MetaCast 2

Instruction Manual

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REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	Metacast 1 Version	Feb 00
2.0	MetaCast 2 Version	Mar 02

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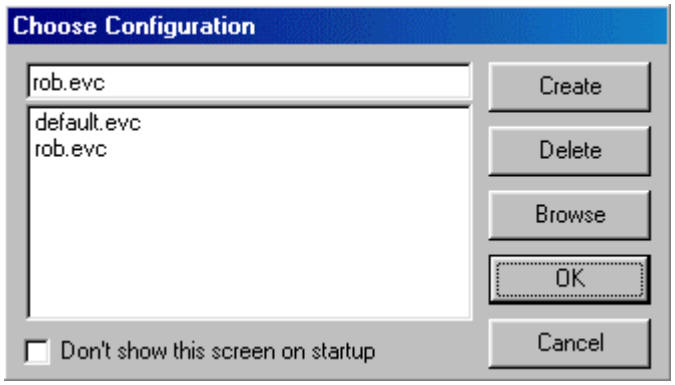
1. GETTING STARTED

1.1. CHOOSING A CONFIGURATION



When opening MetaCast you are prompted to choose a configuration. Having separate configuration files allows you to run multiple sessions of MetaCast using different settings on one computer. A default configuration file 'default.evc' ships with MetaCast. To create a new configuration you can simply type a name into the text box and click OK. Alternatively you can create a configuration based on another configuration by selecting a file from the list, typing in a new name and clicking Create. Click Yes from the prompt and then OK.

1.1.1. Loading/Creating a Playlists

In MetaCast, a playlist is a series of events that are played out in sequence to control a logo inserter, caption encoder or caption decoder. There are three primary methods for creating a playlist in MetaCast: using the built-in spreadsheet interface, importing an Enterprise BMS log file or writing a conversion utility to create a MetaCast playlist file from another traffic or automation system.

It is recommended that the playlist not be created solely by hand in order to increase accuracy and productivity. However, if the required data, i.e. program start time, name, duration, rating etc., is not available elsewhere, then MetaCast provides a powerful interface for creating the files from scratch.

Depending on your situation, select one of the following links on how to create or load a playlist:

- Creating a Playlist using the Built-in Editor
- Importing an Enterprise BMS Log File
- Converting Traffic Files to MetaCast Playlists

1.1.2. Connecting to an Encoder

If you plan to send XDS data (v-chip rating, program name, web link, time of day etc.) or want to synchronize your PC clock with the 808X LTC reader then you must properly engage serial communications between the PC and the encoder.

If you are using an Evertz 8070, 8075 or port A on the back of an Evertz 8074 you will need a NULL modem cable with a unique pin configuration described in the manual you received with the encoder. If you are connecting to port B or C on an 8074 or any port on an 8084, 8084AD or 8085 then you will need an ordinary NULL modem cable which you can purchase at any computer supply store. If you plan to use hardware handshaking, the recommended operating mode, you must ensure that all of the required lines are connected in the cable, including the RTS and CTS lines.

With a cable running from a serial COM port on the back of the PC to port A, B or C on the back of the encoder, the next step is to ensure that both devices are using the same communication settings. For the encoder, these can be selected from the front panel engineering menu. Check your encoder manual on how to change the port settings. It is recommended that the box be set at 9600 baud, 8 data bits and no parity.

The next step is to configure MetaCast to the same settings. The encoder communication settings can be found under Comm Settings in the Encoder menu. On the dialog form, select the port to which the encoder is connected and choose the same settings in the designated comboboxes. For handshaking, it is recommended that 'Hardware' be selected but this requires all pins to be connected in the serial cable.

Once configured, If the response window is not visible on the right side of the screen, click Responses from the View menu. Select Connect from the Encoder menu and watch the All or Encoder tab for indication of a successful connection. Also, if the statusbar is visible on the bottom of the screen, the left most panel should say 'Online' and turn green.

If the panel turns red or the response window indicates an error see Encoder Communication Problems for more information.

1.1.3. Connecting to a Logo Inserter

If you wish to control onscreen logos from MetaCast you will need to successfully engage serial communications between the PC and an Evertz 9525LG, or 9525DSK-LG Logo Inserter.

First, attach a straight-through serial cable, the NULL modem cable used for the encoder will not work, between a COM port on the back of the PC and the COM 1 port on the back of the logo inserter.

Click Com Settings in the Logo Generator menu and select the PC port to which the generator is connected as well as the desired baud rate. It is recommended that the box be operated at 38400 baud. The generator will automatically detect the baud settings and so the box does not need to be configured separately.

Once configured, if the response page and the logo page are not visible on the right side of the screen, click their respective items in the View menu. Next, click the Connect button on the Logo Generator toolbar and monitor the response window for confirmation that communications were successful. The first light on the Logo panel should turn green if successful; if the light turns red then see Logo Inserter Communications Problems for more information

1.1.4. Sending Data

Once connected to the required devices, MetaCast must be instructed to begin encoding the XDS data and to start displaying logos. For this to happen, you must air the playlist by clicking 'Air Playlist' from either the main toolbar or the Playlist menu. If MetaCast was able to find the current broadcast time within the playlist or shortly preceding it, the second and third last panels in the status bar will begin counting down to the next logo and program event respectively. Additionally, any events that are currently active will be highlighted in the event grid according to the colours defined on the Options/Playlist/Colours dialog.

If MetaCast could not find the current program see Airing your Playlist for more information.

With MetaCast actively running the playlist, logo events will now be sent to the inserter as required. To send XDS data, you must select 'Encode Playlist' from the Encoder menu. The active program should now change colour and if any of the program fields contain data, messages will appear on the Response page indicating they have been sent and the appropriate XDS packets should appear in the Encoder Status grid. If this does not happen, see Troubleshooting XDS Encoding.

1.1.5. Automation

With a playlist running and the appropriate XDS data and logos being triggered, the next step is to setup MetaCast automation so that future playlists can be loaded and activated without user intervention.

If the automation page is not visible on the right side of the screen, click 'Automation' from the View menu. Automation in MetaCast is handled as a list of playlist files that should be run in order and then looped after the last one expires. By default, the only item in the list should be the current playlist you are running.

The simplest method to automate playlist loading is to append events to the end of the list by clicking the 'Add Automation Entry' button  and then double clicking the new row in the File column and selecting a new playlist. You can also drag files from a Windows folder and then rearrange their order by left-clicking an entry and dragging it up or down through the list; the black bar shows where the entry will be placed.

Once you have a sequence of playlist files, select the row where you wish automation to begin and then click the Run button  . If you have not yet saved the current playlist, i.e. the MetaCast title bar displays '[New Playlist]', you will be prompted to do so now. If you choose not to save, than you will lose the new playlist and it will be removed from the automation list. MetaCast will than proceed to load each item in the list until it can find one that covers the current time. If it loops through the entire list without finding a current playlist then it will stop automation. See Airing your Playlist for more information in this situation.

For more sophisticated automation, MetaCast can also load date-specific playlists if programmed to recognize your file naming format. See Automating MetaCast for more information on this.

1.2. LOGO RULES

When automating logos with MetaCast there are a number of rules regarding logo placement and timing that must be adhered to so that the hardware can display the logos as expected. MetaCast will warn you if your playlist breaks any of these rules by replacing the event type icon on the left side of the event grid with a yellow exclamation mark. Right-clicking the offending event and selecting 'View Event Warnings' will explain the problem.

- **There are can only be six logos on screen at any given time.**
- **Only one animation can be playing at a time.** Animated logos are distinguished in MetaCast by appending a '(ANI)' to the end of the name in the event grid or in the 'Animation' column in the Logo Inserter Status grid. You must have firmware version 1.06 build 113 or greater for MetaCast to be able to distinguish animated logos from still ones. See your logo inserter manual for information on checking and upgrading your firmware.
- **New logos cannot be cued while an animation is running.** If still logos are to be faded in while an animation is running, they must be cued previous to when the animation began playing. MetaCast will attempt to do this automatically.
- **Logos cannot overlap.** In the logo inserter hardware, the screen is divided into nine equal regions like a tic tac toe board. You may only have one logo in each of the regions at any time. Logos that span more than one region will prohibit other logos from appearing in any of the covered regions.

1.3. PLAYLIST PROPERTIES

This dialog allows you to view or edit various properties associated with the playlist. Some properties such as Call Letters and Station Name do not refer to the playlist itself but the station that is airing the playlist.

1.3.1. File Name

The name of the playlist file. The field will show 'New Playlist' if you have not yet saved your playlist.

1.3.2. Version

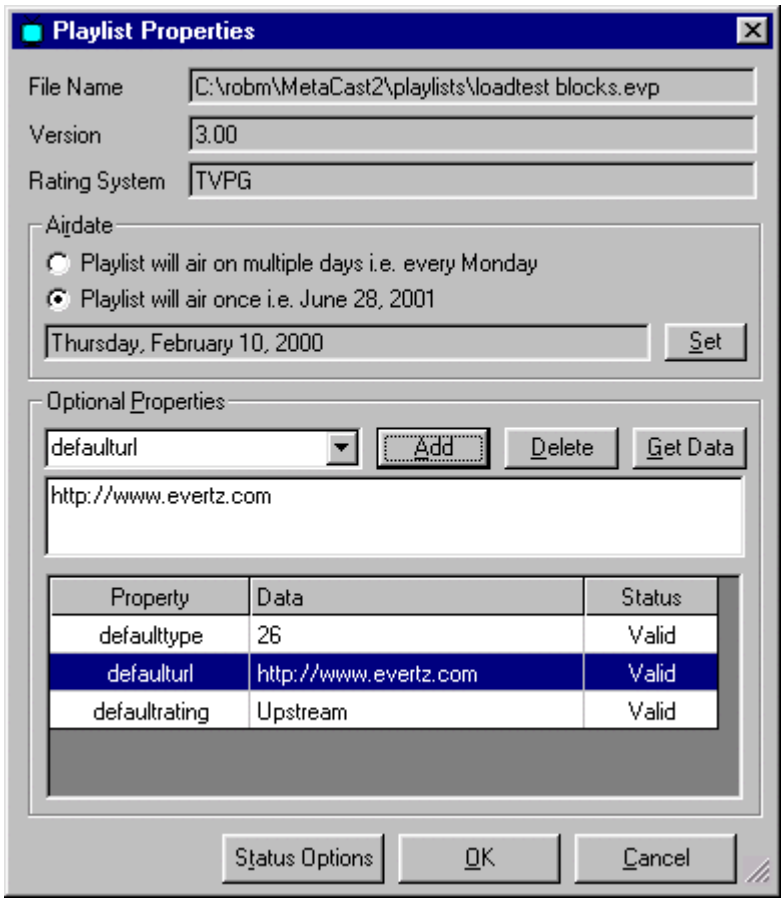
The file version of the current playlist. All files created within MetaCast 2 or imported will appear as version 3.00 whereas files created from earlier version of MetaCast will appear as versions 1 or 2.

