## Scraββle Word Board Game User Manual

This is a game in which tiles are placed on a board to create words, and the running program plays very similarly to the board game Scrabble. The name Scrabble is trademarked and copyrighted, and normally I would have tried to get permission from the copyright holder to use the name here, but I was not able to get hold of the appropriate people. So, our game is called something similar and is NOT Scrabble©®.

## **Installing the Program**

Use the URL to download the zip file and extract the folder "QB64 Scra88le Board Game" and place that folder in your QB64 folder. Be careful that the extraction process doesn't create an extra folder layer. Open the file "scra88le\_v1.bas" in the IDE, and make sure that you have the Run Option "Save EXE in the source folder" checked. The program will work with GL 1.2 or higher.

#### https://www.dropbox.com/s/nb2fpzbinm3fa0b/Scra88le.zip?dl=0

The program assumes a right-handed (default) mouse. If you use a left-handed mouse, then all the program lines containing "\_MOUSEBUTTON(1)" will need to be altered – probably the "1" will need changing to "2".

## **Playing the Game**

When the program is run, there will be a short delay while the dictionary is loaded. The dictionary file is necessarily quite large. When the game begins a representation of a playing board is shown. Lettered squares represent tiles which can be moved onto the board. At the start of the game, seven tiles are randomly selected from the tile set and placed on the tile racks of the Player and Computer. You (as the Player) place tiles on the board from the Player's tile rack to form words and compete against the Computer.



Scraßßle Opening Position

Tiles are selected by single clicking on a tile from the rack. That tile then follows the mouse cursor. The tile is placed in a vacant square on the board by single clicking in that square. Dragand-drop is not implemented in this program. Once a tile is picked up, it can be placed back in the rack by single clicking anywhere outside the board. Notice that the Computer tiles are hidden at this time. At the start of the program, the Player may adjust the strength of the Computer play by single clicking in the selection box to the right of the board. The default strength is set at Max, and it is not necessary to select this default. It is suggested that the game always be played with the default.

At any Player's Go, you may swap all the tiles on the rack for a new selection, or you may miss a Go. The options (available when the Player's tile rack is full and when no tiles have been selected) can be selected by single clicking to the right of the board.



Miss a Go or Swap Tiles

When tiles have been selected and placed, all tiles may be returned to the tile rack by selecting the option to the right of the board.



**Replace Tiles or Submit Word** 

When you are content with your word, the Submit option may be selected. If the word exists in the Scra $\beta\beta$ le dictionary, the word will be scored and then the Computer will have a Go. If the word does not exist, all tiles will be returned to the rack. There is no penalty in placing an incorrect word, and there is no time constraint. In the Player's first Go, the word must go through the centre square and must be at least two letters in length.

If you are dealt a blank tile, you can place the tile on the board as normal. You will then be given an option list to the right. Choose which letter you wish. The blank tile will then display this letter and the program uses that. Thereafter, blank tiles are shaded to identify them. They take zero score value.

Player and Computer running total scores are displayed to the left of the tile racks (whilst the Player has a Go). Individual round scores are not given.

When the Computer has its Go, a Countdown in seconds is displayed to the right of the Computer tile rack. You are not able to interact during this period. If the Computer has found a suitable word, it will then move tiles to the board. If it uses a blank tile, it will update it with its chosen letter.

The game finishes when either player is out of tiles. The game will also end if both Player and Computer have twice missed a Go consecutively.



**Scraββle Final Position** 

### The Scraββle Dictionary

The dictionary which is used has been obtained from an official Scrabble website, and is a "European English" variant. For example "color" (US English – ugh!) and "colour" (British English – yay!) are both acceptable. I find it interesting that the US version of many verb forms where "z" is used instead of "s" would seem to make the occurrence of "z" fairly common and less worthy of the value 10 (eg in the forms realize, realizes, realized, realizing, realization, realizations, realizability, realizabilities, realizable, realizably, realizer, realizers). It should be noted that the "z" forms are acceptable in British English, although frowned upon by some (including me, you must realise!).

The dictionary has some words which would appear to be wrong and some which seem missing. For example, there are some proper names allowed (eg "Jane" which the Computer once played). And then I found that "British" was not allowed when I had that word on a Treble Word score. Many nationalities are not allowed (because they are capitalised words, I suppose). In one game, the Computer came up with "Ozones", and I wouldn't have thought that ozone was a countable noun. Many of the allowed two-letter words seem peculiar, but those are presumably accepted in Scrabble.

If you wish to play Scra $\beta\beta$ le regularly and find that the default dictionary is unsuitable, there is provision for you to create your own. You must have a text file of your word list in the "QB64 Scra88le Board Game" folder. This file must have words in strict alphabetical order (one word per line), and may use only A to Z (case is not important) with no accents. Run the program "Create User Dictionary". The default name for your input word list is "User's Word List.txt", so I suggest that's what you call your file. The program creates an alternative dictionary which Scra $\beta\beta$ le will then use. You do not have to delete the default dictionary (I suggest that you keep it).

# The Scraßßle Tile Set

Aficionados of the Scrabble board game may notice that the tile set used in the Scra $\beta\beta$ le game is slightly different to that of the commercial game. The tile set used here makes the game slightly easier to play. Tile values are the same as that of the commercial game.

# The Scraßßle Rules

The rules for playing and the scoring for  $Scra\beta\beta$ le are the same as those of the commercial game.

#### How the Program Works

When playing the game, it might seem that the computer is playing somewhat intelligently (when I first saw the program placing words on the board, I was quite amazed). It doesn't, of course. During the Computer Go, the program randomly throws tiles (from 1 to the number of tiles on the Computer rack) in a straight line (in either direction), touching at least one existing tile. It scores the contiguous word (along with any created words in the other direction), checks the dictionary and takes the maximum obtained score. At maximum Computer strength, it completes approximately 300,000 iterations. This demonstrates the power of computers, which are phenomenal at repetitive simple tasks. I expect to be offered a job at Google's Artificial Stupidity Development Group.

**Richard Notley**