Legal and Regulatory Analysis

Year: 2023 Semester: Spring Team: 3 Project: “Rigged” Card Shuffler

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Assignment Evaluation:

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| **Item** | **Score (0-5)** | **Weight** | **Points** | **Notes** |
| **Assignment-Specific Items** | | | | |
| **Regulatory Analysis** |  | x3 |  |  |
| **Analysis of Patent 1** |  | x3 |  |  |
| **Analysis of Patent 2** |  | x3 |  |  |
| **Analysis of Patent 3** |  | x3 |  |  |
| **Writing-Specific Items** | | | | |
| **Spelling and Grammar** |  | x2 |  |  |
| **Formatting and Citations** |  | x1 |  |  |
| **Figures and Graphs** |  | x2 |  |  |
| **Technical Writing Style** |  | x3 |  |  |
| **Total Score** |  | | |  |

5: Excellent 4: Good 3: Acceptable 2: Poor 1: Very Poor 0: Not attempted

Comments:

*Comments from the grader will be inserted here.*

1.0 Regulatory Analysis

One of the main agencies that we would have to get certification from is the Federal Communications Commission or FCC. The FCC is important for any device that produces an electromagnetic interference.

Our device would qualify as a Class B device since we do not predict that our product will be used in any commercial or industrial setting.

Our device has two aspects that we must look at to get certified by the FCC. The first part is that the micro and the raspberry pi are not huge sources of electromagnetic interference, or EMI, while they are being used in our product. EMI has the potential to interrupt radio frequencies, so it is important for the FCC to regulate anything that could potentially disrupt radio frequencies. While our product does not intentionally emit EMI, some of our devices do emit it unintentionally like our micro and raspberry pi due to the high frequency they use for their clock.

The second part of our devise that must be verified is our DC motors. They fall into the category of incidental radiators. Our DC motors could potentially be radiators if they were to arc.

For all potential sources of EMI we plan on having it incapsulated inside a wooden box which will hopefully reduce the noise emitted. However, with the DC motors receiving a relatively low amount of voltage and with our devise having a normal clock frequency, we do not anticipate that our devise will emit a dangerous amount of EMI. If we were to develop our product into something production ready, we would run our own test to ensure that it met standards before submitting it to an FCC approved testing facility to receive authorization.

A major concern for our product is the gaming commission. Even though we do not need to directly gain permission from them in order to bring our product to market, users could potentially use our product for gambling purposes which will then need to be approved of by the gaming commission before being allowed to use in a gambling sense. Since our devise is a rigged card shuffler, we do not plan on ever reaching the requirements that the gaming commission might have for our product. A preventative measure we plan on using to help deter people from sidestepping the gaming commission and using our product for gambling intensions is our user interface. In order to place what kind of hand you want to be dealt you would have to manually input into the devise for each hand. There is no way to covertly input anything into the machine without other people at the table from noticing. If we were to bring our product past the prototyping stage our team would consult with the gaming commission board about our product and ensure that we are taking all the necessary steps to deter misuse with our devise.

2.0 Legal Liability Analysis

2.1 Analysis of Patent 1

US Patent Number 0409985. Publication Date: Dec. 29, 2022

Abstract: This product is a card shuffling devise that analyzes and then dispenses cards based on what game the user wants to play. This devise is has a screen where users can input the game and number of players.

Possible Infringement

* This device includes a screen where a user can select what card game they are playing as well as number of players.
* This device outputs cards based on the game that is being played.
* This device has a sensor that reads what the card input is.

All of these components of the shuffler from the patent has the same features as our project. We both utilize a screen that users can use to select their game and a similar type of setup for reading the cards before the cards get shuffled. We also share a similar feature for how cards get dispensed. However, the way the devices shuffle the cards is very different. Our devise has the shelves where the cards are stored on a wheel while the patent specifies that the cards are on a movable wall. Another difference is how the cards are dispensed. Our project uses a gravity-based approach to dispense the cards while the patent utilizes an ejector to shoot the cards vertically from the device. The biggest difference is that our devise has a feature where we can control where each card will end up while the patent indicates no such feature being applicable. With these key features being different I am confident that while we have some features that are similar to the patent, we also have enough differences from it that it wouldn’t be considered

2.2 Analysis of Patent 2

Shuffler King 6 from Casino Shufflers

Abstract: This devise can shuffle up to six decks of cards. It counts the number of cards inside and then shuffles the cards and then stores the card in a stack for the user to easily pull from the bottom.

Possible infringements

* This shuffler uses the same technique by having the cards placed on a spinning wheel while it is being shuffled.
* It identifies the card that is being placed in before it is shuffled.

The card shuffler sold by Casino Shuffler utilizes a very similar method for both reading the cards and shuffling it. The main differences between our product is the reason why our devise is reading the cards and the features that it presents. Our devise reads the value of the card so that way we can control the shuffle for our desired output. The Casino Shuffler utilizes the card reader to ensure that the cards are being shuffled fairly and to eliminate card counting and shuffle tracking. Another major difference between the two devices is that our rigged card shuffler does not have a continuous shuffle mode while the shuffle king 6 can continue to take cards in and shuffle them while outputting cards.

2.3 Analysis of Patent 3

Artishion card shuffler

Abstract: This devise is a card shuffler. The user will place the deck of cards into two sperate piles, then, using gravity and some kickers the machine will replicate a shuffle fold and put the cards into one pile.

Possible Infringements

* This devise shuffle cards together in an effective way.
* Utilizes gravity as a major component in the way the cards are shuffled

This card shuffler utilizes gravity in a major way to shuffle the cards. However, after sharing the basic function of shuffling cards is where the similarities end. The way we are proposing to shuffle a deck of cards will be a lot more sophisticated and even without the rigged feature turned on, we will have a more accurate shuffle. The shuffler sold by artishion is limited by where each card can end up since each card can not be placed wherever in the final shuffle. For example, our devise can place the last card placed in the shuffle anywhere in the final deck while the card shuffler by artishion can not do this.

3.0 Sources Cited:

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