1.3.3. Rating System

The rating system for which the playlist was created.

1.3.4. Airdate

These controls allow you change whether your playlist will air on multiple days, a.k.a a recurring playlist, or whether it is intended for one date in particular, a.k.a. a unique playlist. If you select a unique playlist, the Set button allows you to choose the air date.



1.3.5. Optional Properties

These controls allow you to define optional properties associated with the playlist. These properties will be saved in the playlist file but may or not be used depending on the Optional Properties page in the options dialog. To add a new property, either type in a name in the combobox or select one from the dropdown list. Enter the desired data in the text box immediately below and then click 'Add'. The value should appear in the grid at the bottom of the page. Adding an existing property will update it and clicking 'Delete' will remove it. The status column in the properties grid indicates whether the property is being used, i.e. 'Valid' or being ignored as set on the Optional Properties page. If the status indicates 'N/A' then that property is not used by MetaCast and serves only as a reference for the user. The 'Get Data' button will retrieve information from various sources in MetaCast depending on what property you have selected in the combobox.

1.4. PRIMARY AND SECONDARY EVENTS

In MetaCast there are two levels of events: primary and secondary. Secondary events must always belong to a primary event and are usually referred to as children of the primary and likewise the primary can be called the parent event.

The primary difference between secondary and primary events is in the start time. For primary events, the start time is in 24 hour format and relates directly to the broadcast clock. For example a primary event with a start time of 13:00:00 will become active at 1:00 PM. In contrast the start time for a secondary event is recorded as an offset from it's primary parent. For example, a secondary event has a start time of 00:05:00 and its parent a start time of 13:00:00, the secondary event will become active at 1:05 PM. The offset start time is indicated by a plus sign in front of the time.

Secondary events cannot extend beyond the duration of primary events and will be clipped if you enter a duration that is too long.

Only program events can have secondary events as children and they will appear as branches under the 'P' icon in the event type column to the left of the event grid. A small arrow also appears next to the 'P' icon when the a program has secondary events. If the arrow points down, double-clicking the icon will display the secondary events. If the arrow points up, double-clicking the icon will hide the secondary events.

For secondary logo and secondary v-chip logo events, the necessary logos will be controlled according to the event times and will not effect other logos, be they primary or secondary, within the Logo rules. However, since only one set of XDS data may be encoded at once, secondary program events will supercede their parents for their duration. When they are complete, MetaCast will return to sending the parent. If an active secondary event is hidden, it's parent will be highlighted.

See Also:
Primary Program, Secondary Program, Primary Logo, Secondary Logo, Secondary V-Chip Logo, Primary Log

1.5. PRIMARY LOG

Primary logging events allow you to decode captions out of CC1 of the video stream using an Evertz 80xx Closed Caption encoder and write the results to a time stamped file. Since multiple logs can be written at once, MetaCast allows you to overlap as many logging events as you wish.

Logs appear by default as light red rows in the playlist with a small book icon in the event type column. Apart from the universal start time, day and duration columns, the only field used by logging events is the name. The name column represents the prefix of the file name to which MetaCast will append a date stamp before saving.

Once you Air your Playlist, active logs will appear on the Logging Status page.

See Also:
Primary Program, Secondary Program, Primary Logo, Secondary Logo, Secondary V-Chip Logo

1.6. PRIMARY LOGO

Primary logo events allow you to control an Evertz 9525 Logo Inserter and therefore the ability to fade in and fade out graphics on screen. The logos must already be in the box by downloading them through Evertz Instalogo software. You must also be connected to a logo inserter and have retrieved the box's logo list, see Getting Started for more information.

The hardware allows you to have up to six logos on screen at once so, unlike program events, MetaCast allows logo events to overlap. Since larger logos can take a noticeable amount of time to be prepared for display by the hardware, MetaCast will automatically cue logos before their start time when they will be faded in. MetaCast will then fade the logo out once the event duration has transpired. If MetaCast cannot perform either the cue, fade in or fade out operations, a yellow exclamation mark will appear in the far left event type column. Right-clicking the event and selecting 'View Event Warnings' will give you more information on the problem.

Primary logos appear by default as light blue rows in the event grid with a small picture icon in the event type column. If you have aired the current playlist, active logos will appear by default in a darker shade of blue. Both of these colours can be changed through the Options page.

The only field that applies to logo events, aside from the universal start time, day and duration, is the name field. This represents the name of the logo as it is stored in the logo inserter. if you are connected to a logo inserter and have retrieved a list of logos then when editing this field you can simply select a logo from the drop down list. If you are in an offline setup then you must enter the logo names exactly. Particularly pay attention to capitalization since the logo inserter is case sensitive. When you do load the playlist online, MetaCast will indicate what logos could not be found in the box.

See Also:

Primary Program, Secondary Program, Secondary Logo, Secondary V-Chip Logo, Primary Log

1.7. PRIMARY PROGRAM

Primary program events trigger data to be encoded in line 21 of the video stream in association with the current program. This data, except for web links that appear in text channel 2, is called the Extended Data Service (XDS) and is placed in field two. To broadcast program events you must be connected to an Evertz 80XX Closed Caption encoder, see Getting Started for more information.

Since only one program can be broadcast at any time it makes sense that you can only encode one set of XDS packets at a time. Correspondingly, MetaCast does not allow program events to overlap i.e. one event must end before the next can begin. The exception to this is secondary program events which momentarily supercede their parent, see below for more information. When a playlist is aired, MetaCast will highlight the current program event using the colours you defined on the Options page. The statusbar will also indicate the time remaining in the current program. If no events are highlighted in your list, see Airing your Playlist for more information. To begin sending XDS, you must click 'Encode Playlist' in the Encoder menu. The Encoder Status page will indicate what packets are being sent and that they came from the playlist.

Primary program events appear as white rows in the playlist and have an accompanying 'P' icon in the event type column on the far left side. If the 'P' icon has a small arrow next to it then there are secondary events associated with that program. When the air points downwards, double-clicking the icon will unhide the secondary events. if the arrow points upwards then a double-clicking will hide the secondary events.

Secondary events behave exactly the same as primary events in that they can control either a line 21 encoder or a logo inserter. The difference is that secondary events are entered as offset from their parents, see Primary and Secondary Events for more information. When you edit a primary program data field like program name or rating, the value will carry over to secondary programs if a specific value has not been set for them previously.

The following are the valid fields for program events:

Field Name	Description
Name	Up to 32 characters that describe the contents of the current program. The program name is encoded as packet '0103' according to the EIA-608 standards.
Rating	The V-Chip rating for the current program ha defined by the current rating system. Packet '0105'.
Type	The type/category of program as defined by selecting appropriate keywords. Packet '0104'.
Web URL	A URL that links the current program to associated information on the web. Encoded in text channel 2.
Web Type	The type of web link i.e. sponsor, network, station etc. Encoded as part of the web URL.
Web Description	A text description of the web page. Encoded as part of the web URL.
Web Expiry	The last date on which this page will be valid. Encoded as part of the web URL.
Upstream Blocking	Allows you to control what upstream information will be allowed to pass downstream for the duration of this event.

Note: If a field does not appear in the playlist grid you can unhide it by right-clicking the column headers and selecting 'Show/Hide Columns'. See Playlist Columns for more information.

See Also:

Secondary Program, Primary Logo, Secondary Logo, Secondary V-Chip Logo, Primary Log

1.8. SECONDARY LOGO

Secondary logos behave identically to primary logos in that they allow you fade in and fade out on screen graphics through an Evertz 9525 Logo Inserter. The major difference is that like all secondary events, secondary logos are intended to control data that changes over the course of a program. This means that start times are entered as offsets from the beginning of the parent program event and the duration may not extend beyond the duration of the parent program event.

One possible use for secondary logos is to hide and show station ID logos around commercial breaks. They also have the benefit of moving in relation to their parent program regardless of what ripple method is being used.

Secondary logos appear by default as light blue rows in the playlist which become dark blue when active. See Airing your Playlist for information on how events become active.

See Also:
Primary Program, Primary Logo, Secondary Logo, Secondary V-Chip Logo, Primary Log

1.9. SECONDARY PROGRAM

Secondary events behave identically to primary programs in respect to controlling Evertz Closed Caption encoding hardware. Specifically, they will control encoding of Extended Data Service (XDS) information such as program name, rating and web link in association with the currently airing program. See Primary Programs for more information on what data can be encoded and how to begin encoding.

The major difference is that secondary programs are intended to supercede primary events for a certain period of the program. This can be used to alter the rating for a specific scene or possibly to update a web page to precisely match the programs content. Since the secondary program falls within the primary, its start time is entered as an offset so that if,for example, a primary program begins at eleven o'clock and you wish to change the rating at a 11:05, you would enter 00:05 as the start time of the secondary program.

By default secondary program events appear as pale yellow rows in the playlist and have a 'P' icon in the left most column identical to primary program events.

See Also:
Primary Program, Primary Logo, Secondary Logo, Secondary V-Chip Logo, Primary Log

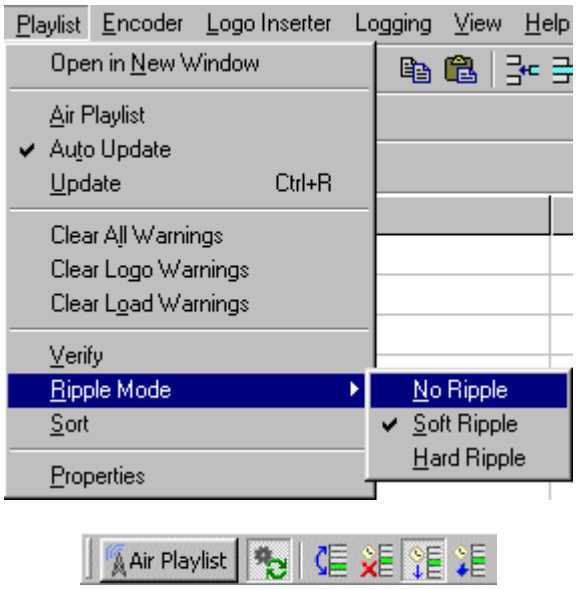
1.10. SECONDARY V-CHIP LOGO

Secondary V-Chip logos behave indentically to normal secondary logos except that the logo name is linked to the rating of the parent program. Using a V-Chip logo map available from the Options page, MetaCast will find the appropriate logo to display whenever you change the rating of the primary program. You can choose to have MetaCast automatically insert V-Chip logos into your playlist when opening new playlists using the Logos page on the Options form.

