

**NIST/ITL Conformance Test Suite for Patron Format A  
Data Structures Specified in ANSI INCITS 398-2008,  
Common Biometric Exchange Formats Framework  
(CBEFF)**

**Beta Implementation V1.1**

**Quick Start Guide**  
**August 2008**

**National Institute of Standards and Technology (NIST)  
Information Technology Laboratory (ITL)  
Computer Security Division (CSD)**

Fernando Podio, NIST/ITL, CTS Development Project Manager  
Mark Jerde, ID Technology Partners (NIST Contractor)  
Dylan Yaga, NIST STEP Student  
Yooyoung Lee, Department of Computer Engineering,  
University of Chung-Ang, Korea (NIST Guest Researcher)



## **DISCLAIMER FOR**

### **NIST/ITL CONFORMANCE TEST SUITE (CTS) FOR PATRON FORMAT A DATA STRUCTURES SPECIFIED IN ANSI INCITS 398-2008, COMMON BIOMETRIC EXCHANGE FORMATS FRAMEWORK (CBEFF)**

#### **BETA IMPLEMENTATION V1.1**

August 21, 2008

The software was developed by the National Institute of Standards and Technology (NIST), an agency of the Federal Government. Pursuant to Title 15 United States Code Section 105, works of NIST are not subject to copyright protection in the United States and are considered to be in the public domain. Thus, the software may be freely reproduced and used. Please explicitly acknowledge the National Institute of Standards and Technology as the source of the software.

This software is released by NIST as a service and is expressly provided "AS IS." NIST MAKES NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT AND DATA ACCURACY. NIST DOES NOT REPRESENT OR WARRANT THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE, OR THAT ANY DEFECTS WILL BE CORRECTED.

NIST does not warrant or make any representations regarding the use of the software or the results thereof, including but not limited to the correctness, accuracy, reliability or usefulness of the software. By using this software or by incorporating this software into another product, you agree to hold harmless the United States Government for any and all damages or liabilities that arise out of such use.

Certain trade names and company products are mentioned in the text or identified. In no case does such identification imply recommendation or endorsement by the National Institute of Standards and Technology, nor does it imply that the products are necessarily the best available for the purpose. With the exception of material marked as copyrighted, information presented in this document is considered public information and may be distributed or copied. Use of appropriate byline/photo/image credits is requested.

This work was funded by NIST/ITL CSD and the NIST/ITL Identity Management Systems Program. It was funded in part by the National Institute of Justice.

# Contents

<b>1. Introduction</b> .....	4
<b>1.1. Location of the Sample Data</b> .....	4
<b>1.2. Location of the Log and Report Files</b> .....	4
<b>2. CTS Welcome Window</b> .....	4
<b>3. Testing Binary Files</b> .....	5
<b>4. Testing and Editing a Manifest</b> .....	8

# **NIST/ITL Conformance Test Suite for Patron Format A (PFA) Data Structures Specified in ANSI INCITS 398-2008, Common Biometric Exchange Formats Framework (CBEFF)**

**Beta Implementation V1.1  
August 21, 2008**

## **Quick Start Guide**

### **1. Introduction**

The objective of this document is to get the CTS operator familiarized with key features in a short time. The User Guide, which is a separate document, provides detailed descriptions of the CTS and its operating procedures.

#### **1.1. Location of the Sample Data**

The sample files are installed where all computer users can access them.

In Microsoft Windows XP Professional the default location is:

