

**GAMING METHOD AND APPARATUS
IMPLEMENTING A HIERARCHICAL DISPLAY
GRID AND DYNAMICALLY GENERATED
PAYLINES**

**CROSS-REFERENCE TO RELATED
APPLICATIONS**

[0001] This is a continuation application of application Ser. No. 09/947,619, filed Sep. 6, 2001, the content of which is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002] This invention relates in general to gaming systems and processes, and more particularly to a gaming method and apparatus implementing a hierarchical display grid utilizing multiple-symbol display segments, and for dynamically generating paylines within the display grid.

BACKGROUND OF THE INVENTION

[0003] Gaming devices such as slot machines have entertained the public for over a century. While the fundamental concept behind slot games has remained relatively intact, the manners of computing, displaying, and participating in modern day slot games has changed dramatically. One force driving these changes is technological advancement, such as the advent of computers and video capabilities. Another driving force is human nature, as the participants of such gaming devices demand continual excitement and stimulation. It is therefore important in the gaming industry that gaming innovations continue to be rolled out to the participating public.

[0004] Some gaming devices, such as slot machines, base the result of a gaming activity on a "payline." For example, in the context of slot machines, one, two, or more predefined paylines may be used. These paylines are generally predetermined lines or patterns encompassing a number of display segments on a mechanical or video display grid. If a predetermined symbol combination is presented on the display segments of any of the predetermined paylines, a winning payout result occurs.

[0005] Various manners of providing interesting paylines have been devised. The earliest slot machines included one payline, generally including one symbol location from each of three mechanical reels. Later slot machines provided two and three paylines by displaying symbols above and/or below the symbol locations associated with the first payline. This type of slot machine provided, for example, three horizontal paylines. As video technologies started entering the gaming industry, even more types of predetermined paylines were utilized. For example, paylines have been provided in horizontal, diagonal, and vertical arrangements, as well as some predetermined pattern such as V-shaped, zigzag shaped, etc.

[0006] However, each of these types of paylines is determined in advance. For example, a line or shape may be superimposed on the display segments to identify to the participant where a predetermined symbol combination must fall in order to provide a winning payout. Therefore, the paylines are in effect "fixed" for that particular slot machine, although there may be multiple paylines. This may in some cases detract from the suspense afforded through

such a chance-based gaming device. One prior art slot machine addresses this through what is commonly referred to as a "scatter pay." A scatter pay is a random payline when a certain symbol is presented a fixed number of times on the display grid. However, scatter pays are entirely random on the display grid, and afford no correlation whatsoever to a physical payline on the display grid.

[0007] Further, these conventional slot machines utilize one display segment per payline position. A horizontal payline on a five column, three row display grid will include one symbol for each of the display segments associated with that payline. This can also detract from a participant's long-term interest in the particular slot machine.

[0008] The present invention addresses the aforementioned shortcomings of prior art gaming activities. The present invention provides gaming participants with a visually-appealing and exciting gaming activity, and provides additional advantages over prior art gaming activities.

SUMMARY

[0009] To overcome limitations in the prior art described above, and to overcome other limitations that will become apparent upon reading and understanding the present specification, the present invention discloses an apparatus and method for providing multi-symbol display segments to allow multiple payout opportunities for each payline. The present invention also provides for the dynamic creation of paylines from adjacent symbols at each of the display segments and/or subsegments.

[0010] In accordance with one embodiment of the invention, a method for facilitating participation in a slot game is provided. A display grid comprising a plurality of display segments is presented. A plurality of display subsegments is presented in one or more of the display segments. Each of the display subsegments presents a subsegment symbol independently of the other display subsegments in its respective display segment. Paylines are created from a plurality of the display segments, where each of the subsegment symbols of each of the display subsegments is independently used in formulating payout results for each of the paylines in which the display segment is affiliated. In this manner, a particular payline comprised of a certain number of display segments may in actuality include a number of overlaid paylines due to the multiple symbols associated with some of the display segments. Other embodiments include dynamically creating the paylines as a result of corresponding symbols occurring in a predetermined number of adjacent display segments and/or subsegments.

[0011] In accordance with another aspect of the invention, a method is provided for facilitating participation in a slot game, where a display grid having a plurality of display segments is presented. Winning slot game paylines formulated from matching symbols occurring in a predetermined number of adjacent display segments and/or subsegments are dynamically created. In this manner, at least some of the paylines are not in predefined locations on the display grid, but rather are generated as a result of a predetermined number of symbols occurring in adjacent display segments/subsegments, regardless of where on the display grid these adjacent segments/subsegments present themselves.

[0012] In accordance with another embodiment of the invention, a casino gaming apparatus hosting a gaming