See Also:
Primary Program, Secondary Program, Primary Logo, Secondary Logo, Primary Log

1.11. PLAYLIST RIPPLING

To make editing playlist event times simpler, MetaCast provides a sophisticated rippling system that automatically adjusts adjacent programs to accomodate your changes. Since, program events cannot overlap, the rippling system will shift programs earlier or later in the day to leave room for the program you are editing. Playlist ripples are initiated after you change the start time or duration of a primary or secondary program event. The method used to ripple events depends on the current ripple mode which can be set from the Playlist menu or on the Playlist toolbar.



1.11.1. No Ripple

This mode allows you to safely edit program events while minimizing the effects to the rest of your playlist. If you extend the duration or set the start time to begin later in the day, MetaCast will clip future events so that they begin immediately after the event you have changed. This will result in the duration of events being shortened so that other events that fall outside of your change will begin as originally scheduled. Similarly, if you adjust a program so that it begins earlier in the playlist, earlier events will be shortened so that they end immediately when the new program begins. In both cases, if the program to be moved is surrounded by empty air space then no other events will be affected.
As in all ripple modes, secondary events are moved along with their parents and will be clipped if their parent's duration is shortened. Also, other logo and log events are not affected by this ripple mode since they can be aired simultaneously along with the programs.

1.11.2. Soft Ripple

A soft ripple preserves event durations by shifting other programs in the playlist to make room for the new event. For example, if you have a playlist containing back to back half hour programs and you extend one by fifteen minutes, every program after that will start fifteen minutes later to accomodate the change. The same happens if you adjust a program to be earlier in your playlist, the start times of previous program events will be shifted so that their durations are preserved and the new event can at the earlier time.

While both the soft and hard ripples will preserve event durations, the characteristic trait of a soft ripple is that is will minimize the changes by filling in programming gaps as it ripples. For example, if you had programs running from noon until two and then nothing schedule again until three o'clock, a soft ripple would bump programs to fill that one hour gap while leaving the three o'clock program unaffected. However, if the change was greater than one hour, the three o'clock show would only be shifted by the difference.

Like the 'No Ripple' mode, logo and log events are unaffected by shifts in program events.

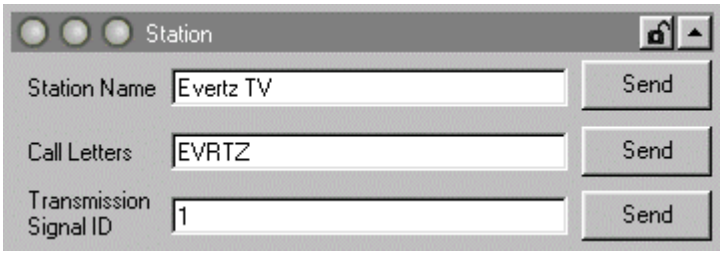
1.11.3. Hard Ripple

The hard ripple behaves identically to the soft ripple in that it preserves event durations by shifting the affected programs forward or back as necessary. However, the primary difference of a hard ripple is that it preserves gaps in the playlist. Using the earlier example where a one hour gap existed between two and three o'clock; if you adjusted the noon show by half an hour a hard ripple will preserve the one hour space and the three o'clock program will be set to begin at three-thirty.

Unlike the other ripple modes, a hard ripple will move logo and log events along with programs.

1.12. STATION PAGE

This page allows you to encode unchanging XDS information such as Station Name, Call Letters and Transmission Signal ID.



The three text boxes allow you to change the values for each field and the buttons on the right are used to Send or Halt the associated data packets. If you edit a field after you have sent the data, MetaCast will update the encoder as soon as you leave the text box.

Field	Description
Station Name	The name of your broadcasting station. Must be between 1 and 32 characters in length and may only contain ASCII characters from 32 to 127.
Call Letters	The call letters associated with your broadcasting station. Must be between 4 and 6 characters. MetaCast will append spaces to stations with less than four call letters.
Transmission Signal ID	The Transmission Signal ID (TSID) given to your broadcasting station. Must be between 1 and 65535

1.12.1. Lights

From left to right, the lights represent the Station Name, Call Letters and TSID respectively.

(gray)	(green)	(red)	(yellow)
The packet is not being encoded or has been removed successfully.	The packet is being encoded as expected.	An error occured while trying to send or remove the packet.	MetaCast is trying to send or remove the packet.

1.13. STATUS BAR

The status bar appears at the bottom of the MetaCast screen and can be hidden or shown by clicking 'Status Bar' in the View menu. If you are in Full Screen mode or if you have opened a MetaCast edit window then the status bar will not be visible.

1.13.1. Hardware Status

The first half of the status bar indicates the present state of the various hardware devices that may be connected to MetaCast. The three panels next to the 'P' represent the Encoder while the two panels next to the logo icon indicate the logo inserters and the two panels to the right of the book indicate the logging decoder.

Each section can be hidden or shown by clicking on the associated icon. When the arrow points towards the icon, clicking it will hide the status panels. When it points away from the icon it will open the panels. MetaCast will automatically open the panels when you connect to the corresponding device.

1.13.1.1. Encoder Status

The first panel indicates the connection status. When the background is white, the device is offline. When the background is green the device has connected successfully. If the background is red, the device has gone offline due to an error.

The second panel indicates if there are system packets currently being encoded. System packets include 'Station Name', 'Call Letters' and other packets that do not change on a program by program basis. If the box is white there are no packets being encoded. If it is green all of the packets are being encoded as expected and if it is a red an error has occured. You must be connected to the encoder for this light to activate.

The third panel indicates that your are encoding the program events from the playlist. As with the system light, the colour indicates the status of the program packets like 'Program Name', 'Rating' etc.

1.13.1.2. Logo Inserter Status

The first panel has the same behaviours as the encoder connect panel. When the background is white, the device is offline. When the background is green the device has connected successfully. If the background is red, the device has gone offline due to an error.

The second panel indicates whether any logos have been faded in and are currently visible on screen. This light is only updated when you are connected to the logo inserter.

1.13.1.3. Logging Status

The first panel in this section behaves identically to the connection lights corresponding to the encoder and logo inserter. When the background is white, the device is offline. When the background is green the device has connected successfully. If the background is red, the device has gone offline due to an error.

The second panel goes green if you are currently logging captions to a file, otherwise, it will remain white.

1.13.2. Misc. Status

The second half of the status bar indicates misc. features associated with MetaCast and the playlist.

The first panel indicates whether you are on or off the air. Off air corresponds to edit mode in MetaCast and in this mode events will not trigger the corresponding hardware. When on air, this panel will turn green and MetaCast will be ready to encoder XDS information and display logos.

The second panel indicates the current position in the playlist. If you are off air this box will always show 'EDIT' since no events will be active. If you are on air, this box will indicate either 'Early', 'Current' or 'Expired' depending on how the current broadcast time relates to the playlist. If the playlist has expired you will need to load a new list or append events before you can continue controlling the hardware. See Airing your Playlist for more information.

The third light corresponds to the Message page and flashes green whenever a positive message occurs and red if an error message occurs. Double-clicking this panel will open the message window so that you can view the message details.

The fourth light indicates whether automation is currently active or not. When white, automation is inactive and only the current playlist will be aired. When green, automation has been enabled and MetaCast will loop through the indicated playlists. Double-clicking this panel will open the Automation page.

The next box is a general text display and will indicate messages as they occur in MetaCast.

The final three boxes indicate times within the MetaCast playlist. The first of these is a countdown to the end of the current program event or, if there is no current program event, to the beginning of the next one. The next one to the right indicates the time to the next logo action. A logo action is any command to the hardware and these occurs both at the beginning of logo events and also when logos are being cued in anticipation to logo events. The final of these time displays it the broadcast time itself.

1.14. RATING SYSTEMS

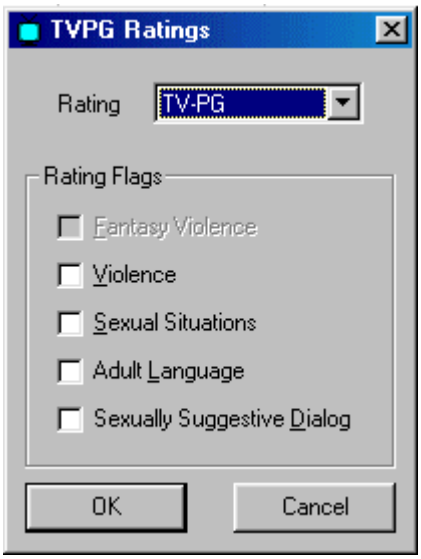
1.14.1. TVPG RATINGS

The TVPG rating system consists of seven different ratings and up to five flags that can be applied to some of those. TVPG ratings can be abbreviated by following the category by a dash and then the applicable flag symbols. If you choose the 'Upstream' rating, MetaCast will not encode rating information for that program.

1.14.1.1. TV Parental Guidance Rating Categories

NR	Not Rated	This program is not rated. (default)
TV-Y	All Children	This program is designed to be appropriate for all children.
TV-Y7	Directed to Older Children.	This program is designed for children age 7 and above
TV-G	General Audience	Most parents would find this program suitable for all ages.
TV-PG	Parental Guidance Suggested	This program contains material that parents may find unsuitable for younger children.
TV-14	Parents Strongly Cautioned	This program contains some material that many parents would find unsuitable for children under 14 years of age.
TV-MA	Mature Audiences Only	This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 17.

See Also:
MPAA Ratings , Canadian English Ratings , Canadian French Ratings

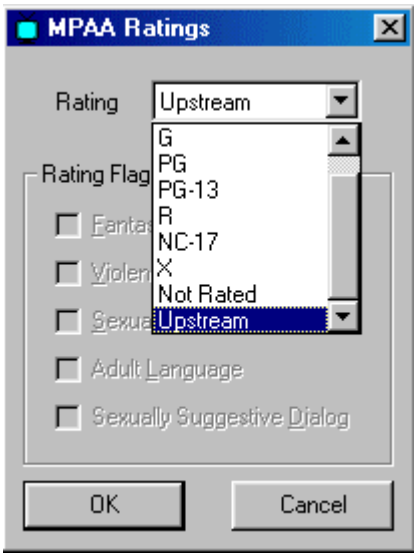


1.14.1.2. TVPG Flags

FV	Fantasy Violence
V	Violence
S	Sexual Situations
L	Adult Language
D	Sexually Suggestive Dialog

1.14.2. MPAA Ratings

The MPAA rating system consists of eight categories and does not use any flags. A N/A rating implies a program for which motion picture ratings do not apply while a Not Rated rating indicates a feature that did not receive a rating. If you choose the 'Upstream' rating, MetaCast will not encode rating information for that program.



