Enable data reporting

Disable data reporting

Enable stream mode

Project Status

Devices and functions of each device:

Timer:

The timer is used to move both players even if it’s not their intention, since the difficulty factor of this game is that the players can’t be standing still.

In this game, we are using the timer with interrupts, therefore we had to implement the functions:

* timer\_subscribe\_int (): used to subscribe the timer 0 interrupts.
* timer\_unsubscribe\_int (): used to unsubscribe the timer 0 interrupts.
* timer\_int\_handler (): used to handle the interrupts from timer 0 (each time the timer 0 raises an interrupt, the interrupt handler will increment a global variable (totalInterrupts)). Every time totalInterrupts is a multiple of 20 (multi computer mode) or 5 (single computer mode), the main loop calls the function that move the players (passive\_move\_payers()).

Keyboard:

The keyboard is used to move the front-end of each player’s light trail every time the player desires.

In this game we are using the keyboard with interrupts, therefore we implemented the following functions:

* keyboard\_subscribe\_int (): used to subscribe the keyboard interrupts, in excusive mode.
* keyboard\_unsubscribe\_int (): used to unsubscribe the keyboard interrupts.
* kbc\_ih (): used to get the key code associated with the keyboard interrupt.

Video card:

The video card was used to display the game to the user. We chose to run the game in mode 0x115, owing to the fact that this mode has 24 bits per pixel (1 byte per colour) so the range of colours available is wide. Furthermore, since we are using the function xpm\_load () provided in the labs and because this function was programmed to handle xpm that only have 1 or 3 bytes per pixel, the mentioned mode is compatible with xpm images that have 3 bytes per pixel.

To use the video card properly, we use the following functions:

* new\_vg\_init (): uses function vbe\_get\_mode\_info () provided in the lectures to get the information about a specific graphic mode. After that, the function maps the Video RAM in the process’s address space, so that our game can change what is displayed on the screen. Finally, this function calls another function called set\_mode () that sets the graphic mode of the video card.

Mouse:

The mouse is used to choose the desired option in the menus.

Since we are using the mouse with interrupts, we had to implement the following functions:

* mouse\_subscribe\_int (): used to subscribe the mouse’s interrupts in exclusive mode.
* mouse\_unsubscribe\_int (): used to unsubscribe the mouse’s interrupts.
* mouse\_ih (): used to get the byte associated with each interrupt.
* parse\_mouse\_info (): used to convert the raw bytes received from the mouse into a more manageable data structure (struct packet provided in the lab).