcome record of the player 110. The outcome record may include the number of battles the player 110 has participated in and/or won, for example.

[0107] The database 260 is adapted to manage characters. Each character may be associated with one or more character sets 265. Each character set 265 is associated with a player. More than one character set 265 may be associated with a particular player. A particular character may only be associated with one particular player 110 at any given time, although, as mentioned, the particular character may be included in more than one character set 265. Characters may be exchanged from one character set 265 to another character set 265, as discussed above. A character set 265 may be an army, for example.

[0108] The database 260 may manage attributes associated with each character. The attributes may include characteristics, statistics, and/or abilities, for example. For example, a character may have ratings for intelligence, strength, speed, and/or dexterity. As another example, a character may have attributes indicating offensive and/or defensive capabilities and strengths. These attributes may affect the character's performance in a competition such as a battle, for example.

[0109] The database 260 may manage ancillary characteristics associated with each character. The ancillary characteristics may include a title and/or appearance, for example. For example, a character may have a title ancillary characteristic that reflects weapon specialization and/or class, such as “swordsmith” or “archer.” As another example, a character may have an appearance ancillary characteristic including an image or three-dimensional model of the character. The appearance ancillary characteristic may be visible to one or more of the players 110 during game play, for example. An ancillary characteristic is ornamental and serves to enhance the gaming environment for the player. However, an ancillary characteristic does not affect the character’s performance in a gaming system.

[0110] The database 260 may be utilized by the game engine 250. The database 260 may store information regarding the state of the gaming system, for example. For example, account information for the players 110 may be stored in the database 260 and referenced by the game engine 250 for authorization and billing purposes. As another example, the database 260 may store information relating to the characters and collection of a player 110, such as the characters’ attributes, attribute values, ancillary characteristics, and ancillary characteristic values.
The information stored and managed by the database may be based on one or more schemas. For example, an account schema may be used to represent information pertaining to the account of the players. As another example, a schema may manage game play information for a player. Information such as characters in the character set of the player may be stored in the database based on a schema. As discussed above, the components, elements, and/or functionality of the server may be implemented alone or in combination in various forms in hardware, firmware, and/or as a set of instructions in software, for example. Certain embodiments may be provided as a set of instructions residing on a computer-readable medium, such as a memory, hard disk, DVD, or CD, for execution on a general purpose computer or other processing device.

FIG. 3 illustrates a functional view of a gaming system according to an embodiment of the present invention. The gaming system may be similar to the gaming system described above, for example. The gaming system includes a communication processor, an account processor, a competition processor, a development processor, a matching processor, and a point value processor. The communication processor is in communication with the account processor, the competition processor, the development processor, and the matching processor. The point value processor is in communication with the account processor, the competition processor, the development processor, and the matching processor.

In operation, the communication processor handles communication with the player. The communication processor may communicate information to the player about events in the gaming system, for example. The communication processor may transmit messages from other components of the gaming system, such as the account processor, to the player. The communication processor may be implemented using a client and a communication component. The client may be similar to the client described above, for example. The communication component may be similar to the communication component described above, for example.

The communication processor may present a graphical user interface to a player, such as a player. Alternatively, the communication processor may provide data to a separate processor that provides the interface directly to the player. For example, the communication processor may provide data to a Adobe/Macromedia Flash™ application running in a Web browser on the player's computer.

The communication processor may receive information from the player. For example, the player may request to be logged-in or authenticated to the gaming system. The player may communicate a username and password to the gaming system. The communication processor may receive the username and password from the player and pass the username and password to the account processor. The account processor may determine the password is valid for the username to authenticate the user. The account processor may register the player as being logged-in as a result of the successful authentication. The account processor may then provide an indicator to the communication component that the player has been properly authenticated. The communication component may then send a message to the player indicating the successful authentication.

The account processor handles processing related to the account of a player. For example, the account processor maintains the collection of the player. The collection includes the characters associated with the player. The account processor may store information such as the password, billing information, and account preferences, for example. As discussed above, the account processor may authenticate a player, for example. As another example, the account processor may allow a character to be added or removed from the collection and/or a character set associated with a player. The addition or removal of a character from a player’s collection by the account processor may occur in cooperation with the exchange processor discussed below.

