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## CaptionMergePlus V1.00 User Manual

Rev. 9/9/07

### Introduction

CaptionMergePlus was designed primarily for post production houses to facilitate encoding multiple languages of closed captioning using caption encoders such as the ULTECH DV2000/ITVinjector and the Link Electronics HDE-3000. The following example scenario illustrates the main problem that CaptionMergePlus was designed to solve:

You need to encode English and Spanish captions into a program, but you have two caption files: an English CC1 file from one caption author, and a Spanish CC3 file from a different caption author.

Sometimes it's possible to first encode the English captions to an intermediate tape, and then run a second pass to encode the Spanish captions to the final tape. But this is time consuming, and there are several common problems that can prevent this from being successful.

CaptionMergePlus solves this problem by reading both caption files and producing a "composite" ULT file containing both the English and the Spanish captions. You can encode this file in one pass, and both languages will be encoded simultaneously.

Additionally, you can instruct CaptionMergePlus to put the Spanish captions on both CC2 and CC3 in the output file.

And, CaptionMergePlus can convert CAP and TDS caption files to ULT files.

### Features

- Merge an English caption file and a Spanish caption file into one "composite" ULT file containing both the English and the Spanish Captions.
- Encode the Spanish captions on CC2, CC3, or both CC2 and CC3.
- Convert TDS and CAP files to ULT files.
- Diagnose problematic TDS, CAP, and ULT files.
- Convert captions to different services (CC1, CC2, CC3, CC4).
- 30 day fully functional free trial period to evaluate the software. It can be registered at any time by obtaining an activation code from Stone Engineering Service, LLC.

### Supported caption file formats

1. ULTECH "ULT" caption files (\*.ult or \*.uld).
2. Cheetah CAPticator Offline files (\*.cap) versions 2.0, 2.1, and 2.2.
3. The Caption Center Timecoded Data Services (TDS) files (\*.tds).
4. National Captioning Institute CAP files (\*.cap).

## Installing the Software

CaptionMergePlus is a standard Windows program that runs under any version of Microsoft Windows (98/NT/2000/XP/Vista).

The software can be downloaded from [www.StoneEngineeringService.com](http://www.StoneEngineeringService.com). The file that gets downloaded is a standard self-extracting file (example: "CaptionMergePlusV100.exe").

After you download the software, create a folder to unzip it into. Then double click the downloaded file. An unzipping dialog will pop up. Browse for the folder you just created, and then click "UnZip". When it finishes unzipping, click "Close".

Now go to the folder you created and execute the file "Setup.exe" and follow the on-screen instructions.

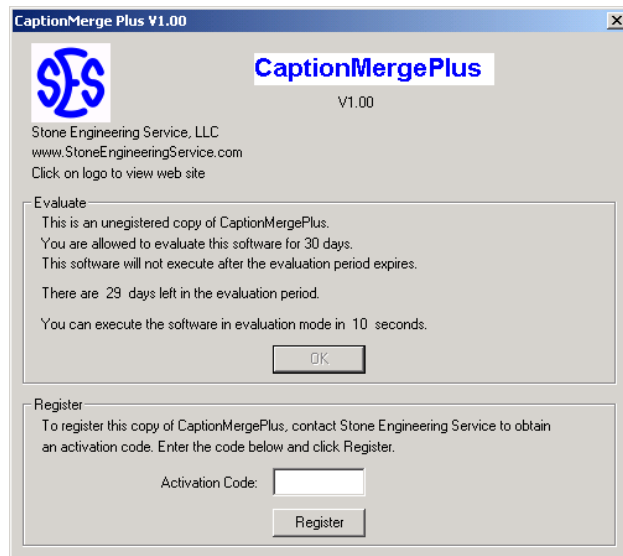
Two shortcuts will be added to your start menu: one to execute the program and one to view the user manual (this document).

## Uninstalling the Software

To completely uninstall the software, open control panel and select "Add/Remove Programs". Select "CaptionMergePlus" and then click "Remove".