**C:\Documents and Settings\All Users\Shared Documents\CBEFF CTS Beta 1.1**

In Microsoft Windows Vista Ultimate the default location is

**C:\Users\Public\Documents\CBEFF CTS Beta 1.1**

#### **1.2. Location of the Log and Report Files**

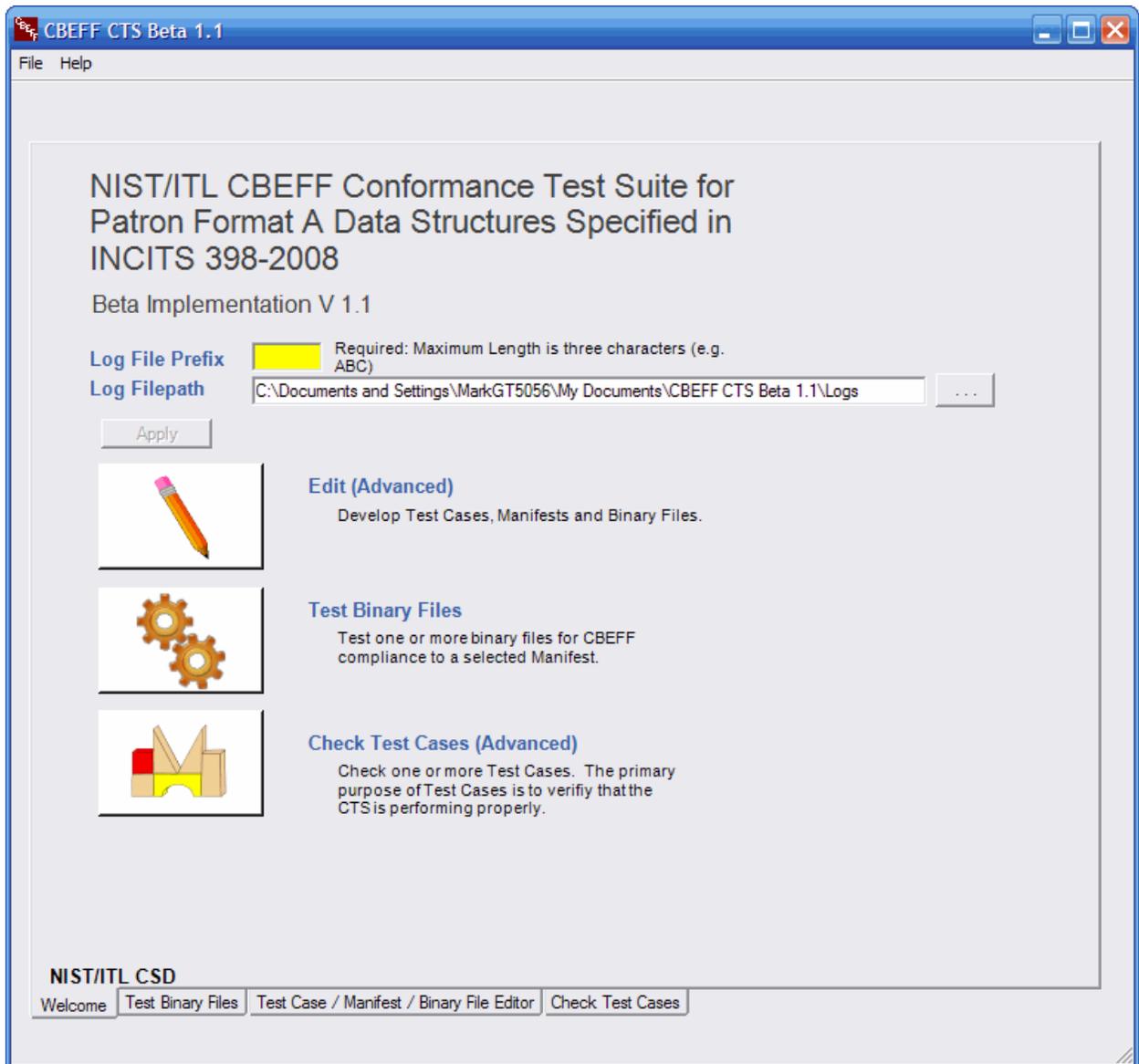
By default Log and Report Files are saved to the folder

**[My Documents]\CBEFF CTS Beta 1.1\Logs**

The user can change the folder name on the Welcome Window.

### **2. CTS Welcome Window**

Start the CBEFF PFA CTS. The welcome window is shown.

