

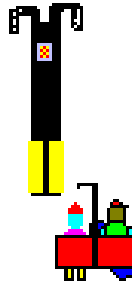
# SkiFree

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# Overview/Inspiration

- Inspired by the classic Windows 3.1 skiing game
- Small skier tries to navigate a downhill path to victory while avoiding trees, hills, and the Abominable Snowman
- Skier will be controlled by a camera tracking the movements of an orange block in user's hand
- Gameplay will be similar to that of the original Windows game

Time: 0:01:36.54  
Dist: 723m  
Speed: 00m/s  
Style: 0



# Basic Game Play

- Skier travels downhill and tries to avoid obstacles such as trees and ramps
- Timer module displays time and velocity in the top right corner of the screen
- Skier's velocity increases the longer he goes downhill without crashing
- When skier reaches the bottom and passes through the “Finish” gates, game pauses and is restarted with a button press

# Additional Features (if time allows)

- Navigation of a slalom course (skier goes around markers or faces time penalties)
- Jumping with use of ramps and modification of control
- Audio (sound effects and game music)
- Attack of the Abominable Snowman given certain events

# Landscape

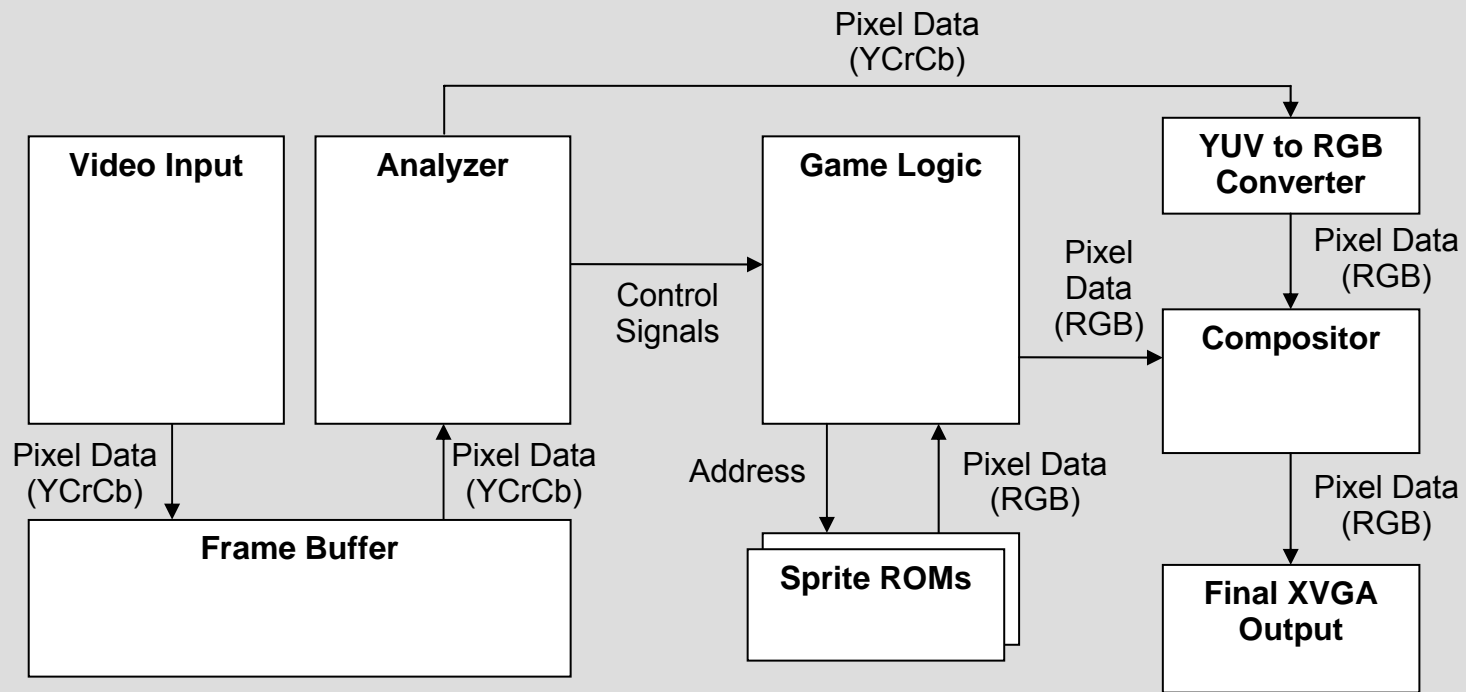
- Includes sprites such as different types of trees, hills, and signs for direction
- The landscape module tracks the x and y coordinates of each object
- The objects in the landscape move up while the skier is relatively static - simulates downhill motion
- Passes object coordinates to the collision module to compare position of landscape objects to that position of skier