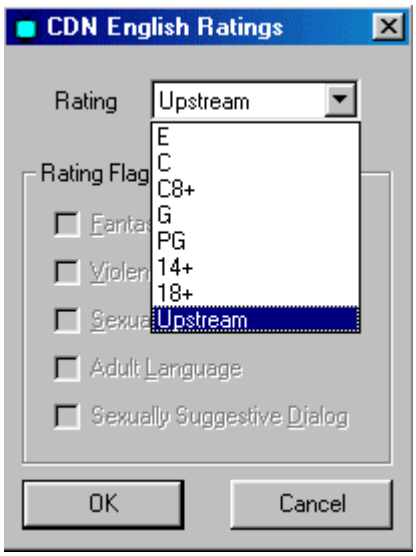
1.14.2.1. MPAA Rating Categories

N/A
G
PG
PG-13
R
NC-17
X
Not Rated (default)

See Also:
TVPG Ratings , Canadian English Ratings , Canadian French Ratings

1.14.3. Canadian English Ratings

The Canadian English language rating system consists of seven categories and no flags. If you choose the 'Upstream' rating, MetaCast will not encode rating information for that program.



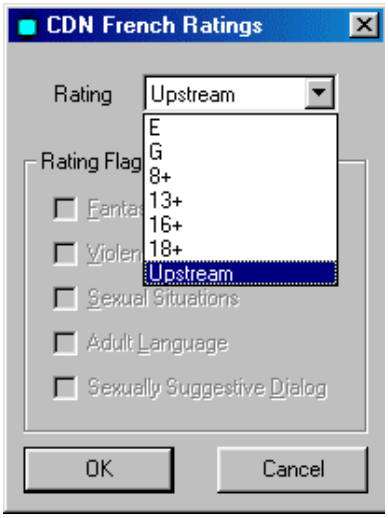
1.14.3.1. Canadian English Rating Categories

E	Exempt	Programming includes: news, sports, documentaries and other informational programming. (default)
C	Children	Programming intended for children under age 8.
C8+	Children	Programming generally considered acceptable for children 8 years and over to watch on their own.
G	General Audience	
PG	Parental Guidance	Programming intended for a general audience but which may not be suitable for younger children.
14+	Parental Guidance	Programming contains themes or content which may not be suitable for viewers under the age of 14
18+	Adult	

See Also:
TVPG Ratings , MPAA Ratings , Canadian French Ratings

1.14.4. Canadian French Ratings

The Canadian French language rating system consists of six categories and no flags. If you choose the 'Upstream' rating, MetaCast will not encode rating information for that program.



1.14.4.1. Canadian French Rating Categories

E	Exempt	(default)
G	General	Programming intended for audiences of all ages. Contains no violence, or the violence it contains is minimal or is depicted appropriately with humour or caricature or in an unrealistic manner.
8+	General	Not recommended for young children. Programming intended for a broad audience but contains light or occasional violence that could disturb young children. Viewing with an adult is therefore recommended for young children (under the age of 8) who cannot differentiate between real and imaginary portrayals.
13+		Programming may not be suitable for children under 13 years of age. Contains either a few violent scenes or one or more sufficiently violent scenes to affect them. Viewing with an adult is therefore strongly recommended for children under 13.
16+		Programming may not be suitable for children under 16 years of age. Contains frequent scenes of violence or intense violence.
18+		Programming restricted to adults – Contains constant violence or scenes of extreme violence.

See Also:
TVPG Ratings , MPAA Ratings , Canadian English Ratings

2. PLAYLISTS

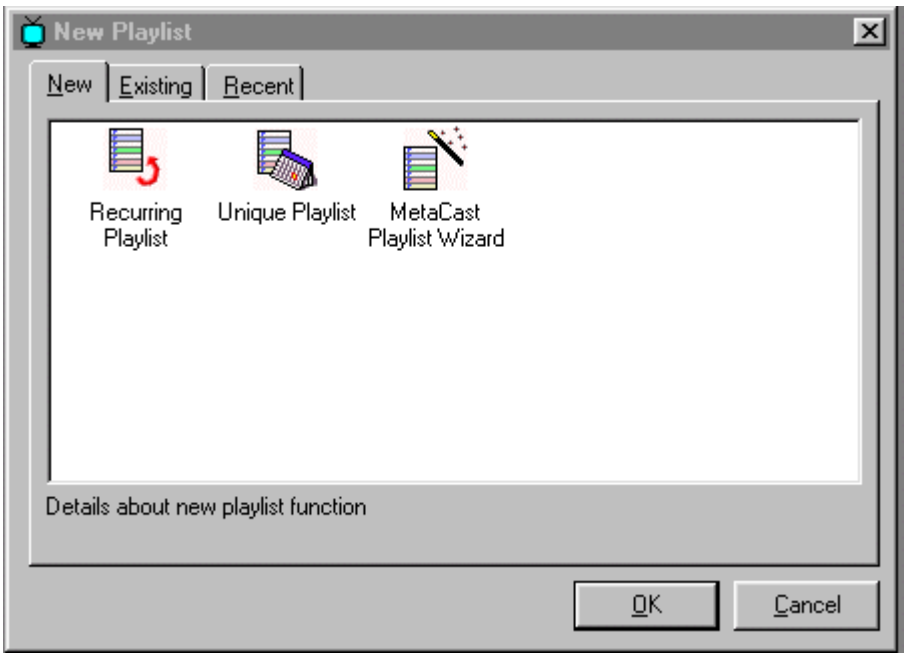
2.1. CREATING A PLAYLIST USING THE BUILT-IN EDITOR

2.1.1. Overview

For stations that do not have XDS program information accessible or do not wish to write a utility to convert the information, MetaCast supplies a built-in editor for creating playlist files. The editor allows you to easily insert, edit and remove events and also supports ripple, sort, cut, copy, paste, undo and redo features.

2.1.2. New Playlist

When you first open MetaCast or when you select 'Create New Playlist' from the File menu, you will be prompted with the New Playlist form. On the New tab, there are three icons which represent different means of creating a new playlist.



The 'Recurring Playlist' icon allows you to create a playlist that will air on multiple dates, for example, every Monday. In contrast, a 'Unique Playlist' is intended to air on one date only. If you are new to MetaCast, it is recommended that you select "MetaCast Playlist Wizard' and click OK. This wizard will walk you through a series of questions that will help MetaCast create the right playlist for your station.

2.1.3. Editing the Playlist

With a list of blank events now occupying the event grid, you can proceed to enter your program or logo data. When creating a new playlist, MetaCast opens in Edit mode. In this mode, MetaCast will not play out events from the playlist. This mode is indicated by a white panel with the words 'EDIT' in the status bar and by the raised state of the 'Air Playlist' button in the toolbar. In edit mode, the playlist becomes unlocked as indicated by the 'Lock' icon on the Edit toolbar.

Locked	
Unlocked	

With the playlist unlocked and in edit mode, you can begin entering your broadcasting information into the blank events. If you need to insert more events, right click the playlist at the desired location and select 'Insert Events'. A small dialog will appear allowing you to choose the desired event types and quantity. Event types that are grayed out are not valid for the current position. A heavy red line will appear in the playlist where the new events will appear. If you need to delete events, highlight the desired row by clicking and dragging the mouse and then select 'Delete Events' from the Edit menu.

2.2. START TIME, DURATION

To edit the start time or duration for an event, simply click the cell and enter a new time using a 24 hour clock. If you click on the start time of a secondary event such as a secondary program, secondary logo or v-chip logo, the time you enter is how long after the parent event you wish it to begin. You cannot have a secondary event exceed the duration of its parent and MetaCast will clip the child event if required.

You can also use the left and right arrow keys to change between the hour, minute and second fields. The time control allows a maximum of six characters so you made need to delete numbers before you can enter new ones.

When you finish editing a time field, MetaCast will scan the playlist and perform any cleaning and updating that may be required. Depending on the event type and the selected ripple mode, MetaCast will alter the times for other events in your playlist to accommodate the new entry. This may require resorting the playlist if you have changed the start time dramatically; you will be prompted if this is necessary. See Playlist Rippling for more information on what happens when you alter an event's start time or duration.

2.3. DAY

Essentially part of the start time, this fields indicates what day the event is schedule to begin on. When creating a recurring playlist that will air on multiple days, this column will contain values beginning with 'Day 1' and incrementing from there. If you are editing a unique playlist, this column will indicate the day on which the playlist will air. **Note:** If you have aired either format of playlist, the dates in this column will be updated so that the events fall around the current broadcast time. You can change whether your playlist is recurring or unique on the 'Playlist Properties' dialog available from the Playlist menu.

To change the start date for an event, click the cell and use the up and down arrows to adjust the value. If your current ripple mode is set to Hard or Soft, MetaCast will ripple all subsequent events accordingly where as if you have chosen not to ripple, only the event you are editing will be affected.

Secondary events do not have day values since their start time is entered as an offset of their parents.

2.4. NAME

The event name has different uses depending on what type of event it is. For a primary or secondary program event, the name stores the title of the program as it will be encoded in the XDS channel and displayed on the home user's television. It can be a maximum of 32 characters ranging from ASCII 32 to 127. Characters above 127, such as accented characters, are not supported. If blank, no data will be encoded for the duration of this event and, unless otherwise blocked (see Upstream Blocking), upstream ratings will be passed downstream through the encoder.

For logo events, the name represents the name of the logo file as stored in the Evertz Logo Inserter. If you are connected to a logo inserter and have retrieved a list of logos, you may select them from the combobox. F4 will open the combo list from the keyboard.

Finally, for a log event, the name fields indicates the destination file for the decoded captions.

2.5. RATING

Only valid for program events, the rating field indicates the v-chip rating associated with a particular program. Double-clicking on this field will open a rating selection dialog specific to the current rating system. The rating for multiple events can be set by clicking and dragging the mouse over multiple rows within the ratings column. Releasing the mouse or hitting enter will open the ratings dialog. A value of Upstream means that no rating will be sent for the duration of this event and that, unless otherwise blocked (see Upstream Blocking), upstream ratings will be passed downstream through the encoder. (See section 1.1.4 for more ratings dialog information).

2.6. TYPE

Only valid for program events, this field is an EIA standard for encoding the type of program within the XDS stream. Double-clicking on the cell will open the program type dialog and allow you to choose up to 32 applicable program types. If no program types are selected, then no packet will be sent for the duration of this event. The program type for multiple events can be set by clicking and dragging the mouse over multiple rows within the type column. Releasing the mouse or hitting enter will open the ratings dialog. (See section 5.4 for more program type dialog information).