The competition processor handles setting up, running, and completing a competition. The competition may involve one or more players. Setting up the competition may include, for example, matching two or more players to compete. Setting up the competition may include wagering stakes on the outcome of the competition. Setting up the competition may include selecting the characters to be included in the competition. For example, two players may agree to participate in a competition using a maximum point value of characters on each side. For example, a player may agree to field an army in the competition where the total point value of the characters in the army does not exceed 1000. The competition processor may utilize the point value processor, discussed below, to determine the point value of a character based on the attribute values of the character, for example. For example, a character with higher attribute values may have a higher point value.

The competition processor may also handle running the competition. Running the competition may include deploying the characters of the players on a map, for example. The characters may move around a landscape over the course of the competition. Characters from opposing players may engage in combat during the competition. In certain embodiments, when a character is defeated in a competition, the character is still available for use in subsequent competitions. In certain embodiments, when a character is defeated in a competition, the character is “dead” and may not be subsequently utilized. In certain embodiments, when a character is defeated in a competition, the character is captured by the victorious player and is placed into the collection of the victorious player and removed from the collection of the losing player. The result of a defeat of a character during a competition may be determined based on the stakes wagered for the competition. The transfer of a character may be facilitated by the exchange processor, for example.

The competition processor may also handle the completion of a competition. When a competition has been won, the winning player receives the stakes wagered by opposing players. As discussed above, stakes may include characters and/or money, for example.

The competition processor may be implemented at least in part with a competition component. The
competition component may be similar to the competition component 256, discussed above, for example.

[0123] The exchange processor 340 handles exchanges involving a character. An exchange of a character may include the character being purchased, acquired, bid for, requested, traded, sold, relinquished, auctioned, and/or offered. A character may be exchanged for another character and/or money, for example. For example, a character may be purchased by a player from the exchange processor 340. Money is transferred from the account of the player and the purchased character is added to the collection of the player. As another example, a player may offer a character for sale at an auction. Other players may bid on the character, and the winning bidder may receive the character in exchange for whatever was bid. The exchange processor 340 may assess a transaction fee on an exchange. For example, a player 110 may purchase a character from another player and be assessed a transaction fee by the exchange processor 340. The exchange processor 340 may work in cooperation with the competition processor 330. For example, the exchange processor 340 may transfer a wagered character to the winner of a competition supported by the competition processor 330.

[0124] The exchange processor 340 may be implemented at least in part with an exchange component. The exchange component may be similar to the exchange component 254, discussed above, for example.

[0125] The development processor 350 handles the development of a character. For example, a player may receive development or experience points after winning a competition supported by the competition processor 330. The development points may be used by the player to develop a character in the collection of the player. A player may "spend" development points to adjust the value of one or more attributes of the character, for example.

[0126] The matching processor 360 handles matching up two or more players 110. The players 110 may be matched to participate in a competition, for example. The competition may be handled by the competition processor 330, for example. The matching processor 360 may be implemented at least in part using a matching component similar to matching component 258, described above, for example. In certain embodiments, the matching processor 360 may match-up players to participate in an exchange.

[0127] The matching processor 360 may utilize one or more competition parameters to match-up the players 110. The competition parameters may be similar to the competition parameters discussed above, for example. For example, a player 110 may request a competition with a particular minimum, maximum, or range of point values. The competition processor 330 may receive the request for a competition and/or the competition parameter(s) through the communication component 310. The competition processor 330 may provide the competition parameter(s) to the matching processor 360. The matching processor 360 may then match-up the player with a second player for the competition processor 330, for example.

[0128] The point value processor 370 is handles determining a point value for one or more characters. The point value processor 370 may be implemented at least in part by a matching component similar to matching component 258, described above, for example.

[0129] The point value processor 370 may handle determine a total point value for a set of characters. The set of characters may be associated with a player seeking to participate in a competition, for example. The set of characters may be the collection of the player. Alternatively, the set of characters may include a subset of the collection of the player, such as an army. Similar to how the point value of a single character may represent an effective strength of that character, the total point value for a set of characters may represent an effective strength of that set of characters.

