

GPSBabelGUI

V2.0.0

Project Plan

Windows GUI Front-end For GPSBabel.exe
GPSBabel: <http://sourceforge.net/projects/gpsbabel>
Delphi 7

Uncontrolled Document - For Reference Only

Down East Engineering

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1 Purpose

This plan provides a mechanism for tracking the various issues addressed under Requirements, below.

2 Scope

2.1 Project Plan Control Block

Project Creation Date: 2005-03-15

Enter name and date to indicate review of appropriate step in the project.

	Reviewed by	Completion Date
Schedule		n/a
Requirements Specification		n/a
Design Specification		n/a
Development Phase		n/a
Test Phase		n/a
V&V		n/a

3 Schedule

The relevant schedule for this release is (filename).

or

3.1 Resource: _____ Est. Man-hours: _____ Est. Completion Date: *not applicable*

4 Requirements Specification

See ANSI/IEEE Std 830-1993, *Recommended Practice for Software Requirements Specifications*.

Include the requirements here and provide proof of review and acceptance.

- 4.1 Add About information or dialog.
- 4.2 Add Exit button.
- 4.3 Add basic Help.
- 4.4 Add hotkeys for most common buttons.
- 4.5 Add timer to load formats after form is created. This prevents the associated dialog from displaying until the form is displayed.
- 4.6 Align controls on dialog.
- 4.7 Don't permit file processing unless *GPSBabel* is OK.
- 4.8 Evaluate need for memoStdErr vs. Message dialog.
- 4.9 Include all Delphi project files in upload.
- 4.10 Look for *GPSBabel.exe* before attempting to open it.
- 4.11 Modify to use input filename and output type to generate default output filename.
- 4.12 Output file dialog: fill in filename and file type, if possible.
- 4.13 Port to Delphi 7.
- 4.14 Process: handle cases where input/output file is a dir.
- 4.15 Remove unused console invocations.
- 4.16 Remove unused variable declarations.
- 4.17 Process: don't allow processing null, or undefined, files.
- 4.18 Rewrite to eliminate 'exit;' where reasonable.
- 4.19 Sort default file types by alpha; add sort routine: CANCELLED: placed in GPSBabel.

4.20 Name: Richard L. Messeder

Title: Down East Engineering

Date: 2005-03-15

5 Design Specification

See ANSI/IEEE Std 1016-1987, *Recommended Practice for Software Design Descriptions*.

See ANSI/IEEE Std 1016.1-1993, *Guide to Software Design Descriptions*.

Include the design requirements here and provide proof of review and acceptance.

- 5.1 Add About information or dialog.
 - 5.1.1 Use a basic About dialog with a 5 second timer to hide.
 - 5.1.2 Display
 - 5.1.2.1 Product name
 - 5.1.2.2 Version
 - 5.1.2.3 Copyright
 - 5.1.2.4 GNU license indication
- 5.2 Add Exit button.
 - 5.2.1 Call Application.Terminate.

- 5.3 Add basic Help.
 - 5.3.1 Intro: describe basic operation of *GPSBabelGUI*.
 - 5.3.2 How To: describe the steps to complete basic file conversion.
- 5.4 Add hotkeys for most common buttons.
 - 5.4.1 About
 - 5.4.2 Exit
 - 5.4.3 How To
 - 5.4.4 Intro
 - 5.4.5 Process
 - 5.4.6 Use Default Filename
- 5.5 Add timer to load formats after form is created.
 - 5.5.1 Set timer delay to 1 second.
 - 5.5.2 Disable timer immediately after it fires so that there will not be duplicate or overlapping attempts to load formats from *GPSBabel*.
- 5.6 Align controls on dialog.
- 5.7 Don't permit file processing unless *GPSBabel* is OK.
 - 5.7.1 Use global Boolean to control processing permission. Set it to true only if there is a high degree of confidence that the *GPSBabel* can be executed and the formats loaded.
- 5.8 Evaluate need for `memoStdErr` vs. Message dialog.
 - 5.8.1 A design review suggests that the memo can be replaced with message dialogs. This provides a uniform method of communicating with the user because message dialogs are used for similar purposes already.
- 5.9 Include all project management and Delphi project files in upload.
 - 5.9.1 *GPSBabelGUI.exe*
 - 5.9.2 All Delphi source and configuration files
 - 5.9.3 This Project Plan
- 5.10 Look for *GPSBabel.exe* before attempting to open it.
 - 5.10.1 If it isn't found, notify the user.
 - 5.10.2 Don't permit processing.
- 5.11 Modify to use input filename and output type to generate default output filename.
 - 5.11.1 Allow the user to use the Save As dialog to set the output directory.
 - 5.11.2 Allow the user to define the name of the output file.
 - 5.11.3 If the user selects Use Default Filename, create the output filename using the input directory, the root name of the input file, and the extension as defined by the selected output file type.
- 5.12 Output file dialog: fill in filename and file type, if possible.
 - 5.12.1 Once the output filename is defined, use it to populate the Save As dialog filename so that the user won't have to type it in if he decides to execute the Save As dialog.
- 5.13 Port to Delphi 7.
- 5.14 Process: handle cases where input/output file is a dir.
 - 5.14.1 If the input file is a directory, alert the user and don't permit processing.
 - 5.14.2 If the output file is a directory
 - 5.14.2.1 Don't attempt to create the file if it doesn't exist.
 - 5.14.2.2 Alert the user and don't permit processing.
- 5.15 Remove unused console invocations.
 - 5.15.1 `LoadFormatsFromGPSBabelExe`: Delete unused `AllocConsole`, `FreeConsole`.
 - 5.15.2 `Process`: Delete unused `AllocConsole`, `FreeConsole`.
- 5.16 Remove unused variable declarations.
- 5.17 `Process`: don't allow processing null, or undefined, files.
- 5.18 Rewrite to eliminate 'exit;' where reasonable.
 - 5.18.1 Restructure code to show 'success' actions.
 - 5.18.2 Supply 'else' clauses to handle 'if' failures, where applicable.
 - 5.18.2.1 Notify users via Message Boxes of logic test failures, where applicable.
- 5.19 **Name:** Richard L. Messeder **Title:** Down East Engineering **Date:** 2005-03-18