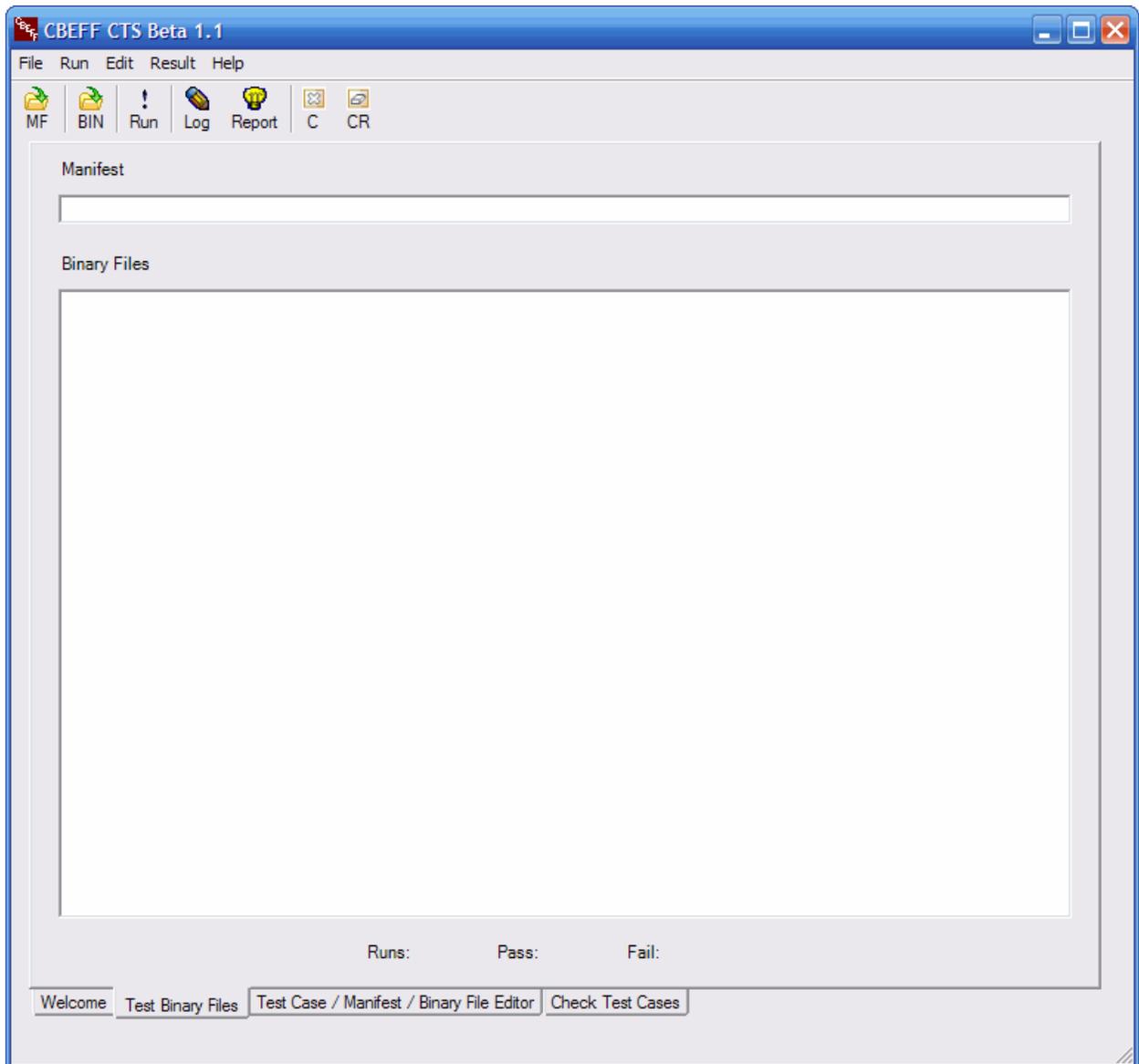


Before selecting any testing/editing option, enter at least one character in the Log File Prefix box and click the **Apply** button. The prefix is the first 1-3 characters in the Test Logs and Test Reports generated when a test is run.

