

ERNST

Environment for Redaction of News Sub-Titles

Introduction

ERNST (Environment for Redaction of News Sub-Titles) is a software intended for preparation, airing and sequencing subtitles for news or any program with similar requirements.

The main features of ERNST are the followings:

- Creation, importation and edition of text files
- Importation from various source (serial port or network)
- Automatic formatting
- Manual, automatic, or semi-automatic encoding
- Encoding from keyboard, file or a sequence of files
- Creation, importation and edition of sequences

Installation

The installation procedure for ERNST is automatic. Launch setup.exe from the diskette and follow the instructions.

Start up

Start up parameters

/i=file name

The */i* option lets the user specify a configuration parameter file different from the default file (« ernst.ini » located in the Windows directory).

/u=user name

The */u* option lets the user specify a user name and a password.

/p=password

The */p* option can be used along with the */u* option to enter the password automatically. Using this command is not recommended unless the computer is accessible only to authorized personnel, as the password will become visible within the command line.

Windows

The ERNST program comprises three main windows: the editor, encoder and sequencer.

Editor

The editor window functions as a standard text editor, with the addition of some functions that are specific to subtitle preparation.

Encoder

The encoder window allows the user control over the way subtitles are broadcast. The encoder includes the following functions:

- Source selection: direct, selected file or current sequence

- Channel and broadcast mode selection (pop on, line roll or text)

- Select default attributes

- Navigation within current file (beginning, end, stop, start)

- Speed up/slow down

- Pass/block incoming data (line 21)

Sequencer

The sequencer allows the creation, importing and modification of a document sequence to broadcast.

Commands (menus and buttons)

Main window menu (always activated)

File

Opens the Editor's File menu. This menu is accessible at all times.

File|Open

Opens a dialog box that lets the user select a file to be edited.

File|Save

Saves the file being edited.

File|Save As...

Saves the file being edited under a different name.

File|Close

Closes the file being edited. If applicable, the program will enquire whether changes should be saved.

File|Print...

Print the file being edited. The command opens the "print" dialog box.

File|Transmit

Allows the transmission of one or several files to a remote computer either by serial port or TCP/IP network.

File|Receive

Allows the reception of one or several files from a remote computer either by serial port or TCP/IP network.

File|Exit

Shuts down program.

Sequence

Opens sequence file manipulation sub-menu.

Sequence|Create...

Creates a new sequence.

Sequence|Open...

Opens an existing sequence.

Sequence|Save

Saves the current sequence.

Sequence|Save As...

Saves the current sequence under a different name.

Sequence|Close

Closes the current sequence.

Encoder

Opens the Encoder command menu.

Encoder|Direct

Activates direct entry of text in Encoder window.

Encoder|File...

Opens the file selection dialog box and places the selected file in encoding.

Encoder|Sequence

Selects the sequencer as source of encoding and opens the first file to be encoded.

Encoder|Erase

Immediately erases display.

Encoder|Beginning

Takes the Encoder back to the beginning of the document.

Encoder|Stop

Immediately terminates encoding of the current document.

Encoder|Pause

Temporarily pauses encoding.

Encoder|Play

Immediately sends a subtitle (or line) and subsequent subtitles at a specified pace.

Encoder|Slow down

Reduces encoding speed.

Encoder|Accelerate

Accelerates encoding speed.

Encoder|Transparent

When activated, this command lets all line 21 subtitles of the source go through.

Encoder|Reset

Resets the Encoder. This command takes the Encoder back to a previous state. The mode to which the Encoder will revert depends on the position of the "transparent" button.

Options

Opens the options sub-menu.

Options|Configuration...

Opens the configuration dialog box. This function is accessible to authorized personnel only.

Options|Users...

This command opens a dialog box that lets the user define, modify or remove a user and that user's password or permissions.

Options|Parts...

This function is useful for development purposes only.

Options|Save layout

This command memorizes the size and placement of windows, which can then be recalled with the Window|Recall command.

