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Independent Study Fall 2008 Proposal

This independent study will focus on the accessibility of slot machines by people with disabilities. This is a really important issue because generally people who play slot machines are older, and with age comes diminishing vision, hearing, and mobility. Traditionally, gambling with slot machines has been a particular personal experience, and many gamblers choose to keep their habits to themselves. This makes it difficult for a person with a disability to ask for help once inside a casino. The main goal of this study is to develop and implement a protocol for gaming devices that will allow players of all disabilities to enjoy slot machines. In a more general sense, this protocol (P2G - Player To Game) will define how an end user can use a player owned device on a slot machine in a casino which has the potential to benefit all players, not just disabled players.

The protocol will be designed such that a firewall type device will filter communications from the player owned device to the slot machine itself. This will hopefully avoid all the security concerns involved with a project like this. Even though it will appear to the player that he is plugging in a device to the slot machine, there is actually a mediator between the device and the slot machine itself. This device will have the ability to determine what information/messages can be passed on to the slot machine, and will thus be able to prevent attacks from the outside world.

This study will focus on the 4 basic types of disabilities: Auditory, Visual, Physical, and Cognitive. Each of these areas will be studied to show exactly how people with these specific types of disabilities are effected in a negative way when trying to play slot machine games. It will then be demonstrated how these are implemented in the P2G protocol (if possible).

For a player with an auditory disability, it will be difficult to play games or parts of games that rely only on vocal clues. Also, sounds add a great deal to the enjoyment of the game. Anticipation sounds create the feel to the player that he "almost" won something. Players thrive on that feeling and without it in the game, the play will suffer. The sounds in general give a player a sense that people in the casino are winning. It would be nice to be able to reproduce these feelings created by sound for players that cannot hear.

Slot machines are primarily a visual device, so for people that are visually impaired, a slot machine may not be that appealing. For example, the player will have no idea how much money he has won, or how much money is remaining on the slot machine. He will not be able to tell if he is getting paid correctly or not. He will not be able to see how much the jackpots are. Large jackpots attract certain types of players, and without knowing what they are, a visually impaired person may not want to try to play. A visually impaired player has a hard time knowing what he is betting, or what the bet options are. He also has no ability to read the written instructions that are printed on the slot machine video screen, or on the cabinet surrounding it.

For people with physical disabilities, it is hard for them to actually press the buttons on the slot machine itself. Games are not geared towards people in wheel chairs. A person in a wheel chair will have a difficult time pressing the buttons on a slot machine, which can convert the enjoyment of gaming to the embarrassment of struggling to press buttons. Also a person with a shaky hand will have a difficult time getting money into the gaming device.

And finally, people with cognitive disabilities can have issues understanding the games. Maybe they have dyslexia and transpose numbers, or they have language issues and need things translated. All of these real world problems that have been addressed in other areas can be applied to slot machine gaming to give all players the experience they deserve to have.

In the end, I hope to show that with simple modifications to existing slot machine hardware we can have slot games that can be enjoyed by all types of people. In addition, the P2G protocol can open the doors for all types of players (disabled and non-disabled) to have a completely new and exciting experience while playing a slot machine game.