### 3. Testing Binary Files

Binary files are tested against a Manifest. The Manifest is a file that defines the format to which the binary files must conform. It contains a list of the Patron Format field names, their length in bytes and sample valid binary data (in hexadecimal notation) for each field.

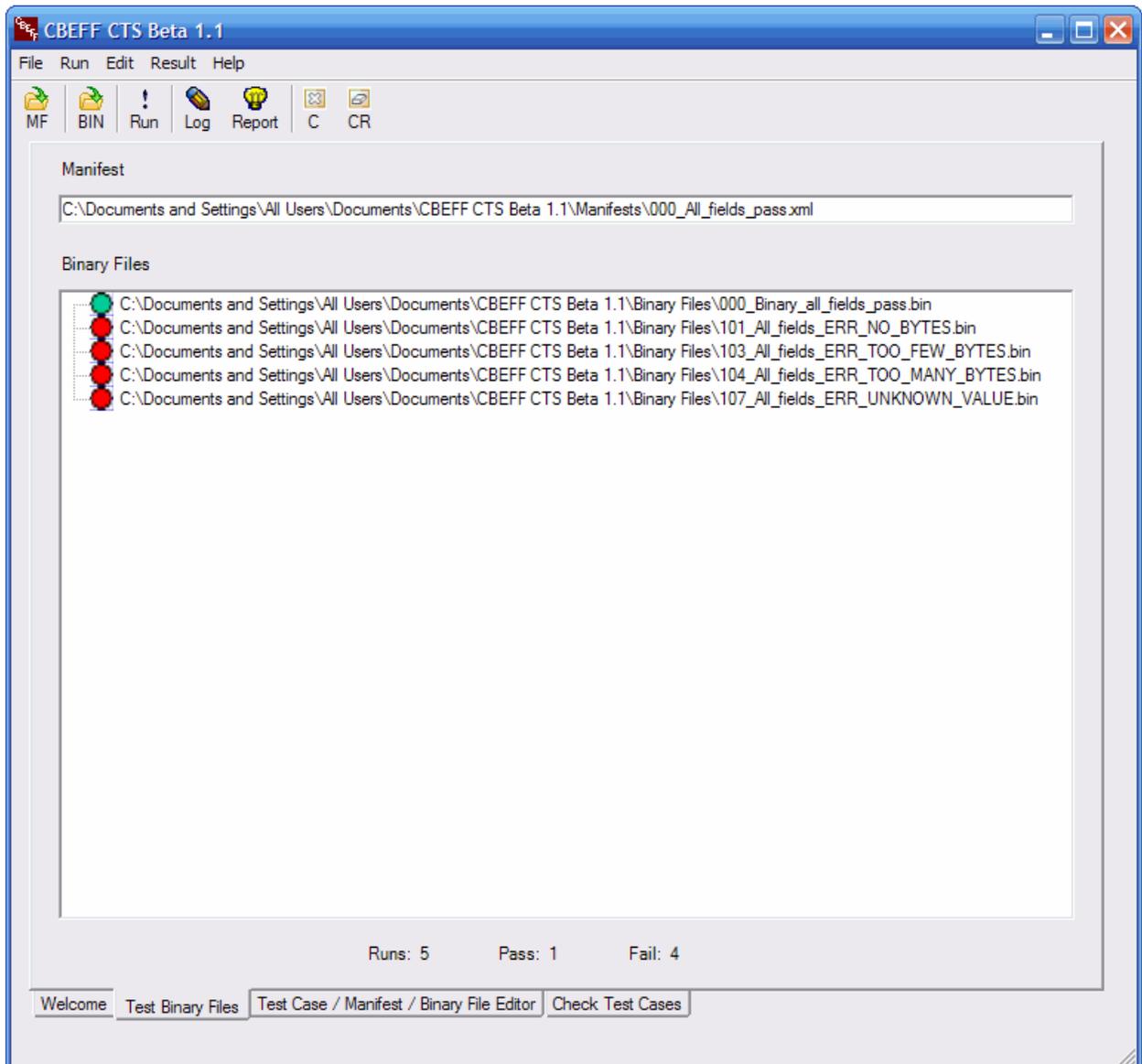
1. After entering the Log File Prefix, click on the “Test Binary Files” button (or the “Test Binary Files” tab). The window below opens.



