Novel Games

Bubble Bug Flash Game Customization Guide

Version 1.0

Modification History

Version	*Date*	*Description*
1.0	*2007-3-15*	*First Draft*

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Introduction

This document describes the source codes of Bubble Bug game and the ways to customize the game.

In order to use the source code your computer should have Flash Professional 8 or above installed. You should also have basic knowledge of the Flash authoring environment, such as the steps to change a picture and the steps to change the value of a variable, etc.

Directory Structure

The source codes are arranged in the following directory structure:

```
+
+-- bubble.pdf (this file)
+-- common
|   +-- com
|       +-- novelgames
|           +-- flashgames
|               +-- common
|                   +-- MainDevelopment.as
+-- bubble
    +-- bubble.fla
    +-- bubble.swf
    +-- bubble.htm
    +-- com
        +-- novelgames
            +-- flashgames
                +-- bubble
                    +-- Config.as
                    +-- other ActionScript .as files
```

To build the game, you should open bubble\bubble.fla in Flash 8 and then publish it. The file bubble.swf in the same directory is the compiled swf file for your reference.

The file bubble.htm contains sample HTML codes for you to use in your web site.

All the ActionScripts are arranged in class files put in the bubble\com\novelgames\flashgames\bubble folder.

Depending on what you'd like to customize, you will need to modify different files:

1) If you want to change the graphics and the sounds, then you should edit the fla file.
2) If you want to tune some parameters of the game, then you should edit the Config.as file.
3) If you want to add the support of high scores, the credits page, or the volume control buttons, then you should edit the MainDevelopment.as file.
4) If you want to change the behaviour of the game and such changes cannot be achieved by tuning the game parameters as in 2) above, then you should edit the ActionScript .as files.

We will discuss 2) and 3) in the next two sections.

The Configuraton File (Config.as)

In this section we'll explain the parameters in Config.as and how they affect the behaviour of the game.

Parameter	Description
BUBBLEFRAME_RADIUS	The radius (in pixels) of the bubble frame
BUBBLEFRAME_BUBBLEMINLENGTH	The minimum length (in pixels) of the inflating bubble at the side of the bubble frame
BUBBLEFRAME_BUBBLEMAXLENGTH	The maximum length (in pixels) of the inflating bubble at the side of the bubble frame
BUBBLEFRAME_BLOWBUBBLESPEED	The speed (in pixels per second) of the increase in length of the inflating bubble
BUBBLE_WAVEAMPLITUDE	The amplitude (in pixels) of the wave of the rising bubble
BUBBLE_WAVELENGTH	The wave length (in pixels) of the wave of the rising bubble
BUBBLE_WAVETIME	The number of milliseconds the rising bubble will take to complete one wave of movement
BUG_MINY	The minimum y coordinate (in pixels) of the bugs
BUG_MAXY	The maximum y coordinate (in pixels) of the bugs
BUG_INITIALMINWAVEAMPLITUDE	The initial minimum amplitude (in pixels) of the wave movement of the bugs
BUG_INITIALMAXWAVEAMPLITUDE	The initial maximum amplitude (in pixels) of the wave movement of the bugs
BUG_INITIALMINWAVELENGTH	The initial minimum wave length (in pixels) of the wave movement of the bugs
BUG_INITIALMAXWAVELENGTH	The initial maximum wave length (in pixels) of the wave movement of the bugs
BUG_WAVETIME	The number of milliseconds the bugs will take to complete one wave of movement

BUG_INITIALMINAPPEARINTERVAL	The initial lower bound of the appear interval (in milliseconds) between two bugs
BUG_INITIALMAXAPPEARINTERVAL	The initial upper bound of the appear interval (in milliseconds) between two bugs
BUG_MINMAXAPPEARINTERVAL	The minimum upper bound of the appear interval (in milliseconds) between two bugs
BUG_WEIGHTS	The relative weights of the frequency of appearance of the bugs
BUG_SCORES	The scores of the bugs
BUG_FLAPTIME	The flap time of the wings of the bugs
LEVEL_INITIALBUGSTOTAL	The initial number of bugs in a level
LEVEL_BUGSTOTALINCREASE	The increase in the number of bugs in a level for each new level
LEVEL_INITIALPASSPERCENT	The initial pass percent in a level
LEVEL_PASSPERCENTINCREASE	The increase in pass percent in a level for each new level
LEVEL_BUGWAVEAMPLITUDEINCREASE	The increase in the amplitude (in pixels) of the wave movement of the bugs for each new level
LEVEL_BUGWAVELENGTHINCREASE	The increase in the wave length (in pixels) of the wave movement of the bugs for each new level
LEVEL_BUGAPPEARINTERVALDECREASE	The decrease in the maximum interval of appearance of two bugs (in milliseconds) for each new level
LEVEL_BEGINTEXTSHOWTIME	The show time (in milliseconds) of the text at the beginning of the level
LEVEL_ENDTEXTSHOWTIME	The show time (in milliseconds) of the text at the end of the level
SCORE_MULTIPLEBONUS	The bonus awarded for catching multiple bugs with a single bubble
SCOREPOPUP_PREFIX	The prefix of the score popup
SCOREPOPUP_SHOWTIME	The time (in milliseconds) the score popup will be shown

Optional Functions (MainDevelopment.as)

If you want to support high scores then you'll need to modify the following 2 functions in this file:

```
public function showHighScores():Void {
	trace("showHighScores()");
}

public function showEnterHighScore(score:Number):Void {
	trace("showEnterHighScore(" + score + ")");
}
```

The `showHighScores` function will be called if the high scores button is clicked.

The `showEnterHighScores` function will be called when the game has finished and the score of the user has been calculated.