[0130] The total point value for the set of characters is determined based on the point value of at least one character in the set of characters. For example, the total point value for the set of characters may be determined by summing the point value of each character in the set of characters. As another example, the point value of certain characters, such as lower point value characters, may be excluded from the determination of the total point value for the set of characters.

[0131] As mentioned, the point value processor 370 handles determining the point value of a character in the set of characters. As described above, the point value for the character may represent an effective strength of the character. The point value of a character in the set of characters may be determined dynamically. That is, the point value for a character in the set of characters may be determined on demand from another processor in the gaming system 300, such as the competition processor 330 or the matching processor 360. As another example, the point value for the character may be determined after a request from the development processor 350 after an attribute value of the character has been adjusted, for example.

[0132] In certain embodiments, the point value of a character in a set of characters is based at least in part on one or more attributes of the character. For example, the point value of a character may be determined by summing the attribute value of each attribute of the character. As another example, the attribute value of certain attributes may be given disproportionate weight based on, for example, the class or type of the character. For example, a character with a class of fighter may have extra weight given (e.g., a factor of 1.5 or 2) to attributes that are of particular importance to the fighter class, such as strength and melee weapon skills.

[0133] In certain embodiments, attributes used in determining the point value of a character may include equipment. That is, equipment of the character may be considered as an attribute for the purposes of determining the point value of a character. Alternatively, the effect of the equipment on one or more attribute values of a character may be included when determining the point value of a character. For example, a character may be equipped with a sword that increases the value of the character’s sword skill attribute.

[0134] In certain embodiments, the point value of a character in the set of characters may be based at least in part on one or more other characters in the set of characters. For example, certain combinations of characters of different types and/or abilities may result in increased or decreased point values for those characters because of the advantage or disadvantage of their combination. For example, a fighter character and a mage character in the same character set may each amplify the point value of the other character due to the broader coverage of attributes they present. That is, the combination of the characters may make for a more effective fighting force. As another example, a set of characters consisting of characters of the same type and/or attributes, may hinder the point value determination of one or more
characters in the set because each additional character of the same type may bring less overall benefit. In certain embodiments, the point value of a character in the set of characters may be based at least in part on one or more other characters in the set of characters of another player participating in the competition. For example, the point value of a first character in one set of characters may be reduced when another set of characters includes a second character with attributes that effectively counter the first character.

[0135] Other elements of the gaming system 300 may utilize the point value processor 370. For example, the account processor 320 may utilize the point value processor 370 to determine a point value for a character that a player 110 is attempting to purchase. As another example, and as mentioned above, the competition processor 330 may utilize the point value processor 370 in setting up a competition, possibly in conjunction with the matching processor 360. As another example, the exchange processor 340 may utilize the point value processor 370 when two players are attempting to negotiate a transaction for sets of characters. As another example, and as mentioned above, the development processor 350 may utilize the point value processor 370 to determine a new point value for a character that has had one or more attribute values adjusted during development of the character.

[0136] As discussed above, the processors, components, elements, and/or functionality of the gaming system 300 may be implemented alone or in combination in various forms in hardware, firmware, and/or as a set of instructions in software, for example. Certain embodiments may be provided as a set of instructions residing on a computer-readable medium, such as a memory, hard disk, DVD, or CD, for execution on a general purpose computer or other processing device.

[0137] FIGS. 4A-4B illustrate examples of various screen configurations for a client to a gaming system according to embodiments of the present invention. The client may be similar to the client 120, described above, for example. The gaming system may be similar to the gaming system 100 and/or the gaming system 200 described above, for example.

[0138] More particularly, FIG. 4A illustrates an exemplary screen configuration for a matching interface for a competition in the gaming system. For example, the matching interface may be used by a player to specify one or more competition parameters and then request the gaming system to match-up the player with another player seeking a game. Alternatively, the player may select an existing game from a list to manually match with another player.

[0139] FIG. 4B illustrates an exemplary screen configuration for an army selection interface for participating in a competition in the gaming system. For example, the selection interface may provide a list of the characters in the collection of a player. The player may then select one or more characters to be placed into the army being built for the competition. As characters are added to the army, the gaming system may dynamically calculate a point value for the characters to determine a total point value for the army. The gaming system may compare the total point value for the army against one or more competition parameters, such as minimum and/or maximum point values to be involved in the competition. If the player’s army does not conform to the competition parameter(s), the gaming system may notify the player of the discrepancy. Once the player has met the competition parameter(s), the player may enter the competition.