2. Click the **MF** icon in the Icon bar and choose the Manifest “000\_All\_fields\_pass.xml” from the Manifest folder of the sample data folder. (See Section 1.1 for the location of the sample files.) This Manifest includes a description of all the fields specified in Patron Format A. The Manifest file name will be displayed in the Manifest panel.
3. Click the **BIN** icon in the Icon bar to select a set of binary files from the Binary Files folder. Include in the selection the file “000\_All\_fields\_pass.bin”
4. The binary file name(s) will be displayed in the Binary Files window. Note that the test status indicators are yellow.
5. Test these files by clicking the **! Run** icon in the Icon bar.

6. Note the test results. One of the following Status Indicators will be displayed for each binary file.

- Yellow: The result is undecided.
- Green: The test passed.
- Red: The test failed.



7) Click the **Report** icon in the Icon bar to display the Test Report.

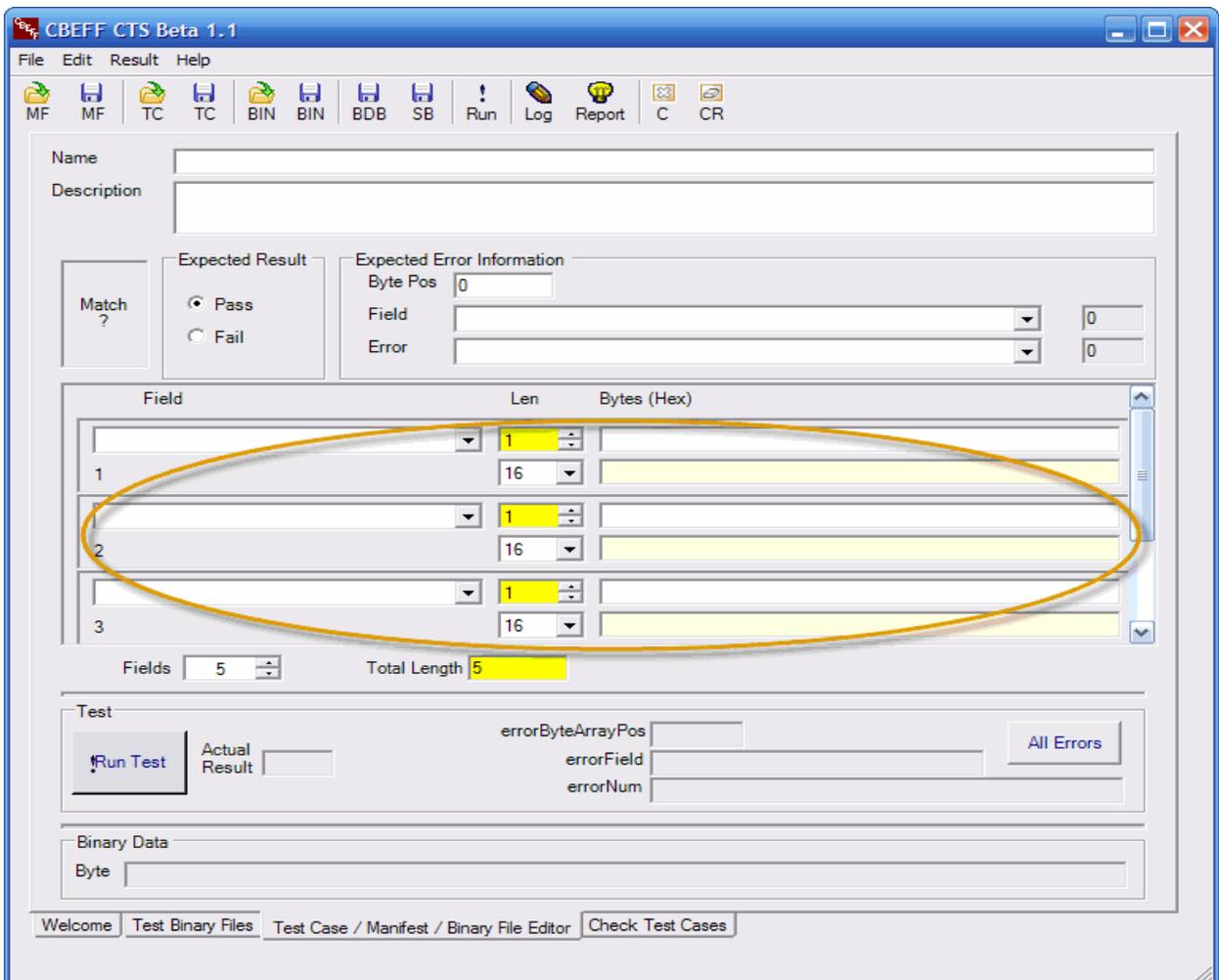
8) Double-click a binary file to open the binary file and the Manifest in the “Test Case/Manifest/Binary File Editor” window. This can be done for editing and analysis of the Binary file. A detailed step-by-step procedure on how to develop/edit a binary file is in the User Guide (see Section 3.2.9.2).