# Sprites

- Generated by screen shots from the original Windows game
- .coe file generated through a Matlab script to convert from bitmap
- Each image is stored in an individual ROM

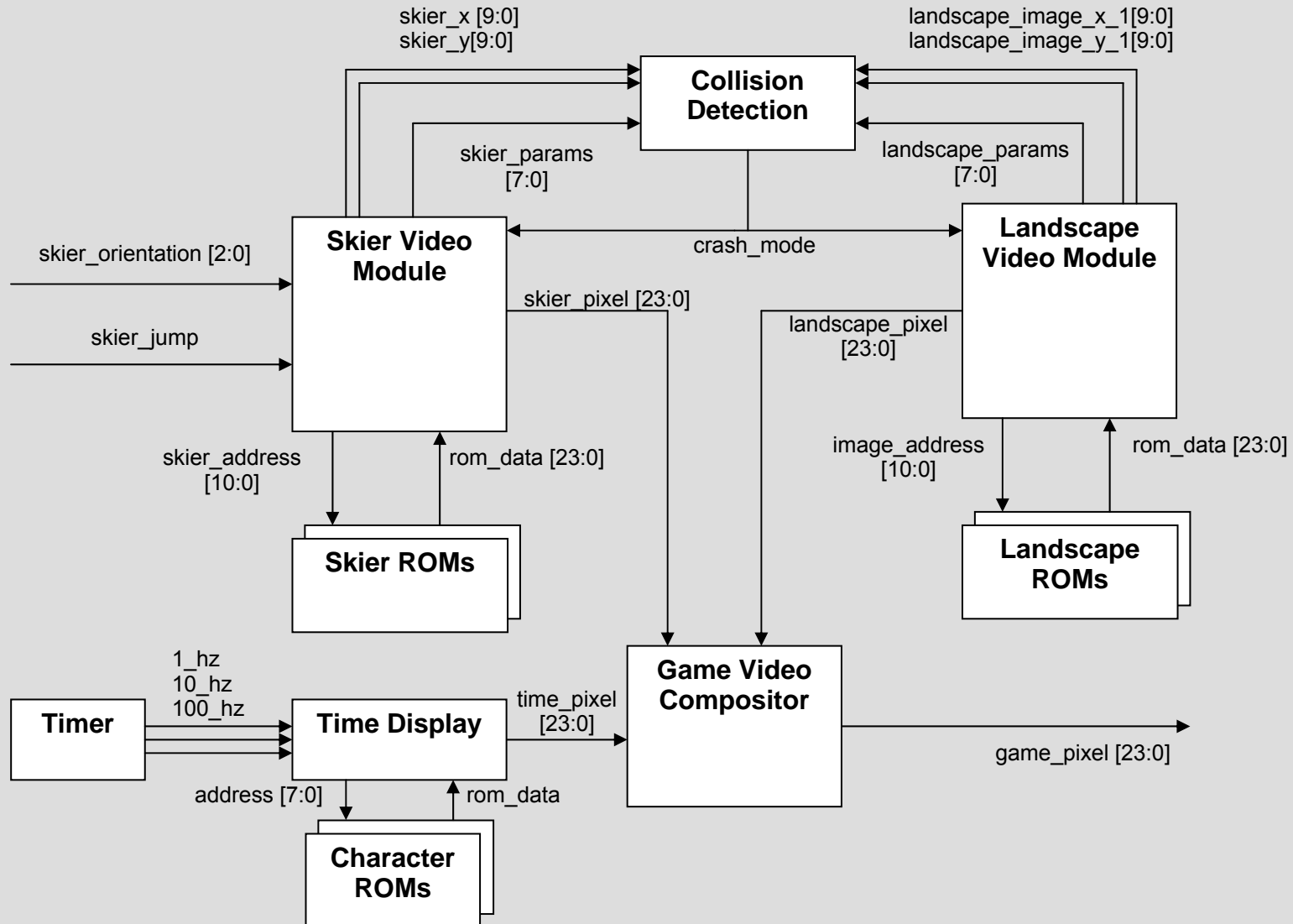


# High Level Block Diagram

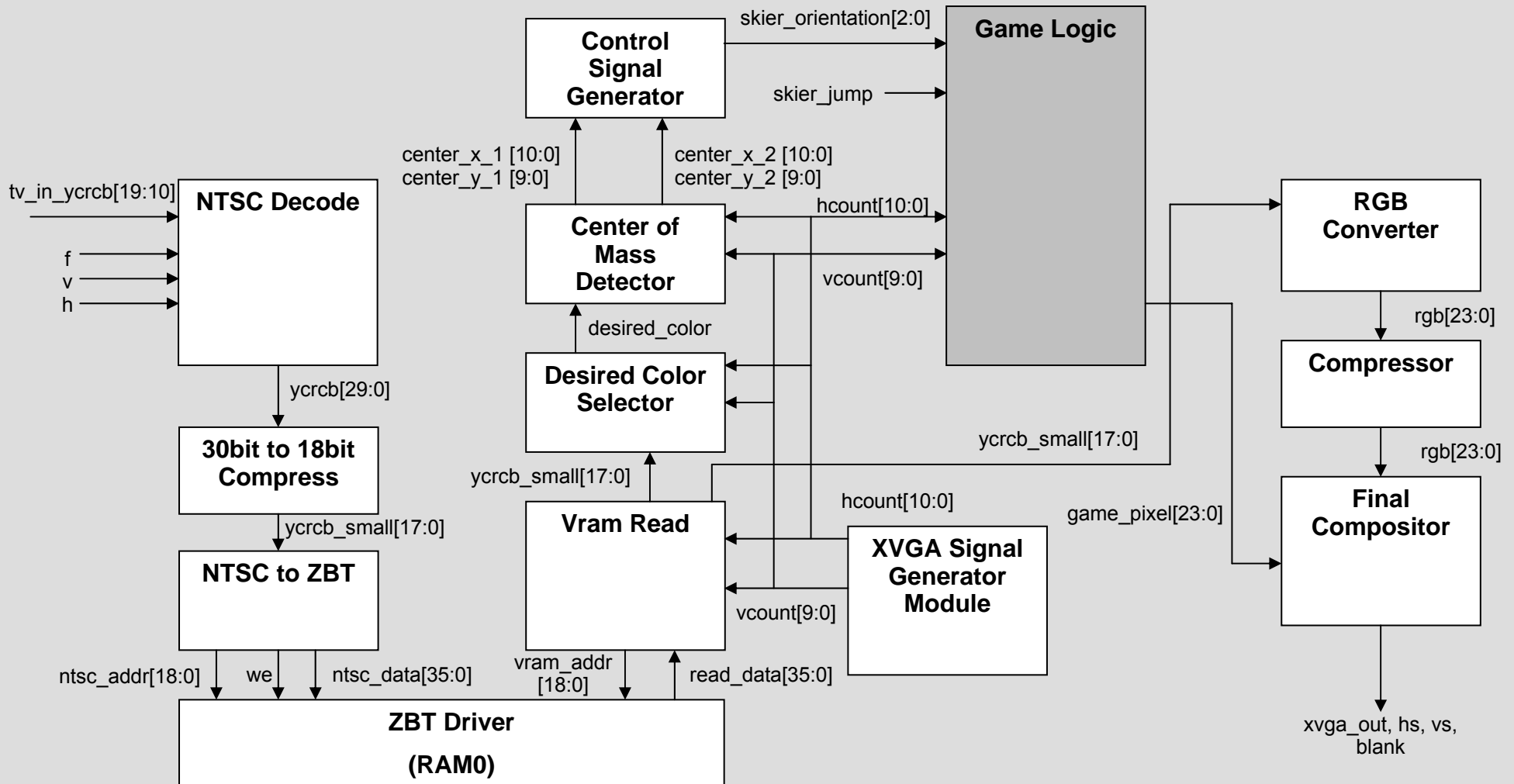




# Game Logic Block Diagram



# Video Logic Block Diagram



# Project Timeline

- **11/22 Basic Functionality**
  - All Sprites loaded into ROMs and drawing correctly
  - Collision Detection Working
  - Timer and Timer Display Functional
  - Video Color Detection, Center of Mass Detection
- **12/1 Additional Features in Place**
  - Video Controller Functioning
  - Integration with Signals from the controller
  - Jumping and Slalom Working
- **12/6 Final Touches**
  - Finish Adding More Features to Game (monsters, audio)
  - Make sure all aspects of the Game are fully functional
  - Final Video Compositor to Allow for video input overlay
- **12/10 System Bug Free**
  - Rigorous Debugging and Testing
  - Play time!