Window

Opens the window manipulation sub-menu.

Window|Editor

Activates the editor window.

Window|Sequencer

Activates the sequencer window.

Window |Encoder

Activates the encoder window.

Window |Recall layout

Restores previously saved layout (Options|Save layout).

Help

Opens the help sub-menu.

Help|About...

This command displays a dialog box showing information about the program. Clicking on the picture will display information about painter Max Ernst, after whom the program was named.

Edit window menu

The following commands are accessible only when the editor window is activated.

Edit

Opens the edit menu.

Edit|Cancel

Cancels the last change.

Editer|Cut

Cuts selected text to clipboard.

Edit|Copy

Copies selected text to clipboard.

Edit|Paste

Pastes clipboard contents to selected text.

Edit|Erase

Erases selected text.

Edit|Select All

Selects entire document.

Edit|Clean Up

This function eliminates all empty lines from document.

Search

Opens the search and change sub-menu.

Search|Find...

This function opens the search dialog box.

Search|Replace...

This function opens the replace dialog box.

Search|Go To Line...

This function opens the dialog box allowing to reach a line by its number.

Sequencer commands

The following commands are accessible only when the sequencer window is activated.

Modify

Opens the sequence edit sub-menu.

Modify|Add...

Opens the file selection box to add a document to the end of the sequencer list.

Modify|Insert...

Opens the file selection box to add a document at the position of the selected sequencer document.

Modify|Delete

Deletes the selected document from the sequencer's list.

Modify|Move Up

Moves the selected document further up the list.

Modify|Move Down

Moves the selected document further down the list.

Encoder commands

The following commands are accessible only when the encoder window is activated.

Configuration

Opens the encoder configuration sub-menu.

Configuration|Channel

Opens the broadcast channel selection sub-menu.

Configuration|Channel|1

Selects channel 1 for broadcast.

Configuration|Channel|2

Selects channel 2 for broadcast.

Configuration|Mode

Opens the broadcast mode selection sub-menu.

Configuration|Mode|Stamp

Selects "Stamp" mode. The subtitle is hidden during preparation and displayed all at once.

Configuration|Mode|Roll, 2 Lines

Selects "Roll" mode, with 2-line display. Text rolls up as new text appears at the bottom.

Configuration|Mode|Roll, 3 Lines

Selects "Roll" mode, with 3-line display.

Configuration|Mode|Roll, 4 Lines

Selects "Roll" mode, with 4-line display.

Configuration|Mode|Text

Selects "Text" mode. The text is displayed over 8 lines in roll mode.

Attributes

Opens the display attribute specification menu.

Attributes|Position...

Opens a dialog box that lets the user specify the vertical placement of the text.

Attributes|White

Selects white (monochromatic) as text color.

Attributes|Green

Selects green as text color.

Attributes|Blue

Selects blue as text color.

Attributes|Cyan

Selects cyan as text color.

Attributes|Red

Selects red as text color.

Attributes|Yellow

Selects yellow as text color.

Attributes|Magenta

Selects magenta as text color.

Attributes|Italics

Selects display of text in italics (monochromatic only)

Attributes|Retrait...

Opens a dialog box that lets the user specify left margin.

Attributes|Underline

Selects the underline attribute.

Configuration

Introduction

The options dialog box is only accessible to authorized personnel, as determined by user profile. This box comprises several pages.

Preferences

The preferences page allows the user to specify the language of operation, comment and command indicators, tabulation width, default channel and broadcast mode.

Appearances

The appearances page allows the user to specify the font, the attributes and the colors of the editor, encoder and sequencer windows.

Files and folders

The files and folders page allows the user to specify the file types used by default, and their location.

Communication

The communication page allows the user to specify which communications port will be used to communicate with the line 21 encoder, as well as the communication parameters to be utilized. Which values to use depends on the configuration of the encoder.

Shortcuts

This page lets the user specify the key combinations that will give immediate access to various functions.