## Evaluation and Registration

There is a 30 day free trial period to evaluate the software. During the trial period, the software is fully functional, but the following dialog will appear when you run the software.



You have to wait 10 seconds, and then you can click "OK" to run the software in evaluation mode. When running in evaluation mode, the software is fully functional. You can use the software in evaluation mode for 30 days.

The registration procedure is very simple. Just contact Stone Engineering Service for an activation code, enter the code, and click "Register". After you enter the activation code, this dialog will no longer appear.

## Information about Caption Files

A caption file contains all the caption information for one program (a film, a TV show episode, etc.). They contain caption text and positioning info, and timing info (SMPTE time codes). There are several different standard caption file formats, each with its own rules and syntax.

Certain caption files may contain multiple languages. When a caption file containing multiple languages is encoded using an ULTECH DV2000/ITVinjector or a Link Electronics HDE-3000, these encoders will encode all of the languages simultaneously.

Each language uses one caption “service”. There are four captioning “services” defined in the captioning specification (EIA-608-B).

CC1 = captioning channel 1 (field 1, channel 1) = primary language

CC2 = captioning channel 2 (field 1, channel 2) = non-synchronous additional language

CC3 = captioning channel 3 (field 2, channel 1) = secondary language

CC4 = captioning channel 4 (field 2, channel 2) = non-synchronous additional language

A caption file can contain one or more of these “services”. The following table indicates which services each caption file format supported by CaptionMergePlus may contain.

<u>Format</u>	<u>CC1</u>	<u>CC2</u>	<u>CC3</u>	<u>CC4</u>
ULTECH	yes	yes	yes	yes
Cheetah CAP	yes	yes	yes	yes
TDS	yes	yes	yes	yes
NCI CAP	yes	no	no	no

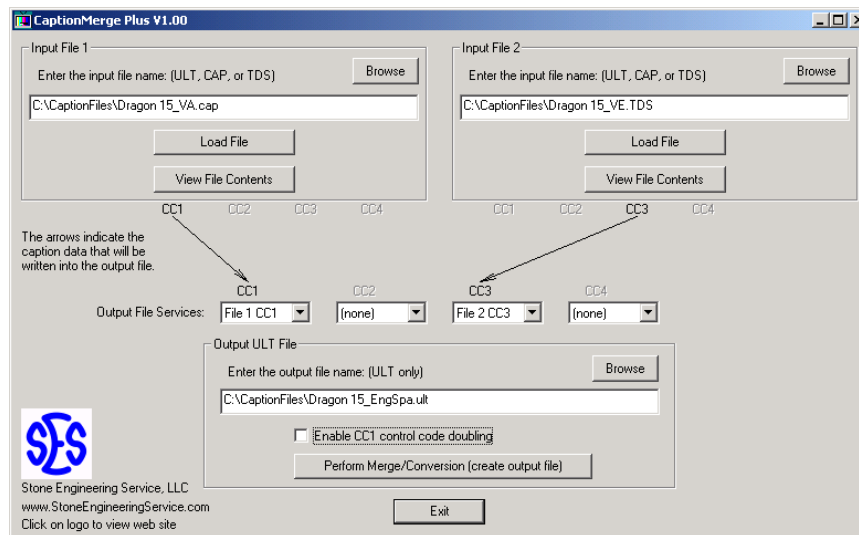
Typically, English captions are encoded on the CC1 service so that TV’s configured to display “C1” closed captions will display English captions.

Spanish captions are typically encoded on the CC2 or the CC3 service. The CC2 service is defined as a “non-synchronous” service by EIA-608-B. This is because CC1 and CC2 are multiplexed into field 1, and CC1 has priority over CC2, so the display timing of CC2 captions is unpredictable. The CC3 service is encoded into field 2, so the caption timing is predictable (just like CC1).

For better caption timing, it is preferable to encode the Spanish captions on the CC3 service, but some TV’s cannot display CC3 captions (they only allow you to select “C1” or “C2” captions), so Spanish captions are encoded on CC2 most of the time.

