

CSEE4840 Final Project Proposal

Battle City

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Introduction:

Our project is to design a video game **Battle City** which was originally developed by Namco in 1985. The player, controlling a tank, must destroy enemy tanks in each level, which enter the playfield from the top of the screen. The enemy tanks attempt to destroy the player's base (represented on the map as a bird, eagle or Phoenix), as well as the human tank itself. A level is completed when the player destroys all 20 enemy Tanks, but the game ends if the player's base is destroyed or the player loses all available lives.

Goals:

The general appearance of the game Battle City looks like this:



To implement this project on the DE2 board, we will design a VGA controller, a CPU, a RAM controller and an interface between the hardware and the software. VHDL and C are respectively used to implement the hardware part and software part. With them we can handle inputs from the keyboard and video display output on the screen.

In order to finish this project, we divide our group into two subgroups, one is in charge of the graphic interface and video display while the other is in charge of the audio and music stuff.

Our goal is running this game on the DE2 board with VGA display and audio output, and the actions of the tank are controlled by the PS2 keyboard. There will be one or more stages to be chosen, which depends on the progress.