[0140] FIG. 5 illustrates a flow diagram for a method 500 for matching a player with another player in accordance with an embodiment of the present invention. The method 500 includes the following steps, which will be described below in more detail. At step 510, an authentication request is received from a player. At step 520, the player is authenticated. At step 530, a developable character is selected from a set of characters associated with the player. At step 540, a point value is determined for the selected character based at least in part on an attribute. At step 550, a point value is determined for the set of characters. At step 560, the player is matched with a second player based at least in part on the point value of the set of characters. The method 500 is described with reference to elements of systems described above, but it should be understood that other implementations are possible. In addition, the method 500 refers to a set of characters, but it should be understood that the term “set of characters” may include the collection of a player, a subset of the collection of the player, or a group of characters from the collections of one or more players.

[0141] At step 510, an authentication request is received from a player. The authentication request may be received over a network, for example. The authentication request may be a username and password, for example. The player may be similar to the player 110, described above, for example. The authentication request may be received at a server, similar to server 140 or server 200, described above, for example. The authentication request may be received by a communication processor similar to communication processor 310, described above, for example.

[0142] At step 520, the player is authenticated. The player may be similar to the player 110, described above, for example. The player may be authenticated by an account processor similar to account processor 320, described above, for example. The authentication may be based on the authentication request received at step 510, described above, for example. The player may be authenticated based on a username and password, for example. For example, a username and password may be received in an authentication request and provided to an account processor. The account processor may compare the password against a stored password associated with the username. If the passwords match, the player may be authenticated.

[0143] At step 530, developable character is selected from a set of characters associated with the player. The developable character may be selected based on a command from a player. The player may be the player authenticated at step 520, described above, for example. The set of characters may be the collection of the player, for example. As another example, the selected character may be chosen from an army of the player. As another example, the set of characters may be associated with another player. For example, the selected character may be chosen from the collection of another player. Alternatively, the set of characters may be characters available for auction. As another example, the set of characters may be characters available for purchase from the gaming system. The set of characters may be similar to the character set 265, described above, for example.

[0144] The selected character is adapted to be developed. That is, the character may include one or more attributes. The attributes are adapted to be adjusted by the player.
attributes may include characteristics, statistics, and/or abilities, for example. For example, a character may have ratings for intelligence, strength, speed, and/or dexterity. As another example, a character may have attributes indicating offensive and/or defensive capabilities and strengths. These attributes may affect the character’s performance in a competition such as a battle, for example.

In certain embodiments, the character is selected using a client similar to client 120, described above. Selecting the character may involve communicating a requested selection from a player, such as player 110, to a gaming engine. The gaming engine may be similar to gaming engine 150 and/or gaming engine 250, described above, for example.

In certain embodiments, the selected character may be developed using a development processor similar to development processor 350, described above. In certain embodiments, the selected character is adapted to participate in a competition. The competition may be provided by a competition component similar to competition component 256, described above, for example. The competition may be provided by a competition processor similar to competition processor 330, described above, for example.

At step 540, a point value is determined for the selected character based at least in part on an attribute. As described above, the point value for the character may represent an effective strength of the character. The point value may be determined for the character selected at step 530, described above, for example. The point value may be determined by a matching component similar to matching component 258, described above, for example. The point value may be determined by a point value processor similar to the point value processor 370, described above, for example.

The point value of the character may be determined dynamically. For example, the point value of the character may be determined as part of the matching process. As another example, the point value for the character may be determined prior to the matching process. The point value for the character may be determined after an attribute value of the character has been adjusted, for example.

In certain embodiments, the point value of the character is based at least in part on one or more attributes of the character. For example, the point value of the character may be determined by summing the attribute value of each attribute of the character. As another example, the attribute value of certain attributes may be given disproportionate weight based on, for example, the class or type of the character. For example, a character with a class of fighter may have extra weight given (e.g., a factor of 1.5 or 2) to attributes that are of particular importance to the fighter class, such as strength and melee weapon skills.