## Using the Software

The following illustrates the main window of the software. In this example screen snapshot, two input files have been selected, and an output file name has been entered.



Operating the software consists of the following basic steps. Note that, depending on the operation that you are performing, not all of these steps are required. All optional steps are included here for completeness.

1. Select Input File 1 by typing in the file name or using the “Browse” button.
2. Click Input File 1 “Load File” to read the file into memory.
3. Note the services contained in this file. At the bottom of the Input File 1 section there are four indicators (CC1, CC2, CC3, CC4) that show you which services this file contains.
4. Inspect the contents of this file by clicking “View File Contents”. This will pop up a window that displays the contents of the file.
5. Optional: Repeat steps 1 – 4 for Input File 2.
6. Select the caption data that you want the output file to contain by using the “Output File Services” drop-down lists. In the above example, the output file will contain the CC1 captions from Input File 1 and the CC3 captions from Input File 2.
7. Inspect the arrows to verify what the output file will contain. There must be an arrow for each service that you want the output file to contain. The software will automatically convert the captions to the proper services as necessary.
8. Enter the file name for the output ULT file by typing it in or using the “Browse” button.
9. Optional: If you want the encoder to double the CC1 control codes when it encodes the output file, check the “Enable CC1 control code doubling” checkbox.
10. Click “Perform Merge / Conversion” to create the specified output file.

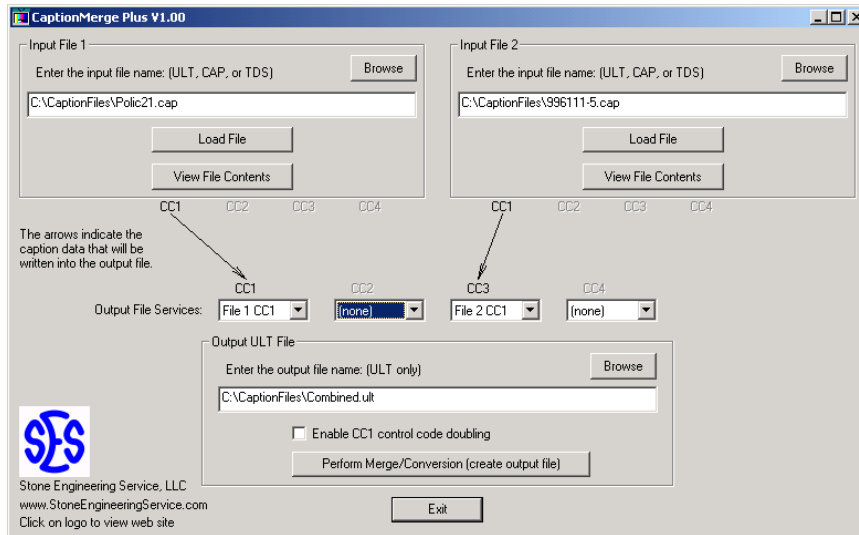
The following sections of this manual use common examples to illustrate the different ways to use the software to solve different types of problems.

### Example 1: Diagnose a problematic caption file

Sometimes mistakes are made during authoring, or caption files get corrupted in transport. When you try to run a problematic file, the encoder will typically just report “syntax error”.

CaptionMergePlus can be used to diagnose problematic CAP, TDS, or ULT files. The software is designed to provide detailed error messages for any problems it finds when loading a file. The types of errors that can be detected include syntax errors, bad time code values, etc. These error messages can be used to troubleshoot many common caption file problems.

