

SAGa

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Our team will design and implement a Sprite Animated Game (SAGa) modeled after many of the coin-op video games from the 1970's and 1980's. The game will feature sprite-based characters moving about a gameboard, and will include a variety of sound effects and animations, and will be displayed on the connected monitor at a standard resolution. Gameplay will be both single player versus the computer as well as at least two players simultaneously, either on the same computer or via a network connection.

SAG will take full advantage of the DE2's capabilities by featuring both hardware- and software-driven components. The sprites and gameboard will be rendered and stored (in real-time) on the board due to the performance gains one receives from hardware image processing, and the board will also be utilized to handle the audio components. Both the in-game logic and network communications will be handled in software due to the ease of implementation. As always, these divisions in hardware/software utilization are subject to change as the project progresses.

We expect that the most difficult areas will be in implementing the hardware interface so that playability remains high even with a large number of elements being rendered at a given time, and communicating/maintaining integrity of the game state when multiple users are playing simultaneously, especially across the network.