RTF Writer for DOS

Version 0.1

User's Manual and Development Reference

Last modified on 2012/1/2

### 0 Introductions

RTF Writer for DOS is a simple document processor which can handle ASCII text as well as simple Riched Text Format document. It will be able to handle more formats in the RTF standard in the future.

**Features:**

Visual presentation for text formats

--See the format in every part of the document at a glance.

Word-warp

--Say good-bye to a super long line when you are writing.

Simple Long File Name support

--You can open those LFN files even in Windows environment.

**Change Log**

0.1.12 Alpha 2

Border to show the editor window added.

Bug fixed: Plain text saving.

Bug fixed: Not-saved warning not functioning when quitting the program.

Bug fixed: Word-warp error when inserting characters just before a line break.

Bug fixed: Cannot quit when the document has been saved.

Bug fixed: Cannot create new document correctly if failed loading the file via command line.

0.1.10 Alpha 1

Support Bold & Italic format editing.

Save and Open functions available.

Visible line break and end-of-document notation.

Improved format indicator behavior.

Improved Notice window.

Warning when you are trying to load another document or a new document without saving the current document.

RTF translation bugs fixed.

Line break bugs fixed.

Character deleting bugs fixed.

0.1.8 Pre-Alpha

First Release.

Support displaying a RTF document with Bold & Italic formats.

Support plain text editing. Word-warp natively supported.

**Known Issues**

Backspace behaves abnormally when at the beginning of a line.

**Future Development**

Supporting more formats.

File header operation.

Improve editing experience.

### 1 Operation

#### 1.1 Basic Knowledge

There are two different areas on the screen. The upper, blue one is called ***Editor***, in which you edit your document. The lower, black one is called ***Ribbon***, which shows the information, commands and so on to you.

***Notice*** is a message dialog that pop up to inform you some warnings or errors.

#### 1.2 Commands

##### 1.2.1 Command Line

When you start the program in command-line, you can add the document name you want to open. Simply type *rtf <filename>* and you can open the document at once. If the program cannot open it, a notice will pop up and a new document will be created for you to edit.

##### 1.2.2 Commands

Hit F1 to get help. This will pop up a notice window to show basic help for you.

Hit F2 to open a document. You can type in the filename in the dialogue popping up and hit Enter to open it. Leave the input box blank so as to cancel.

Hit F3 to save the document. The program will create a temporary file first and replace the former one if it exists. If failed, a notice will pop up. If the reason is that the program cannot replace the former document, you can find your document saved in the temporary file.

Hit F4 to create a new document.

*\*Note that if you are trying to open a document or create a new one without saving the current document, you will receive a notice to confirm your action.*

Hit F10 to quit the program back to the DOS Shell.

##### 1.2.3 Editing

Use direction keys to move the cursor to the place you want to modify.

You can use Home, End to quickly move to the beginning or the end of the current line.

You can simply use Page Up and Page Down to scroll up or down for one screen. Using direction keys in the edge of the editor can scroll the page as well.

Using direction keys while pressing Shift can choose a block of characters.

Use Ctrl+B to control the Bold format, Ctrl+I for the Italic format.

### 2 Development Reference

#### 2.1 Obtaining files

This is an open-source project that you can obtain all the source code and binary files freely through the Internet.

To download the source code, binary files and screenshots of the project, please go to the following SkyDrive website:

<https://skydrive.live.com/redir.aspx?cid=f447999724814ded&resid=F447999724814DED!367&parid=F447999724814DED!348>

or the shorter edition (thanks to *ink.nu*): <http://lnk.nu/skydrive.live.com/1vtw.aspx>

For developers, please contact [dujingshan@gmail.com](mailto:dujingshan@gmail.com) to obtain the edible link of the website.

#### 2.2 System Architecture

The whole system contains three modules: Editor, Graphical UI, File I/O.

Module Editor manipulates all the edit operations including: character inserting/deleting, format controlling, cursor moving and page scrolling, invoking all the other functions of the program.

Module Graphical UI handles the on screen displaying, including window drawing, dialog displaying and the document layout.

Module File I/O mainly undertakes file loading and saving functions. It serves as the translating module of the RTF syntax.

#### 2.3 Realizations of several key functions

##### 2.3.1 Document layout

In the memory, the document is stored as a 2-dimention array. Each element of the array is a structure which contains the character and the format information.

The format information is stored as an integer. Now as the program supports Bold and Italic format, the first bit at the right end represents Bold format, while the second for Italic.

##### 2.3.2 Word-wrap

Naturally, the program supports word-warp displaying. But the word-warp feature is not easy when the user is editing the document.

When the user inserts or deletes characters, the contents behind the cursor should be moved forward. But if there’s a line break, or if one line should be deleted or inserted after the movement, we should handle the condition in order not to destroy the correct document storage and displaying. You can refer to the function ins(char) and del(int) to see how it works.

#### 2.4 About the developing team

Du Jingshan: Software Architect & Chief Programmer.

Fang Mingtong: Programmer, in charge of part of the Graphical UI module.

Li Yue: Programmer, in charge of part of the Graphic UI module and the Program Tester.

This is the 23# Group of the *C Programming* course of Zhejiang University, the advisor is Ying Jing.