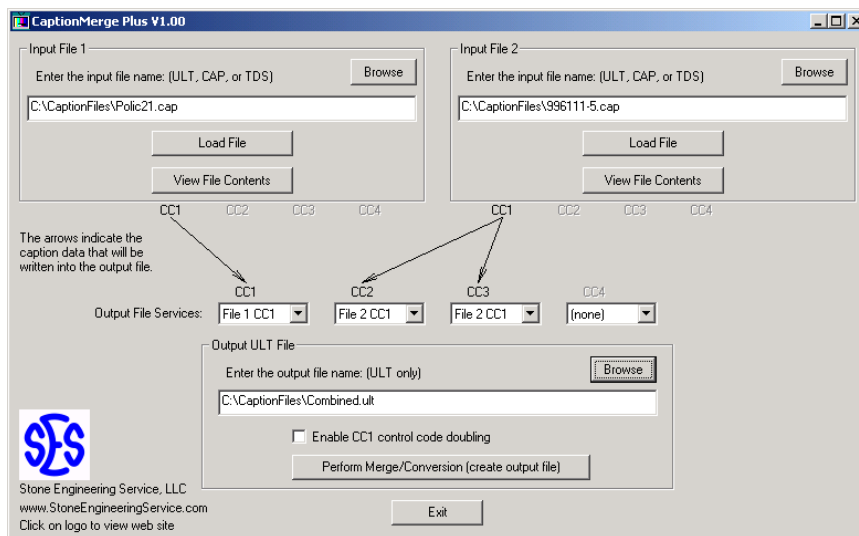
## Example 2: Merge English CC1 file and Spanish CC1 file



In this example, Input File 1 contains CC1 English captions and Input File 2 contains CC1 Spanish captions. This is a common scenario because many caption authoring systems can only reliably output CC1 caption files (they have trouble outputting valid CC2 or CC3 caption files).

CaptionMergePlus will copy the CC1 English captions from Input File 1 into the output file. Then it will convert the CC1 Spanish captions from Input File 2 to CC3, and copy the CC3 Spanish captions into the output file.

## Example 3: Merge English CC1 file and Spanish CC1 file, and put the Spanish on CC2 and CC3



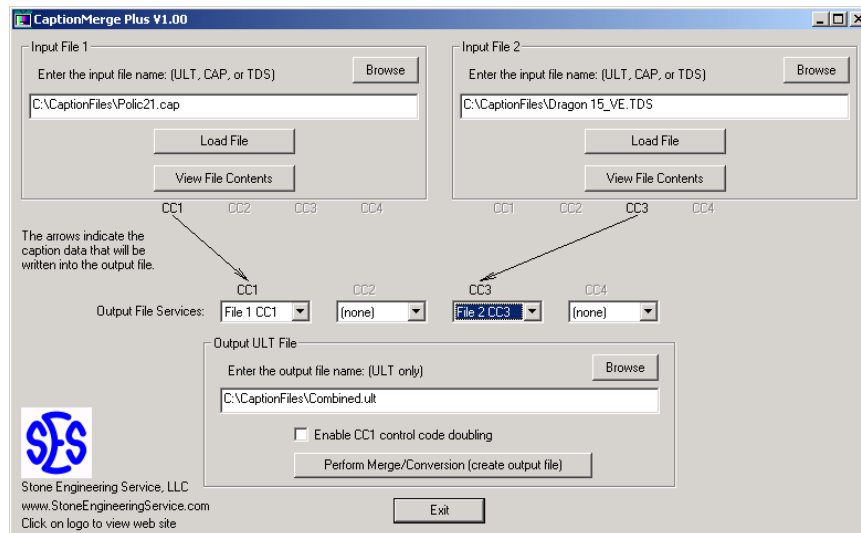
In this example, Input File 1 contains CC1 English captions and Input File 2 contains CC1 Spanish captions. This is a common scenario because many caption authoring systems can only reliably output CC1 caption files (they have trouble outputting valid CC2 or CC3 caption files).

This example also shows how to put the Spanish captions on both the CC2 and the CC3 services in the output file.

CaptionMergePlus will copy the CC1 English captions from Input File 1 into the output file. Then it will convert the CC1 Spanish captions from Input File 2 to CC2, and copy the CC2 Spanish captions into

the output file. Then it will also convert the CC1 Spanish captions from Input File 2 to CC3, and copy the CC3 Spanish captions into the output file.