In certain embodiments, attributes used in determining the point value of the character may include equipment. That is, equipment of the character may be considered as an attribute for the purposes of determining the point value of the character. Alternatively, the effect of the equipment on one or more attribute values of the character may be included when determining the point value of the character. For example, the character may be equipped with a sword that increases the value of the character’s skill attribute.

In certain embodiments, the point value of the character may be based at least in part on one or more other characters in the set of characters from which the character was selected. For example, certain combinations of characters of different types and/or abilities may result in increased or decreased point values for those characters because of the advantage or disadvantage of their combination. For example, a fighter character and a mage character in the same character set may each amplify the point value of the other character due to the broader coverage of attributes they present. That is, the combination of the characters may make for a more effective fighting force. As another example, a set of characters consisting of characters of the same type and/or attributes, may hinder the point value determination of one or more characters in the set because each additional character of the same type may bring less overall benefit. In certain embodiments, the point value of a character in the set of characters may be based at least in part on one or more other characters in the set of characters of another player participating in the competition. For example, the point value of a first character in one set of characters may be reduced when another set of characters includes a second character with attributes that effectively counter the first character.

At step 550, a point value is determined for the set of characters. The set of characters may be the set of characters from which the character was selected at step 530, described above, for example. The set of characters may be the collection of the player, for example. Alternatively, the set of characters may include a subset of the collection of the player, such as an army. Similar to how the point value of a single character may represent an effective strength of that character, the point value for a set of characters may represent an effective strength of that set of characters.

The point value for the set of characters may be determined by a matching component similar to the matching component 258, described above, for example. The point value for the set of characters may be determined by a point value processor similar to the point value processor 370, described above, for example.

The point value for the set of characters may be based at least in part on a point value determined for a character in the set of characters, such as the point value determined at step 540, described above, for example. The point value determined for the set of characters may be a total point value similar to the total point value described above, for example. For example, the point value for the set of characters may be determined by summing the point value of each character in the set of characters. As another example, the point value of certain characters, such as lower point value characters, may be excluded from the determination of the total point value for the set of characters.

At step 560, the player is matched with a second player based at least in part on the point value of the set of characters. The point value of the set of characters may be the point value of the set of characters determined at step 550, described above, for example. The player may be matched-up with the second player by a matching component similar to matching component 258, described above, for example. The player may be matched-up with the second player by a matching processor similar to the matching processor 360, described above, for example.

The second player may be selected manually. For example, the first player may indicate a second player from a list of available players to match with. Alternatively, the second player may be selected automatically. For example,
the second player may be selected from a list of available players seeking to be matched. The second player may be selected automatically by the matching component 258 and/or the matching processor 360, for example.

[0157] The players may be matched to participate in a competition, for example. The competition may be supported by the competition component 256 and/or the competition processor 330, described above, for example. One or more competition parameters may be utilized to match-up the players. The competition parameters may be similar to the competition parameters discussed above, for example. For example, a player 110 may request a competition with a particular minimum, maximum, or range of point values. The competition parameter may then be utilized to match the player with the second player, for example. In certain embodiments, the players may be matched to participate in an exchange.

[0158] Certain embodiments of the present invention may omit one or more of these steps and/or perform the steps in a different order than the order listed. For example, some steps may not be performed in certain embodiments of the present invention. As a further example, certain steps may be performed in a different temporal order, including simultaneously, than listed above.

[0159] One or more of the steps of the method 500 may be implemented alone or in combination in hardware, firmware, and/or as a set of instructions in software, for example. Certain embodiments may be provided as a set of instructions residing on a computer-readable medium, such as a memory, hard disk, DVD, or CD, for execution on a general purpose computer or other processing device.

[0160] Thus, certain embodiments of the present invention provide a gaming system that can determine an effective strength of a set of characters as those characters develop over time. Certain embodiments provide a gaming system that can match players based on the determined effective strength of the respective sets of characters of the players. Certain embodiments provide systems and methods for point value based match-up in online gaming. Certain embodiments of the present invention provide a technical effect of a gaming system that determines an effective strength of a set of characters as those characters develop over time. Certain embodiments provide a technical effect of a gaming system that matches players based on the determined effective strength of the respective sets of characters of the players. Certain embodiments of the present invention provide a technical effect of point value based match-up in online gaming.