2.7. URL, WEB DESCRIPTION, WEB TYPE AND WEB EXPIRY

These fields are only applicable for program events and may be set by double-clicking on any of their respective columns. To encode the web data in text channel two, MetaCast requires a valid URL but the other fields are optional. To set the web data for multiple events, highlight multiple rows in one column and hit enter. If the URL is blank or only "http://", no web site will be encoded. (See section 5.7 for more web dialog information).

2.8. UPSTREAM BLOCKING

Only valid for program events, double-clicking on this field allows you to set which upstream channels will be blocked or passed for the duration of this event. Only channels that appear visible on the event grid e.g. C1, C2, T1 etc. will be blocked, the remaining channels will be free to pass upstream data. XN, XV and XT represent the name, rating and type packets in the XDS stream. Since new XDS packets overwrite old ones, these indicators will appear whenever valid data is present for the event since they will be essentially blocked. On the dialog that opens when you double-click this field, placing a check next to an

upstream channel will block it while leaving the box unchecked will permit data to travel downstream. To set blocking for multiple events, highlight the desired rows in only the blocking column and hit enter. (See section 5.1 for more channel status dialog information).

2.9. SAVING THE PLAYLIST

Select Save from the file menu to write your playlist to disk. You will be prompted to enter a filename for your playlist. Unless you plan to reuse your playlist, it is generally best to name it using the date on which it is meant to air. See Playlist File Names for details on MetaCast's naming scheme.

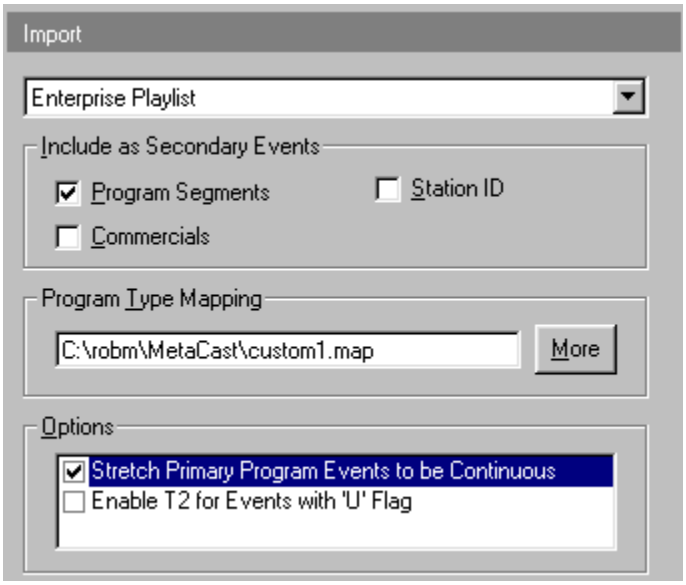
You will then be prompted with the save dialog that allows you to choose what information should be saved to the file. Generally you should save all information so that when you load your playlist it appears exactly as you saved it. One situations where you may not want to save all of the fields is if you plan to view/edit the playlist in a text viewer; a smaller file tends to be clearer and easier to read. Another reason is if you are making use of default program settings defined in MetaCast or the file header since MetaCast will replace missing columns with the defined defaults. See Using Default Programs for more information.

Once you have saved your file it is recommended that you try loading it into another instance of MetaCast to ensure that it appears as you expect. To do this, select Open in New Window from the Playlist menu.

3. IMPORTING ENTERPRISE LOGS

In addition to MetaCast's own playlist file format, MetaCast can also load Enterprise logs. An explanation on how to create the file can be found in Creating Enterprise Logs for MetaCast.

With the file created, the playlist can be loaded just like native MetaCast playlists. By default any of the Open dialogs will only show MetaCast files but you can open the 'Files of Type' combo to show files with different extensions. Unlike normal, you will be prompted with an import dialog that allows you to choose how MetaCast will import the file. This dialog is also available from the Options page and any choices you make will be carry over to the next playlist you import.



The first combobox allows you to choose which format your file is in; this should be set to Enterprise Playlist. Generally, MetaCast will import the first segment of every program in the log as a primary program event. In addition, MetaCast can load subsequent program segments as secondary events as well as commercials and station IDs.

MetaCast identifies the event type using column 166, the Record Type, in the log file. According to Enterprise this may have a value of P, S, I or M which refer to Program, Spot, ID or message respectively. A commercial or spot, is recognized as having an 'S" in column 166, a station ID must have an 'I' in column 166 and column 165, the secondary source, must be blank. Finally, a program segment will have a 'P' in column 166 and a number greater than '01' in columns 173-174, the segment number.

The program type map allows the four characters in columns 155-158 to represent up to 32 program types as defined by EIA 608. Clicking the More button allows you to define 2 character keys that represent specific program types. See Program Type Mapping for more information.

Finally, the Options section specifies additional flags that control the way MetaCast loads the log file.

3.1. STRETCH PRIMARY PROGRAM EVENTS TO BE CONTINUOUS

This feature is highly recommended to ensure that no gaps appear in your playlist and therefore XDS information is encoded at all times. Gaps may be present in your log file if you only choose to load primary programs or if there are events in your log that MetaCast does not recognize. To fix the problem, MetaCast extends the events' durations so that they end immediately when the next program should begin.

3.1.1. Enable T2 for Events with 'U' Flag

The features allows you to force upstream data in T2 to be passed for the duration of this event. This can be useful if you normally wish to prevent unknown web data that may be present in upstream T2 from passing downstream but you know specifically that the web data for this event is must be passed. The 'U" flag should be in column 43 of the log file which is the second character in the Video Effects field.

3.2. PLAYLIST FILE SPECIFICATIONS

3.2.1. Overview

In MetaCast, playlist files are used to store a sequence of events for later retrieval or transfer between systems. Playlist files can either be created by saving the contents of the onscreen event grid (See Saving Playlists) or generated by an external utility from another format of playlist. Typically, a broadcasting station will have all of the information needed for MetaCast, such as Program Name, Start Time, Duration etc., in either their traffic or automation system. In this case, it is recommended that a simple filter be built to convert the data from that system to MetaCast - this document is a reference on how to accomplish that. For users who do not have the required information in any accessible program, you will have to create the playlists manually. (See Creating a Playlist using the Built-in Editor) Finally, for users of an Enterprise Traffic System, MetaCast can import the log files directly without any additional interpretation. (See Importing Enterprise Files)

3.2.2. File Naming

When creating an application to generate playlist files, it is recommended that a clear date specific format be used so that MetaCast can automatically locate and load the playlist on the correct date. Unless a station has a specific format already in place, it is simplest to follow MetaCast default naming scheme as stated below. For those using custom file names, MetaCast will have to be programmed to identify them correctly. (See Creating Custom File Names)

sMMDDYY.EVP

MM is a value from 01 to 12 representing the month in which this playlist will air, DD is the day from 01 to 31 and YY is the last two digits of the year from 00 to 99.

Example file names:

s010100.evp	January 1, 2000
s021002.evp	February 10, 2002

3.2.3. File Format

Playlist files are human readable ASCII text files that can be created or modified in any simple text editor such as NotePad or WordPad. In order for MetaCast to properly identify the file the first line must be as follows not including the quotations:

'MetaCast - Playlist File'

Files that do no contain this header will be forwarded to the import routine and will not be loaded correctly. Note: For compatibility with legacy products, the title "MetaCast - Schedule File", including the quotes, is also acceptable. (See Legacy File Formats for more information)

3.2.4. File Header

The playlist file is divided into two sections: the file header and the file body. The header contains information that allows MetaCast to properly interpret the body, configure various values within MetaCast and store custom information that relates to the playlist.

Each header item consists of one line of text ending with a carriage return and line feed. The text consists of the header variable that is being set, an equals sign and then the value being assigned. For example,

Version=3.00

defines this as a version three playlist file and must exist immediately following the title. For information on previous file version see Legacy File Formats. The following table provides a list of the system defined headers, what their possible values are and what they do. Only the headers in Bold are mandatory and must be included in the file for proper operation of MetaCast.

Header	**Purpose**	**Values**	**Example**
Version*	The file version. Must be the first header defined after the title.	3.00	Version=3.00
AirDate*	The date on which this playlist is intended to air.	MM/DD/YYYY	AirDate=06/12/2001

Header	Purpose	Values	Example
RatingSystem*	The rating system used in this file. Must be defined before a default rating.	TVPG, MPAA, CDN English, CDN French	RatingSystem=CDN English
Columns*	The order of data in the file body.	See Playlist Columns for possible values.	Columns=EventType, Start, Name, Duration
DefaultName	A default program name to use during periods in the playlist for which no programs are defined.	Up to 32 characters in the range of ASCII 32 to ASCII 127.	DefaultName=Program A
DefaultRating	A rating to be used during programs for which none was defined and during gaps in the playlist.	Must be consistent with the rating system defined previously. (See Rating Systems for more information)	DefaultRating=G
DefaultType	A program type to be used during programs for which none was defined and during gaps in the playlist.	See Program Types for more information	DefaultType=26
DefaultURL	A URL to be used during programs for which none was defined and during gaps in the playlist.	Any valid web URL.	DefaultURL=http://www.evertz.com
DefaultWebDesc	A web description to be used during programs for which none was defined and during gaps in the playlist.	A text string of any length defining the URL associated with a program. Only valid if a URL is defined.	DefaultWebDesc=Evertz Microsystems

Header	Purpose	Values	Example
DefaultWebType	A web type to be used during programs for which none was defined and during gaps in the playlist.	None, Station, Operator, Sponsor, Program or Network. Only valid if a URL is defined.	DefaultWebType=Program
DefaultWebDate	The expiry date for the web page to be used during programs for which none was defined and during gaps in the playlist.	MM/DD/YYYY	DefaultWebDate=06/12/2001
DefaultBlock	The default channels to block for all program events. Data in the Block or Pass fields will overwrite this on a channel by channel basis. Also sent during gaps in the playlist.	C1, C2, C3, C4, T1, T2. T3, T4, XDS	DefaultBlock=T2 T4 C3 XDS
StationName	The name of the station broadcasting this playlist	Up to 32 characters in the range of ASCII 32 to ASCII 127.	StationName=Evertz TV
CallLetters	The call letters of the station broadcasting this playlist	Must be between 4 and 6 characters in the range of ASCII 32 to ASCII 127. Shorter call letters will be padded with spaces.	CallLetters=EVRZTV
TSID	The transmission signal identifier of the station broadcasting this playlist.	A number between 1 and 65535.	TSID=1

* MetaCast can still load these values as they appeared in older file version. See Legacy File Formats for more information

Users may also define any custom headers they wish for the purpose of better identifying this playlist or its contents. All headers, including any custom ones, appear in the Playlist Header Dialog accessible from the Playlist menu. The following table lists possible headers the user may wish to include in the playlist.