#### 4. Testing and Editing a Manifest

Manifests and Binary files can be examined, edited and developed in the “Test Case/Manifest/Binary File Editor” window. This window can also be used to test or develop Test Cases. The purpose of these Test Cases is explained in the Overview document. How to test or develop a Test Case is detailed in the User Guide (see Section 3.2.9.3).

A Manifest can be examined or developed using the following procedure:

1. In the Welcome window click on the “Edit” button to open the editor window (this window can also be opened by clicking the “Test Case/Manifest/Binary File Editor” tab at the bottom of the window). The window below opens.



2. If the Editor window contains data, click on the **C** icon in the Icon bar to clear the window.

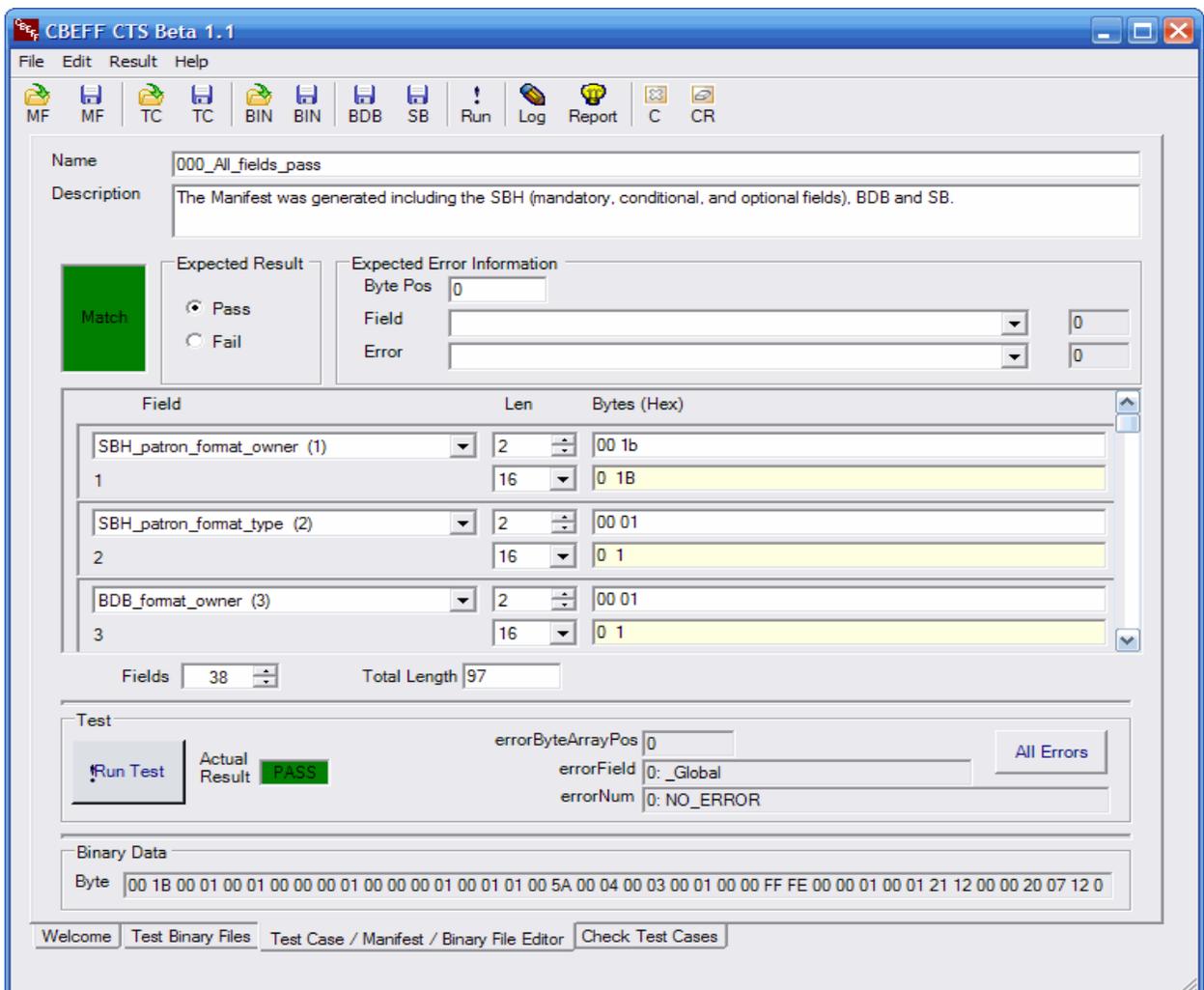
3. From the **File** menu select **Open Manifest...** Select the Manifest “000\_All\_fields\_pass.xml” from the Manifest folder.