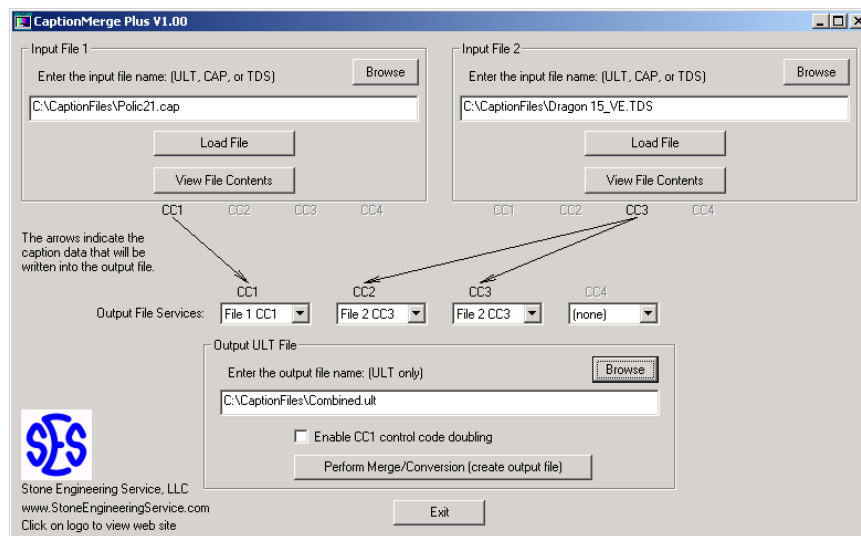
#### Example 4: Merge English CC1 file and Spanish CC3 file



In this example, Input File 1 contains CC1 English captions and Input File 2 contains CC3 Spanish captions.

CaptionMergePlus will copy the CC1 English captions from Input File 1 into the output file, and it will copy the CC3 Spanish captions from Input File 2 into the output file.

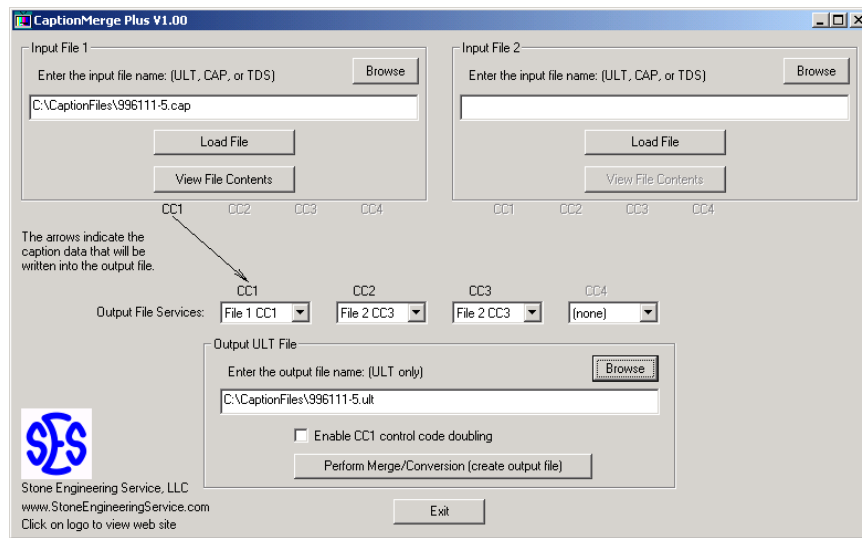
#### Example 5: Merge English CC1 file and Spanish CC3 file, and put the Spanish on CC2 and CC3



In this example, Input File 1 contains CC1 English captions and Input File 2 contains CC3 Spanish captions.

CaptionMergePlus will copy the CC1 English captions from Input File 1 into the output file, and it will copy the CC3 Spanish captions from Input File 2 into the output file. Then it will convert the Spanish CC3 captions from Input File 2 to CC2, and copy the CC2 Spanish captions into the output file.

### Example 6: Convert a CAP file to ULT



In this example, Input File 1 contains CC1 English captions.  
CaptionMergePlus will copy the CC1 English captions from Input File 1 into the output file.

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