Substitutions

This page allows the user to specify which replacements will be performed automatically on imported texts. This option allows the replacement of characters that are not available to line 21 decoders by character sequences that are semantic equivalents. The substitutions are made at the time of the reading of the file and at the entry of the characters during editing.

Conversions

This page allows the user to specify how each character will be translated so that the line 21 encoder can correctly identify it.

The conversion only occurs at the moment of transmission to the encoder.

File exchange

This page allows the user to specify the parameters of the communications interface used for file exchange. File exchange can be done through serial link (COM1-4) or TCP/IP network.

To use the TCP/IP network, Winsock must be installed and both computers must have a permanent IP address. The specified IP address is that of the remote computer.

ernst.ini file

The ernst.ini file (or the configuration file specified in the command line) memorizes the options selected in the configuration dialog box. It also holds the translations and definitions of certain buttons.

Timecode Option

Introduction

The Timecode option allows automatic encoding of subtitle based on SMPTE time code. With this technique, it is possible to quickly prepare a document and achieve better voice to subtitle synchronism.

Description

To use the Timecode option, a timecode source is required. The μ CCI is an ideal device for this purpose, since it features, in addition to a close-caption encoder, an LTC/VITC timecode reader. The timecode is sent to the computer via the serial port.

The Timecode Option appears as an additional menu and tool bar in the encoder window. The toolbar has two timecode displays, one for the current time, the other for the next event time. The additional menu items and corresponding tools provide the following functions:

Menus

Timecode |Manual

This command put the encoder in manual mode, disabling the timecode option.

Timecode |Sync

This command enables the synchronization mode, allowing timecode insertion.

Timecode |View

This command enables the view mode. This is the automatic encoding mode.

Timecode |Insert timecode

This command, enabled only in synchronization mode, insert the current timecode at the insertion point. The insertion point then moves to the beginning of the following paragraph.

Timecode|Save file

This command saves the file with the timecodes.

Operation (timecode option)

The production of a document for automatic encoding starts from an existing text document, and proceeds as follows:

- open the document in the encoder
- place cursor at the beginning of the first paragraph to be encoded
- start the VCR (you should see the timecode change)
- when display time comes, click on "Insert timecode"
- repeat "Insert timecode" for each subtitle

At any time, you can stop the VCR, erase a timecode and restart. You can place the cursor at an intermediate point to refine the synchronization. You can manually edit the timecode, although it is not recommended, an erroneous timecode could freeze subtitle encoding.

To encode, select the View mode. The cursor will automatically move to the first timed subtitle, which will be encoded when the timecode reaches that point. The program automatically calculates the encoding time of each line.

Character conversion table (EIA 608) Preliminary

| | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|----|-------------|--------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------------|
| | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
| 20 | 32: | 33: ! | 34: " | 35: # | 36: \$ | 37: % | 38: & | 39: ' |
| 28 | 40: (| 41:) | 42: * 20 12 28 | 43: + | 44: , | 45: - | 46: . | 47: / |
| 30 | 48: 0 | 49: 1 | 50: 2 | 51: 3 | 52: 4 | 53: 5 | 54: 6 | 55: 7 |
| 38 | 56: 8 | 57: 9 | 58: : | 59: ; | 60: < | 61: = | 62: > | 63: ? |
| 40 | 64: @ | 65: A | 66: B | 67: C | 68: D | 69: E | 70: F | 71: G |
| 48 | 72: H | 73: I | 74: J | 75: K | 76: L | 77: M | 78: N | 79: O |
| 50 | 80: P | 81: Q | 82: R | 83: S | 84: T | 85: U | 86: V | 87: W |
| 58 | 88: X | 89: Y | 90: Z | 91: [| 92: \ 7C 13 2B | 93:] | 94: ^ 7F 13 2C | 95: _ 7F 13 2D |
| 60 | 96: ` 7F | 97: a | 98: b | 99: c | 100: d | 101: e | 102: f | 103: g |
| 68 | 104: h | 105: i | 106: j | 107: k | 108: l | 109: m | 110: n | 111: o |
| 70 | 112: p | 113: q | 114: r | 115: s | 116: t | 117: u | 118: v | 119: w |
| 78 | 120: x | 121: y | 122: z | 123: { 28 13 29 | 124: 2F 13 2E | 125: } 29 13 2A | 126: ~ 2D 13 2F | 127: • |

| | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|----|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|--------------------|
| | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
| 80 | 128: € | 129: • 11 37 | 130: , 2C | 131: f | 132: „ | 133: ... 2E 2E 2E | 134: † | 135: ‡ |
| 88 | 136: ^ | 137: ‰ | 138: Š 53 | 139: < | 140: Œ 4F 45 | 141: • | 142: Ž | 143: • |
| 90 | 144: • | 145: ‘ 12 26 | 146: ’ 27 | 147: “ 22 12 2E | 148: ” 22 12 2F | 149: • 2E 12 2D | 150: – 2D | 151: – 2D 12 2A |
| 98 | 152: ~ | 153: ™ 11 34 | 154: š 53 | 155: > | 156: œ 69 65 | 157: • | 158: ž | 159: Ÿ 59 |
| A0 | 160: | 161: j 69 12 27 | 162: ċ 11 35 | 163: £ 11 36 | 164: ₪ 36 13 36 | 165: ¥ 59 13 35 | 166: 7C 13 2E | 167: § |
| A8 | 168: ¨ | 169: © 63 12 2B | 170: ª | 171: « 22 12 3E | 172: ¬ | 173: - | 174: ® 11 30 | 175: ¯ |
| B0 | 176: ° 11 31 | 177: ± | 178: º | 179: ³ | 180: ´ | 181: µ | 182: ¶ | 183: · |
| B8 | 184: ¸ | 185: ¹ | 186: º | 187: » 22 12 3F | 188: ¼ | 189: ½ 11 32 | 190: ¾ | 191: ¿ 11 33 |
| C0 | 192: À 41 12 30 | 193: Á 41 12 20 | 194: Â 41 12 31 | 195: Ã 41 13 20 | 196: Ä 41 13 30 | 197: Å 41 13 38 | 198: Æ 41 45 | 199: Ç 43 12 32 |
| C8 | 200: È 45 12 33 | 201: É 45 12 21 | 202: Ê 45 12 34 | 203: Ë 45 12 35 | 204: Ì 49 13 23 | 205: Í 49 13 22 | 206: Î 49 12 37 | 207: Ï 49 12 38 |
| D0 | 208: Ð | 209: Ñ 7D | 210: Ò 4F 13 25 | 211: Ó 4F 12 22 | 212: Ô 4F 12 3A | 213: Õ 4F 13 27 | 214: Ö 4F 13 32 | 215: × |
| D8 | 216: Ø 4F 13 3A | 217: Ù 55 12 3B | 218: Ú 55 12 23 | 219: Û 55 12 3D | 220: Ü 55 12 24 | 221: Ý 59 | 222: Þ | 223: ß 42 13 34 |
| E0 | 224: à 11 38 | 225: á 2A | 226: â 11 3B | 227: ã 61 13 21 | 228: ä 61 13 31 | 229: å 61 13 39 | 230: æ 61 65 | 231: ç 7B |
| E8 | 232: è 11 3A | 233: é 5C | 234: ê 11 3C | 235: ë 65 12 36 | 236: ì 69 13 24 | 237: í 5E | 238: î 11 3D | 239: ï 69 12 39 |
| F0 | 240: ð | 241: ñ 7E | 242: ò 6F 13 26 | 243: ó 5F | 244: ô 11 3E | 245: õ 69 13 28 | 246: ö 6F 13 33 | 247: ÷ 7C |
| F8 | 248: ø 6F 13 3B | 249: ù 75 12 3C | 250: ú 60 | 251: û 11 3F | 252: ü 75 12 25 | 253: ý 79 | 254: þ | 255: ÿ 79 |