Custom Header
Author
TrafficSystem
SourceFile
Comments

In the Options page under Playlist File Headers, you can choose which header information you would like to read from the file and what you would like to ignore. When you load the file again and select Header Information from the Playlist menu, MetaCast will list all of the header items and indicate whether they are being used or ignored. See Header Information dialog for more details.

3.2.5. Playlist Columns

The most critical item in the playlist header is the column order. It consists of comma delimited words that identify the order of the data in the playlist body. The format of this line is as follows:

Columns=Column1, Column2, Column3, ...

The possible columns are listed in the following table. Columns in bold are mandatory but may appear in any order. If an optional field is not defined, default values defined within MetaCast or the playlist header will be used in its place.

Column	**Description**
EventType	A number indicating the type of event i.e. Program, Logo, Log, etc.
Start	The start time of the program.
Name	The name of the program, logo or log.
Duration	The length of the event.
Rating	The program rating.*
Type	The program type.*

Column	Description
Day	The number of days after the start of the playlist before this event begins
URL	A URL web link associated with the event*
WebDesc	A description of the associated web page.*
WebType	The type of web page.*
WebDate	The last date on which the web page will be valid*
Block	Upstream channels to block i.e. Captions 1- 4, Text 1-4 or XDS
Pass	Upstream channels to pass i.e. Captions 1- 4, Text 1-4 or XDS

* This values only apply to program events

3.2.6. Playlist Body

The body of the playlist consists of the majority of the file and defines the actual events to be played out by MetaCast. Each line in the represents a single event and the various parameters of that event are comma delimited in the order defined in the header. If more or less data is present than is defined by the columns, MetaCast will load what it can and the remaining fields will be blank. String data such as the event name, URL or web description may be bracketed with double quotations if leading or trailing spaces are desired.

3.2.6.1. EventType

This field is mandatory and consists of an integer value that represents the type of event. The possible values are:

Value	Description
1	Primary Program
7	Secondary Program
3	Primary Logo
4	Secondary Logo
5	Secondary V-Chip Logo
6	Primary Log

The rules governing the ordering of primary and secondary events are very important. Only primary programs are permitted to have secondary events attached to them and all secondary events must follow immediately after their associated primary. Secondary events that do not follow these rules may be discarded. For a thorough description of the various events, click on them in the table. For more information on the relationship between primary and secondary events, click here.

3.2.6.2. **Start**

The start time of the program in HH:MM:SS format. This format follows the 24 hour clock and so SS must be no greater than 59, MM no greater than 59 and HH no greater than 23. An invalid start time will be set to 00:00:00. Although the start time for secondary events appears as an offset in the event grid, the time stored in the file is absolute and is not related to the primary.

3.2.6.3. **Name**

The title of the program, the name of the logo or the destination file for the log depending on the event type. Program names can be no longer than 32 characters and may only contain ASCII characters from 32 to 127 i.e. accented characters are not allowed.

3.2.6.4. **Duration**

The length of the program in HH:MM:SS format. Times such as 00:00:90 are permissible and will be converted to 00:01:30. To prevent possible confusions, it is recommended that the duration be stored according to the 24 clock i.e. SS must be no greater than 59, MM no greater than 59 and HH no greater than 23. Durations exceeding 24 hours are not allowed.

3.2.6.5. **Rating**

The v-chip rating assigned to the program if this is a program event; otherwise this field is ignored. Must be valid for the current rating system.

3.2.6.6. **Type**

Program type in EIA 608 format, i.e "21"= Education, "262D" = OTHER & Baseball. Only valid for program events.

3.2.6.7. **Day**

The day on which this program will air relative to when it starts. i.e. if a playlist starts at 6:00 in the morning it, and every other program up to midnight, will have the day value set to zero. Every program after midnight should have a value of 1. Subsequently, programs that begin past the second midnight should have a day value of 2. If this column is not included, MetaCast decides when the next day begins by checking if the start of the current program precedes the start of the last program. When this happens, MetaCast increments the day field.

3.2.6.8. **URL**

The URL for a web page associated with a program event. The URL must be complete including the required protocol i.e. 'http://', 'mailto:', etc.

3.2.6.9. **WebDesc**

Description of the web page associated with a program event. Should be kept as short as possible to reduce bandwidth consumption. Only valid if a URL has been defined for this program.

3.2.6.10. **WebType**

Type of web page associated with the program event, can be "None", "Program", "Network", "Station", "Sponsor" or "Operator". Only valid if a URL has been defined for this event,

3.2.6.11. **WebDate**

Expiry date for the program's web page in the format MM/DD/YYYY. Only valid if a URL has been defined for this event,

3.2.6.12. **Block**

Upstream channels that should be blocked for the duration of this event. Valid fields are C1, C2, C3, C4, T1, T2, T3, T4 and XDS. Multiple channels should be separated by spaces. Channels that are not defined will be blocked or passed depending on the Pass column and the event defaults.

3.2.6.13. **Pass**

Upstream channels that should be passed for the duration of this event. Valid fields are C1, C2, C3, C4, T1, T2, T3, T4 and XDS. Multiple channels should be separated by spaces. Channels that are not defined will be blocked or passed depending on the Block column and the event defaults.

3.3. EXAMPLE

Included below is a sample playlist containing a couple program events, secondary v-chip logos and the basic header.

```
MetaCast - Playlist File
 Version=3.00
 Airdate=06/12/2001
 RatingSystem=CDN English
 Columns=EventType, Start, Name, Duration,
Rating
 1, 23:55:00, "Program A", 00:00:30, PG
 5, 23:55:00, "canengpg", 00:00:07, PG
 1, 23:55:30, "Program B", 00:00:30, C
 5, 23:55:30, "canengc", 00:00:07, C
 1, 23:56:00, "Program C", 00:00:30, PG
 5, 23:56:00, "canengpg", 00:00:07, PG
 1, 23:56:30, "Program D", 00:00:30, 14+
 5, 23:56:30, "caneng14", 00:00:07, 14+
```

3.4. AIRING THE PLAYLIST

In MetaCast, a playlist is a sequence of events that describe what MetaCast should do at particular times of the day. Although most broadcasters will define programming for their entire broadcasting day, playlists do not necessarily have to cover the period continually; MetaCast will support both intermittent programming and overlapping events. **Note**: Programming events cannot overlap since the encoder can only send one set of information at a time.

To determine the correct information to send to the hardware you must instruct MetaCast to air your playlist. If your playlist has been created for the current broadcast date, MetaCast will immediately find the current events and if you are online and encoding, will begin to send data to the hardware. However, if yours is a recurring playlist or you are trying to air a playlist on a date for which it was not intended, MetaCast will have to calculate a temporary new air date so that it can find the what events cover the current broadcast time.

Events that become active are highlighted in the playlist according to the settings defined in the Playlist Colours page in the Options dialog. If there are no highlighted events, check the statusbar for more information. The playlist position light indicates where the broadcast time falls in respect to the playlist. The following table outlines the possible values:

Light	Description
EDIT	MetaCast is in edit mode and the playlist has not been aired. Select 'Air Playlist' from the Playlist menu to begin broadcasting your playlist.
EARLY	The current broadcast time falls before the first event in the playlist. If no more than fifty days previous to the beginning of the playlist, either the next logo event or next program event counters will indicate the time remaining until the playlist begins.
CURRENT	The current broadcast time falls between the beginning of the first event and the end of the last. Any events that include the current time will be highlighted and the appropriate data will be available to send to the hardware. It is possible that no events will be highlighted if the current time falls between playlist events.
EXPIRED	The current broadcast time falls after the end of the last event. MetaCast has run out of control events; a new playlist must be loaded or additional events appended to the current one.

If the events you expect to be active do not appear to be so, it could be for one of the following reasons:

- **MetaCast is in Edit Mode.** Check that the playlist position light does not contain the word 'EDIT'. If it does, select 'Air Playlist' from the Playlist menu.
- **Active Event Highlight Colours are the same as Inactive Event Colours.** Check the Playlist Colour options to ensure that Offline Program and Online Program do not have white backgrounds like the default program events and that active logos do not have the same colours as regular logos.
- **Broadcast Time is Incorrect.** To achieve greater accuracy and flexibility, MetaCast maintains its own internal clock which is referred to as broadcast time; this time can be different than your local time or the time maintained by Windows. The current broadcast time is displayed at the top of the Clock page and on the far left side of the statusbar. Check that this time is what you expect and that it falls after the start time and before the duration expires for the event in question. See Broadcast Time for more information.
- **Start Date is Incorrect.** To allow users to replay playlists on multiple dates, MetaCast does not hardcode the dates associated with the playlist event start times. The dates are instead stored as offsets which are added to an internal start date to determine the actual event times. You can view the event dates in both forms by enabling the Day column in the playlist and changing the data format; these settings are available from the Playlist Columns options page. If the date on each event does not match the broadcast time, you can either change the dates manually by clicking on the Day column and using the up/down control or by selecting Find New Start Date from the playlist menu.
- **MetaCast has not been Updated.** Generally MetaCast will update the current event automatically; however, to force MetaCast to re-evaluate the playlist, select 'Update' from the Playlist menu or click the 'Update and Resend' button,  , on the encoder toolbar. If you are online with either an encoder or logo inserter, this command will also update the data in the hardware.

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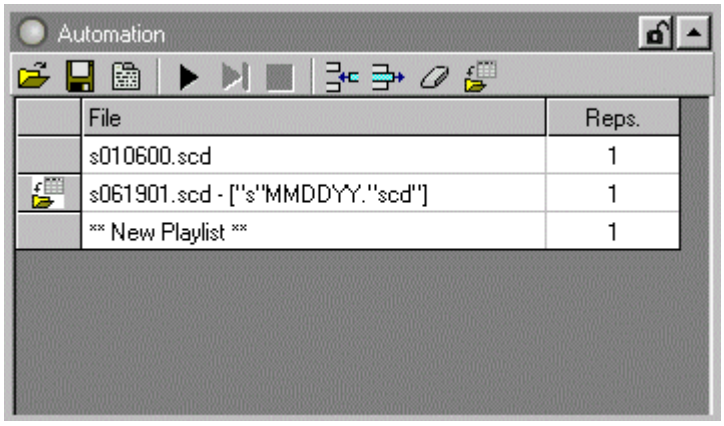
4. PAGES

4.1. AUTOMATION PAGE

This page allows you to automate how MetaCast loads playlists. You can either create a list of playlists to load in sequence or you can instruct MetaCast to find a file that matches the current date.



