

PrimerWare User Manual

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Introduction

PrimerWare is a minigame framework and suite of minigames for single- or multi-player recreation, in the style of WarioWare DS and similar games. As of writing (2012-03-08) PrimerWare has two game modes, “Single Player” and “Co-Op”, with a third mode “Versus” in beta (Versus is buggy and may not behave as expected). PrimerWare comes with 3 games:

1. **BalloonInflate**

The player must inflate a balloon by tapping in the balloon. In co-op mode the balloon will inflate when either player taps.

2. **TiltMove**

The player must move a ball from a start position to an end position by tilting the device. In co-op mode, each player controls only one axis of tilt, and the players must carefully work together to get the ball to the goal.

3. **SquishTheBugs**

The player must squash bugs which move around the screen using the touchscreen. In co-op mode, both players squish the same set of bugs.

Playing PrimerWare

Upon starting the game, the user is presented with a menu for choosing if they want to play a single player or a two player game. If the player chooses single player then gameplay begins, otherwise the user is prompted to choose a co-op or a versus game.

One round of gameplay consists of a number of games (configurable in the source), each of which is randomly chosen from a list. Before each game, a stage start screen is displayed indicating to the player what stage they are on. The game then begins, which starts with instructions. Every game is timed, and a progress bar is displayed at the bottom so that the player knows how much time they have left. Upon successful completion or failure of a game, an appropriate screen is displayed and the cycle begins again. If the stage was won, the players score is increased, and if the player lost then they lose one of their 3 lives (configurable in source). After the last game, a game over screen is displayed with the player's score and remaining lives. Gameplay will also terminate if the player loses all of their lives.

Networking

To play co-op games, two Primer2 devices must be connected via serial. Pins 20 (ground), 18 (RX data), and 16 (TX data) should be connected. These are the three pins on the bottom row furthest from the battery jumper.

Alternatively, it is possible to use the IrDA instead of serial by commenting out the `USE_SERIAL` define in `Net.h`, and uncommenting `USE_IR`, then recompiling. This increases the communication delay and speed somewhat.

Development Features

PrimerWare has been built in a modular fashion, and contains various helper libraries to aid in the development of additional minigames.

The Net library allows minigames to send arbitrary data via serial or IR, encapsulating configuration and backend.

The RandNo library provides an implementation of Complementary Multiply With Carry for random numbers.

The Timer system provides a developer with up to 8 timers (this value can be changed) for any one game. Developers can see the current value of a timer, disable timers, check if a timer has 'triggered' (reached its maximum) and draw a time limit bar.

The Touchscreen library allows developers to detect 4 different touch events, based upon whether the touchscreen had been pressed last time a call was made, and if the touchscreen has been touched this time.