

# Heroes of CIS: Design Document

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## 1 Concept Overview

Its a frantic night in the Mudd computing labs, and one brave soul is charged with keeping the printers running smoothly. The player takes the role of a CIS staff member, and must navigate the hazards of the Academic Computing labs in order to rush supplies to needy, broken printers. Students will unwittingly hinder you, paper jams will strike fear into your heart, and print queues will fill with assignment after assignment. All these challenges and more await the intrepid Heroes of CIS!

## 2 Gameplay

### 2.1 Overview

The Game occurs in a two-dimensional playfield containing the player, students (enemies), printers, and supply cabinets arranged in various positions. The printers occasionally break, requiring the player to fix them using supplies from the supply cabinet. While the printers are broken, an unrelenting stream of print requests are added to their print queues, but when they are fixed, they slowly process the pages, causing the their queues to decrease. If the any of the printer's queues fill, the printer explodes and the game is over.

### 2.2 Player Controls

Using the arrow keys, the player must move between the printers and supply cabinets, avoiding obstacles and enemies on the way. Each arrow key moves the player in its repective direction, and the player's movement is blocked by the walls at the edge of the playfield and by tables scattered about the

computer lab. The player's motion is also obstructed by printers, supply cabinets, and students.

### **2.3 Supply Cabinets**

Trusty providers of precious office commodities, the supply cabinets contain resources necessary for restoring printers to good working order. The player can access these supplies by simply walking up to the supply cabinet, but can only hold enough supplies to fix one printer at a time. Strangely, the supply cabinets in the labs never run out of printer-fixing materials; this phenomenon is being looked into by Mudd's best engineers.

### **2.4 Printers**

Not nearly as reliable as the supply cabinets, printers sit in secluded sections of the rooms, breaking at random intervals and begging gullible students to load Tray 3. Fortunately, Mudd's trained CIS staff members can fix these disagreeable machines in an instant, provided that they have the supplies necessary to do so. Fixing a printer consumes whatever supplies the player is carrying.

As mentioned above, when the printers are broken, their print queues increase quickly, but when they are fixed, their print queues slowly decrease. The rates of increase and decrease will be balanced in order to keep the players on their toes, but also to keep the game from being completely impossible.

### **2.5 Enemies**

Though they do not know it, students using the labs are highly obstructive to the job of the CIS staff member. They get in the way and are fairly distracting, but most importantly, they print up papers like there's no tomorrow. Students will enter and exit the labs through the door, and will either proceed towards printers to collect their print-outs, bounce around the room randomly (having just finished a three hour take-home test), or try to "fix" fully functioning printers, thereby rendering them inoperational. These various kinds of students will be color-coded in order to give the player a hint about their behavior. While CIS employees are strictly prohibited from disciplining students who break the printers, the color-coding at least gives them a clue about which printers are about to be broken.

## 2.6 Game End and Scoring

If any of the print queues overflow, the game is over. The player receives a score based on how many printers were fixed and how long the lab remained functional. Level-based scoring may be implemented in the future.

## 3 Schedule

Various parts of the game were unimplemented in the prototype and will be added to the final release. These features and the people tasked with completing them are listed below.

- Cal will finalize the graphics and general “finished look” of the game, including making and implementing the bitmaps for each of the sprites.
- Ryan will add enemies to the game. Different enemies will have different properties and different interactions with the player.
- Paul will add levels to the game and design each level’s layout. He might implement walls as well, we shall see.

We plan for all these features to be fully implemented on Saturday. Anything left unresolved at that juncture will be dealt with during the remainder of the weekend.