6 Development Phase

Where the development environment permits, a code walk-through shall be conducted and documented.

or

Where the development environment does not permit a code walk-through, an equivalent design review shall be conducted.

6.1 Name: Title: Date:

7 Test Plan

- 7.1 Add About information or dialog.
 - 7.1.1 Verify that the About dialog displays for approximately 5 seconds.
 - 7.1.2 Verify that it displays
 - 7.1.2.1 Product name
 - 7.1.2.2 Version
 - 7.1.2.3 Copyright
 - 7.1.2.4 GNU license indication
- 7.2 Add Exit button.
 - 7.2.1 Verify the application terminates.
- 7.3 Add basic Help.
 - 7.3.1 Verify that basic operation of *GPSBabelGUI* is displayed.
 - 7.3.2 Verify that basic steps to complete basic file conversion are displayed.
 - 7.3.3 Verify spelling and syntax in all Help.
- 7.4 Add hotkeys for most common buttons. Verify that hotkeys work as indicated for:
 - 7.4.1 About
 - 7.4.2 Exit
 - 7.4.3 How To
 - 7.4.4 Intro
 - 7.4.5 Process
 - 7.4.6 Use Default Filename
- 7.5 Add timer to load formats after form is created.
 - 7.5.1 Verify that a message dialog appears immediately after the main form is displayed, indicating that formats have been loaded from *GPSBabel*.
- 7.6 Align controls on dialog.
 - 7.6.1 The dialog should be attractive and well-ordered.
 - 7.6.2 Give attention to the flow of user interaction with the dialog.
- 7.7 Don't permit file processing unless *GPSBabel* is OK.
 - 7.7.1 Display a dialog if *GPSBabel* can't be found.
 - 7.7.1.1 Test by running *GPSBabelGUI* with no *GPSBabel* available.
 - 7.7.2 Display a dialog if *GPSBabel* has an error when it executes.
 - 7.7.2.1 Test by running *GPSBabelGUI* with a bad *GPSBabel*.
 - 7.7.2.2 If the buffer doesn't contain at least 1000 bytes of data, assume an error. The data passed by *GPSBabel.exe* should exceed 1500 bytes, but this provides some slack. We're discussing the possibility of having some sort of byte count passed by *gpsbabel*, e.g., 'byte count=1234'; we could then check for 'byte count=', and if we don't get it then we know that there is an error.
- 7.8 Modify to use input filename and output type to generate default output filename.
 - 7.8.1 Use Open File dialog to select a file of a type known to .
 - 7.8.2 Verify that y selects the correct format for the input file.
 - 7.8.3 Verify that the user may select the input file type independent of the input file name.
 - 7.8.4 Select an output file type.
 - 7.8.5 Select Use Default Filename.
 - 7.8.6 Verify that the output filename is created using the input file directory, the name of the input file, and the extension that matches the output file type selected.
- 7.9 Output file dialog: fill in filename and file type, if possible.
 - 7.9.1 Verify that the user can:
 - 7.9.1.1 Change edit the output file name directly.
 - 7.9.1.2 Using the Save As dialog:
 - 1. Change the output directory.
 - 2. Change the file name.
 - 3. Change the file type mask.
- 7.10 Process: handle cases where input/output file is a dir.
 - 7.10.1 Make the input file a directory.
 - 7.10.1.1 Attempt to Process, and verify that a warning dialog is displayed.
 - 7.10.2 Make the output file a directory.

- 7.10.2.1 Attempt to Process, and verify that a warning dialog is displayed.
- 7.11 Process: don't allow processing null, or undefined, files.
 - 7.11.1 Make the input file blank.
 - 7.11.1.1 Attempt to Process, and verify that a warning dialog is displayed.
 - 7.11.2 Make the output file blank.
 - 7.11.2.1 Attempt to Process, and verify that a warning dialog is displayed.

7.12 **Name:** Richard L. Messeder **Title:** Down East Engineering **Date:** 2005-03-24

8 Verification and Validation

Design reviews are conducted at appropriate stages in accordance with Software Engineering procedures. Name and date entries in this document or external documents referenced herein indicate acceptance of the output of the referenced stage.

9 Acronyms and Abbreviations

TBD	To Be Determined
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10 Glossary

verification and validation (V&V)	The process of determining whether the requirements for a system or component are complete and correct, the product of each development phase fulfills the requirements or conditions imposed by the previous phase, and the final system or component complies with the specified requirements.
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