The body of this page contains MetaCast's automation list. The list is a series of playlist files that, when activated, will play out in order and loop upon reaching the end. Each row represents one playlist with the file name in the File column and the number of times to repeat that file in the Reps column. Entries with folder/calendar icons are dated automation entries which change depending on the date in accordance with the formula in square brackets. An entry can be toggled between a normal entry and a dated one by clicking the 'Toggle Load by Date' button,  , on the automation toolbar,

To change a file name or the date formula, double-click en entry in the file column. To change the number of repetitions, click the Reps. column and adjust the arrow buttons. Entries can be re-arranged by holding down the left mouse button and dragging up or down. The black line indicates where the item will go. You can also drag files from a Windows folder right into the automation list.

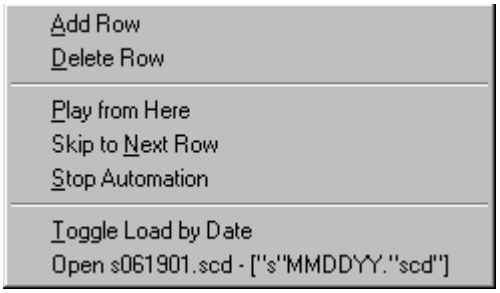
To play the list you can either right click on the initial event and select 'Play from Here' or select the event and press the play button on the toolbar. Once playing you can adjust the current playlist by holding down the right mouse button and dragging up and down.

Entries highlighted in red indicate files that could not be found when MetaCast last updated the list. To manually refresh the list, right click and select 'Update List'. MetaCast will still attempt to open highlighted items when it encounters them.

4.1.1. Toolbar

Button	Title	Description
	Import Automation Entries	Load an automation list from file and append it to the current one. This can be used to load old Script files from MetaCast versions 1.xx
	Export Automation Entries	Write an automation list to a file. Normally the automation list is saved as part of your configuration; however, you can use this option if you wish to transfer automation lists between configurations or computers.
	Options	Open the options page to set the playlist pickup directory as well as the date naming format.
	Play	Start the automation list from the selected entry.
	Next	Skip ahead to the next item in the list.
	Stop	Stop automation.
	Append Automation Entry	Add a blank automation entry to the end of the list
	Delete Automation Entry	Delete the selected entry. You cannot delete the entry for the currently loaded playlist.
	Toggle Load by Date	Toggle whether the selected entry is a regular fixed filename or whether it should compute the file name based on the date.

4.1.2. Context Menu



4.1.2.1. Add Row

Add a blank automation entry to the end of the list

4.1.2.2. Delete Row

Delete the selected entry. You cannot delete the entry for the currently loaded playlist.

4.1.2.3. Play from Here

Start the automation list from the selected entry.

4.1.2.4. Skip to Next Row

Skip ahead to the next item in the list.

4.1.2.5. Stop Automation

Stop automation.

4.1.2.6. Toggle Load by Date

Toggle whether the selected entry is a regular fixed filename or whether it should compute the file name based on the date.

4.1.2.7. Open/Load ...

If the automation list is playing, this item will open the selected playlist in a new edit window. Otherwise, the selected playlist will be loaded into the current instance of MetaCast.

4.1.2.8. Update List

Forces MetaCast to manually refresh the automation list. This cause it to re-confirm whether the files exist or not. Files that cannot be found will be highlighted in red.

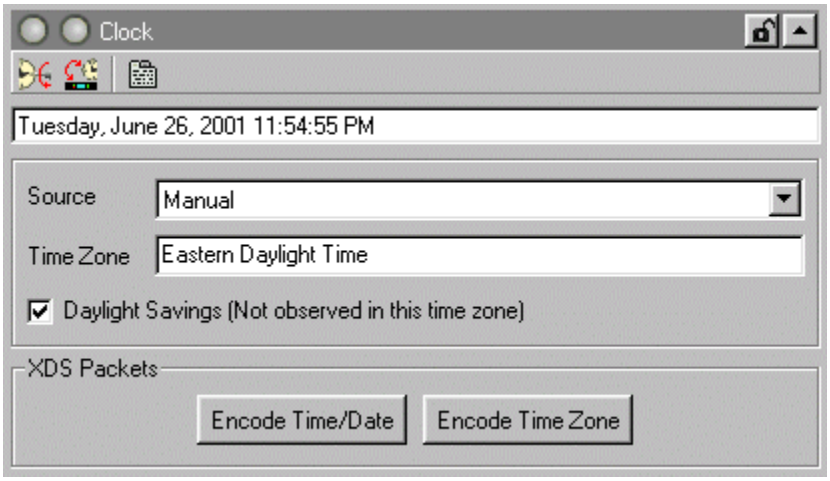
4.1.3. Lights

The automation light can also be found on the status bar.

	
Automation is off. MetaCast will stop encoding once the current playlist has ended.	Automation is active, MetaCast will load the next playlist in the list when the current playlist ends.

4.2. CLOCKS PAGE

The clocks page allows you to view and set the current Broadcast time. Additionally, you can send Time of Day and Time Zone XDS packets from this page.



The first box on this page displays a full version of the current Broadcast Time; this time is also available in 24 hour format on the status bar. The format is composed of Windows' Long Date and Time format as defined under Regional Settings in the Windows Control Panel.

The next control allows you to select the source of the broadcast clock. The following table describes the available modes:

Time Source	Description
PC Clock	MetaCast takes all date, time and time zone information from the hosting Windows PC.
Encoder	Time is taken from the encoder's internal clock. Although MetaCast will maintain the time when not connected to the encoder, you will have to be connected to remain synchronized.
Manual	MetaCast uses the PC clock to count seconds but maintains the Broadcast time independently.

The Time Zone field is not directly editable but may be modified by clicking 'Set Clock' from the toolbar. The time zone presented generally indicates whether Daylight Saving Time (DST) is active by including the word 'Daylight' or when inactive by using the word 'Standard'.

The Daylight Saving checkbox allows you to set whether DST is currently active or not. If this field is disabled, MetaCast has been set to automatically adjust for DST. A check in the box means that DST is active. The comments 'Not observed in this time zone' means that the selected time zone will ignore DST when calculating local time.

The bottom two buttons allow you to toggle whether Time/Date and Time Zone packets are being encoded. If the buttons are pressed then the associated packet is being encoded and should appear on the Encoder Status page.

4.2.1. Toolbar

Button	Title	Description
	Set Clock	Open up the Date/Time Properties window so that you can edit the Date, Time and Time Zone. If your clock source is the PC, this button will open the standard dialog used to set the PC clock.
	Sync MetaCast and Encoder	If you are connected to an Encoder, this button will ensure that MetaCast and it are synchronized. If your clock source is the Encoder, MetaCast will update its own clock, otherwise MetaCast will update the clock in the Encoder.
	Options	Shortcut to the General Options page when you can set various clock parameters.

4.2.2. Lights

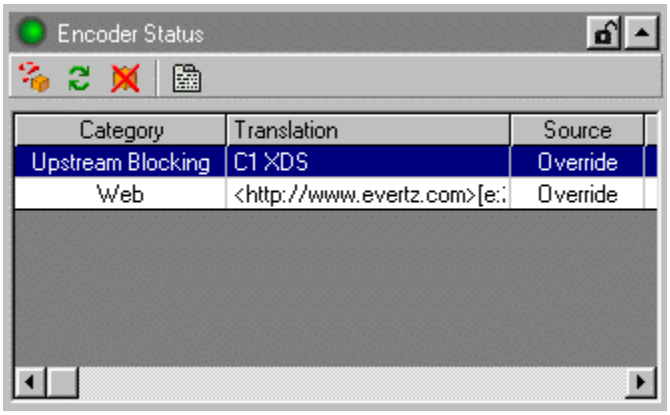
The two lights on this page, from left to right, indicate the status of the Time/Date packet and the Time Zone packet respectively.

(gray)	(green)	(red)	(yellow)
The packet is not in the Encoder's memory according to MetaCast. This is the default situation when offline.	The packet is being encoded as expected.	The packet is not being encoded as expected. There is an error of some sort.	Transition between states.

See Also:
Configuring Clocks

4.3. ENCODER STATUS PAGE

The encoder status page displays the current status for XDS packets, web links and upstream blocking.



The majority of the page contains a grid listing packets that MetaCast has sent to the encoder as well as any packets that were sent to the encoder by another device. Each row represents a separate packet and the colour of the row indicates its status. On the Encoder Status options page, you can define what colour will represent the various packet states and what columns appear in the grid. You can get to the Options Page by right-clicking the the column headers or clicking the Options button,  , in the toolbar.

The possible packet states are:

State	Default Colour	Description
Packet OK	White	The packet has been sent to the encoder successfully.
Packet Missing	**Red**	The packet could not be sent to the encoder, likely due to communications failure.
Packet Wrong	**Red**	The packet is in the encoder but the data is incorrect. This is usually caused by communications failure when MetaCast tries to update the packet.
Packet Unknown	**Blue**	The packet is in the encoder but was not sent by this instance of MetaCast. This can be caused by another device controlling the encoder through a different serial port or by leaving packets active after closing MetaCast.

The possible packet columns are:

Column	Description
Packet ID	The four number ID for the packet as defined by EIA-608. For web packets, the ID is 'URL' and for upstream blocking the packet is 'Block'.
Category	A descriptive identifier for the packet.
Raw Data	The actual raw data being encoded for the packet. For unknown packets MetaCast may only be able to display the first few characters of data.
Translation	A textual translation of the raw data. For unknown packets MetaCast may not be able to translate the data.
Repetitions	The number of times the packet will be repeated in the video stream. The value is always 9999 which means the packet will be sent indefinitely.

4.3.1. Toolbar

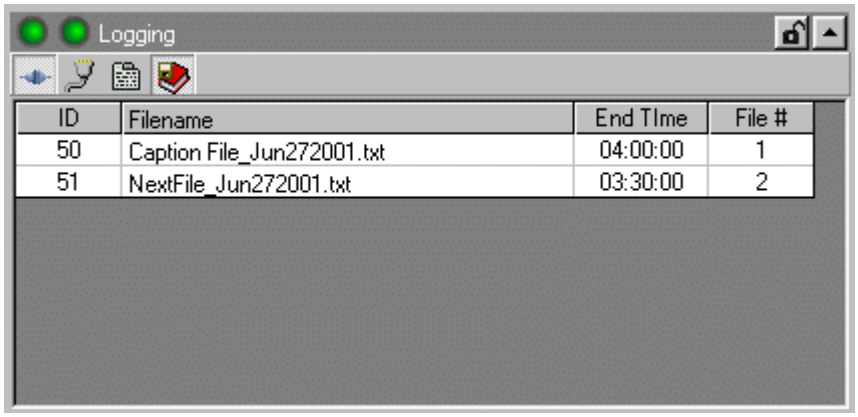
Button	Title	Description
	Check & Confirm Packets	Check the encoder memory to confirm that packets are being encoded as expected. This function will update the status for the packets in the grid.
	Update Playlist and Hardware (Ctrl + R)	MetaCast will resend all data to the hardware and if the playlist is on air, MetaCast will re-evaluate what the current events are.
	Delete Packet	Delete the selected packet from the encoder. The selected packet appears highlighted in the grid and can be chosen by clicking on any column. Only system packets (Station Name, Call Letters, Time of Day etc.) and unknown packets can be deleted in this fasion. If you wish to remove program packets that have been sent by MetaCast you must change the source of the packet in the playlist. Program fields set to 'Upstream' or blank will not be encoded.
	Options	Open the Encoder Status page in the Options dialog.