3.a The Name and Description panel displays the Manifest name and description.

3.b The Expected Result panel displays Expected Result: “Pass” (a manifest should always Pass before testing binary files.)

3.c The Fields and Binary Data panel (see window below) displays in the “Field” dropdown boxes the PFA field names included in the Manifest, the length of each field in the “Len” fields, and the Binary data for each field in the “Bytes (Hex)” fields.

4. Click the **! Run** icon in the Icon bar.



5. As shown in the screenshot above the test passes because the Manifest is properly formatted and contains conforming binary data for all ANSI INCITS 398:2008 fields.
6. Click the Report icon in the Icon bar to display the Test Report (HTML format). Click the Log icon in the Icon bar to display the Test Log (XML format).
7. The user is encouraged to make changes in the Manifest (e.g., change the length of one of the fields) and run the tests to observe the test results and error messages derived from each change.
8. Click the **C** icon in the Icon bar to clear the window.
9. In the Fields and Binary Data panel, using the dropdown window which displays the PFA fields, select field number 1, "SBH\_patron-format\_owner (1)". Enter a value "2" in the Len field and the value "00 1b" in the Bytes (Hex) field. The "Fields" value should be "1".
10. Run the test.
11. Observe the test result. The test fails and the error indicates ERR\_PAIR-SBH\_PATRON\_FT\_TYPE (the Patron Format Type is missing). Other mandatory fields are also missing – see below).
12. Format Owner Type can be inserted by increasing the number of fields in the "Fields" drop down window, following the process indicated in "9" above and selecting:
  - 12.1 "SBH\_patron-format\_type (2)"
  - 12.2 A length of "2" in the "Len" field
  - 12.3 The value "00 01", for example, in the "Bytes (Hex)" field.
13. Run another test.
14. The test will still "fail" because other mandatory fields are missing from the Manifest as shown in the "error" display.

Step-by-step instructions on how to develop and test Manifests, Binary files and also Test Cases are included in the User Guide. The Guide includes detailed descriptions of all the CTS windows, operating procedures, and samples of Test Logs and Test Reports. A list of errors (number/description) is also included.