[0161] While the invention has been described with reference to certain embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the scope of the invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the invention without departing from its scope. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed, but that the invention will include all embodiments falling within the scope of the appended claims.

1. A method for determining a value for a set of characters in an online game, the method including:
   selecting a set of characters,
   wherein the set of characters is associated with a player,
   wherein the set of characters is adapted to include at least one character,
   wherein each character in the set of characters includes at least one attribute,
   wherein at least one attribute is adjustable by the player;
   determining a point value for at least one character in the set of characters based at least in part on at least one attribute of the at least one character, wherein the point value represents an effective strength of the character; and
   determining a total point value for the set of characters based at least in part on the determined point value,
   wherein the total point value represents an effective strength of the characters in the set of characters.

2. The method of claim 1, wherein the determined point value is based at least in part on a plurality of attributes of the character.

3. The method of claim 1, wherein the determined total point value is based at least in part on a combination of characters in the set of characters.

4. The method of claim 1, wherein the determined point value is based at least in part on an outcome record of the player.

5. The method of claim 1, wherein the determined point value is based at least in part on a preference specified by the player.

6. The method of claim 1, wherein the at least one attribute reflects the effect of equipment of the character.

7. The method of claim 1, wherein at least one character in the set of characters is adapted to be exchanged.

8. The method of claim 1, further including receiving a competition parameter from the player, wherein the player is allowed to participate in a competition when the determined total point value conforms to the competition parameter.

9. A gaming system, the system including:
   a first character set associated with a first player,
   wherein the first character set is adapted to include at least one character,
   wherein each character in the first character set includes at least one attribute,
   wherein at least one attribute of each character in the first character set is adjustable by the first player;
   a second character set associated with a second player,
   wherein the second character set is adapted to include at least one character,
   wherein each character in the second character set includes at least one attribute,
   wherein at least one attribute of each character in the second character set is adjustable by the second player; and
   a matching component adapted to determine a first point value for the first character set and a second point value for the second character set, wherein the first point value represents an effective strength of the first character set, and wherein the second point value represents an effective strength of the second character set.

10. The system of claim 9, wherein the first point value is based at least in part on the at least one attribute of at least one character in the first character set.

11. The system of claim 9, wherein the matching component is adapted to match the first player and the second player based at least in part on the first point value and the second point value.
12. The system of claim 9, wherein the matching component is adapted to select the second character set automatically.

13. The system of claim 9, further including a competition component adapted to allow a competition including the first character set and the second character set.

14. The system of claim 13, wherein the competition component allows the competition when the first point value conforms to a competition parameter and the second point value conforms to the competition parameter.

15. The system of claim 14, wherein the competition parameter is specified by the first player.

16. The system of claim 13, wherein the at least one attribute of each character in the first character set is adapted to be adjusted based at least in part on the outcome of the competition.

17. The system of claim 9, further including an exchange component adapted to allow at least one character in the first character set to be exchanged with at least one character in the second character set.

18. The system of claim 17, wherein the exchange is based at least in part on the first point value and the second point value.

19. A computer-readable medium including a set of instructions for execution on a computer, the set of instructions including:
   a first character set routine configured to support a first character set,
   wherein the first character set is adapted to include at least one character,
   wherein each character in the first character set includes at least one attribute,
   wherein at least one attribute of each character in the first character set is adjustable by a first player;
   a second character set routine configured to support a second character set,
   wherein the second character set is adapted to include at least one character,
   wherein each character in the second character set includes at least one attribute,
   wherein at least one attribute of each character in the second character set is adjustable by a second player; and
   a matching routine configured to determine a first point value for the first character set and a second point value for the second character set, wherein the first point value represents an effective strength of the first character set, and wherein the second point value represents an effective strength of the second character set.

20. The set of instructions of claim 19, further including a competition routine configured to allow a competition including the first character set and the second character set, wherein the competition routine is configured to allow the competition when the first point value conforms to a competition parameter and the second point value conforms to the competition parameter.

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