

# Rolling Ball

## The application

Rolling Ball is an arcade-style game for Symbian based mobile phones. In this game the player is to control a ball on a track from top view. The goal of the game is to finish the track – that is, to get the ball to a marked location – as fast as possible.

The control of the ball can be done by tilting the device in either direction, using the onboard camera or can be done with the keyboard.

There are various object on the track, that makes advancing harder, such as ramps, pits, and bridges.

The game can be played in single or multiplayer mode. In singleplayer mode, the goal is to beat the clock. In multiplayer mode, two players race each other over Bluetooth.

## User's Manual

### Hardware requirements

- Camera
- Bluetooth
- Symbian S60 3rd edition device

### Install

Simply upload the installation file (rollingball.sisx) to the device. After that, the application is ready to be installed.

### Run

The application can be started from the Menu / My Own menu, by selecting the RollingBall icon.

### The main menu

After starting the application, you get to the main menu. Here you can browse through the menu items using the up (or 2) and the down (or 8) buttons, and then you can select the current item by pressing the OK (or 5) button. The current menu item is marked with a star (\*).

- *Start singleplayer* Starting a singleplayer game
- *Start multiplayer* Activates the Bluetooth submenu, where you can connect to another device, which is also in the application's Bluetooth submenu, selecting the *Connect BT device*. After the connection has been established, both devices start the game automatically in multiplayer mode.
- *Options* Activates the Options submenu, where you can select the control method of the game (*Control: Camera/Keyboard*).
- *About* Displays information about the application.
- *Quit* Quits the application.

## **The game**

After loading the track, an orange ball appears on it. In multiplayer mode, in the beginning, you can see both players' balls, at the same location. The camera always follows the ball that is of the local player.

You can control the ball with the selected method, which you can change in the Options menu.

*Keyboard* – Hold the up (or 2), the down (or 8), the right (or 6), or the left (or 4) buttons to accelerate the ball in the desired direction. The ball keeps accelerating until it reaches its maximum speed, or collides to a wall.

*Camera* - The control of the ball is done using the main camera of the device, utilizing an image processing algorithm. Therefore be sure not to obscure the camera lens, and to provide it with a bright and diversified image. The quality of the image feed for the image processing algorithm is indicated by a blue horizontal line in the upper left corner of the screen. A short line means that the required operating conditions for motion detection are not met, therefore the ball won't accelerate at all.

Tilting the device in either direction about 30 degrees from the starting position, the ball begins to accelerate in the respective angle. The acceleration is not constant, it drops to zero in about five seconds. Then this will be the new horizontal position for the device

The momentary position of the device can be set to horizontal by pressing the OK button (or 5).

The goal of the game is to drive the ball into the finish hole. After finishing a level, you can return to the main menu by acknowledging the *You win!* message.

The game can be paused at any time by pressing the soft-key on the right-side. A menu appears, from which you can return to the game by selecting *Resume* or quit to the main menu by choosing *Quit to main menu*.