4.3.2. Lights

 (gray)	 (green)	 (red)	 (yellow)
There are no packets in the Encoder memory according to MetaCast. This is the default situation when offline.	All of the packets are being encoded as expected.	One or more packets are not being encoded as expected.	Transition between states.

4.4. LOGGING PAGE

This page allows you to monitor and control MetaCast's caption logging features.



The logging status grid occupies the majority of this page and contains a list of the current log destination files. Each row corresponds to a separate logging event that is currently active in the playlist. The first column displays the id for the source event, the second displays the filename while the third column displays the time at which the event is scheduled to end. The final column refers to the file number as it was opened by MetaCast.

Using the 'Manual Log' button in the toolbar, you can start logging to a file without inserting Logging events in your playlist. After clicking this button you will be prompted to enter a filename. Clicking OK will create a new line in the status grid with the ID 'Manual'. This item will continue to log until you click the button again.

4.4.1. Toolbar

Button	Title	Description
	Connect/Disconnect	When the button is unpressed, clicking it will instruct MetaCast to connect to the logging decoder. When pressed, clicking this button will disconnect the logging device. MetaCast's logging connection status is visible by the lights on this page and the status bar.
	Port Settings	Open the port settings to correctly configure MetaCast to talk to your logging device.
	Logging Options	Open the Logging page in the Options dialog.
	Toggle Manual Log	If unpressed, this button will begin a manual log otherwise it will end the current manual log.

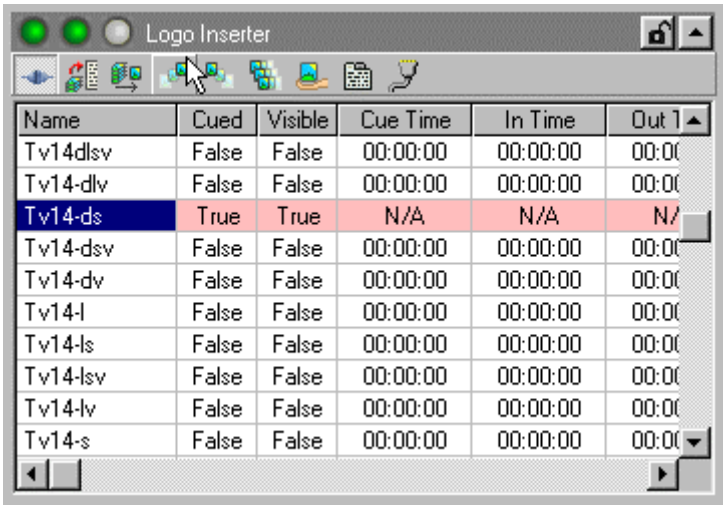
4.4.2. Lights

The lights on this page, from left to right, indicate the logging connection status and whether any logs are currently active respectively

Light	(gray)	(green)	(red)	(yellow)
Connection Status	The logging device is offline or has been successfully disconnected.	The logging device is online.	The logging device is offline due to a connection error.	The logging device is attempting to connect.
Log Active	There are no log files currently being written.	One or more logs are currently open and being written to.	N/A	N/A

4.5. LOGO INSERTER STATUS PAGE

This page displays the status of the logo inserter and its logos and allows you to manually cue, fade in or fade out any logos that are in the box.



The logo status grid, occupying the majority of this page, lists all of the available logos in the logo inserter plus their status and various parameters. To initially fill the list when you first open MetaCast, you need to click the Connect button,  , and once the first light goes green, click the Retrieve Logo List button,  . This process may take a while if there are many logos in the box; a progress meter in the toolbar will show how much time is remaining.

Each row in the status grid represents one logo in the logo inserter. Each column displays a different piece of information about that logo. By right-clicking on the column headers or going to Logo Columns on the Options page, you can choose what columns are displayed.

Logos highlighted in red are under manual control and cannot be accessed by playlist events. A logo comes under manual control if you press the cue  , fade in  or fade out  buttons in the toolbar while that logo is highlighted. To release the logo so that playlist events can once again access it, click the Release button,  , in the toolbar.

4.5.1. Columns

Column	Description
Name	The name of the logo as it is stored in the logo inserter. This value is case sensitive and so any references must match this title exactly.
Cue Status	True or False. Whether the logo is presently cued or not.
Visible	True or False. Whether the logo is presently visible on screen or not.
Animation	True or False. Whether the logo is an animation or not. Animated logos must follow different rules as to their placement on screen and the time required to cue them. See Logo Rules for more information.
Transparency	The percentage transparency for the logo. 0% transparent means the logo is completely visible, 100% transparent means the logo is invisible.
Horizontal Position	The horizontal sample number where the logo begins.
Vertical Position	The top line on the screen where the logo appears.
Fade In Duration	The number of frames it takes to fade in the logo.
Fade Out Duration	The number of frames it takes to fade out the logo.
Hold Duration	The number of frames the logo remains on screen before it automatically fades out again. This feature is not supported by MetaCast and all logos should display 'Always' in this field.
Clear	True or False. Whether the event times are valid or not. True means this logo has no upcoming playlist events in the near future.
Time to Cue	Time at which this logo is scheduled to be cued. This value is calculated from the playlist and is based on the first upcoming reference to this logo.
Time to Fade In	Time at which this logo is scheduled to be faded in. This value is calculated from the playlist and is based on the first upcoming reference to this logo.
Time to Fade Out	Time at which this logo is scheduled to be faded out. This value is calculated from the playlist and is based on the first upcoming reference to this logo.
Event ID	The next upcoming event that references this logo.

4.5.2. ToolBar

Button	Title	Description
	Connect / Disconnect	Connect to the Logo Inserter. Clicking this button when it is depressed will disconnect MetaCast from the logo inserter. The connection process may take a couple of seconds. During this time the connect light will turn yellow. Afterwards, if MetaCast is able to connect the light will go green otherwise it will turn red.
	Retrieve Logo List	Once connected, this button will retrieve a list of the available logos in the logo inserter. If there are many logos in the box this process could take a while. A progress meter on the main toolbar will indicate how much time remains.
	Cue Logo	Cue the selected logo so that it can be quickly faded in when required. To cue a logo, click the desired row in the status grid and then click this button. If not already under manual control, the targeted row will turn red. This means that the events in the playlist will no longer be able to cue, fade in or fade out this logo. This process could take a considerable amount of time if the logo to be cued is an animation. If operating with an old version of logo inserter firmware (previous to 1.6 build 113), MetaCast will not be able to tell if the logo is an animation and may disconnect while it is cueing. It is recommended that your logo inserter firmware be upgraded for operations under MetaCast.
	Fade In Logo	Fade in the selected logo so that it is visible on screen. If the logo has not been previously cued, the logo inserter will do that now. To fade in a logo, click the desired row in the status grid and then click this button. If not already under manual control, the targeted row will turn red. This means that the events in the playlist will no longer be able to cue, fade in or fade out this logo.
	Fade Out Logo	Fade out the selected logo. This button has no effect if the logo has not be faded in previously. To fade out a particular logo, click the desired row in the status grid and then click this button. If not already under manual control, the targeted row will turn red. This means that the events in the playlist will no longer be able to cue, fade in or fade out this logo.
	Fade Out All Logos	Fade out all visible logos. This button has no effect if there are no visible logos. Any logos that were visible or cued before this command was sent will come under manual control. This means that the events in the playlist will no longer be able to cue, fade in or fade out this logo.
	Release Logo to Playlist	Halts manual control of the selected logo and allows it to be accessed by the playlist. This button has no effect on logos that are no under manual control (i.e. appear white in the logo status grid)
	Logo Options	Opens the Options dialog to the Logos page. Allows you to configure Auto V-Chip logos as well as logo maps and columns.
	Logo Comm Settings	Opens the logo inserter comm port settings.

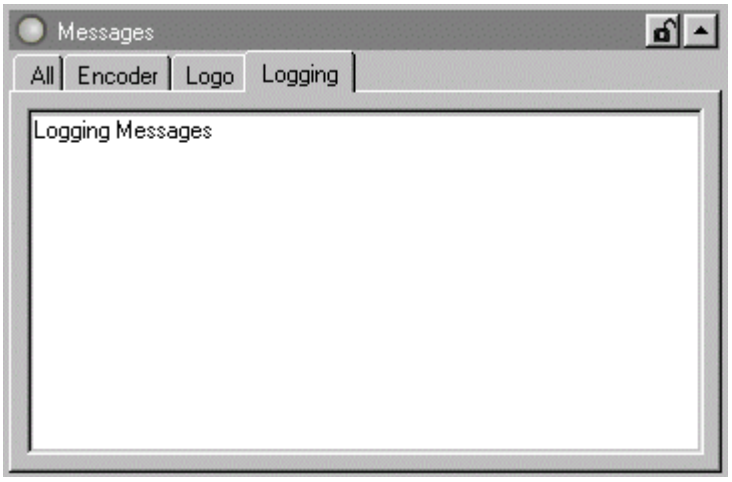
4.5.3. Lights

The three lights on this page from left to right, are the logo inserter connection status, logo visible indicator and the animation active indicator respectively.

Light	(gray)	(green)	(red)	(yellow)
Connection Status	The logo inserter is offline or has been successfully disconnected.	The logo inserter is online.	The logo inserter is offline due to a connection error.	The logo inserter is attempting to connect.
Logo Visible	There are no logos visible on screen at present.	One or more logos are flagged as visible on screen.	N/A	N/A
Animation Active	There are no animations currently active.	An animated logo is currently playing.	N/A	N/A

4.6. MESSAGE PAGE

This page displays messages relating to MetaCast operations or device communications. New messages are appended to the end of old messages so that you can scroll back through the history of operations.



There are four tabs on the this page that each display messages referring to different aspects of MetaCast. The 'All' tab displays every message received or sent by MetaCast. Messages referring to specific devices will appear in a particular colour while general messages will appear in black. The remaining tabs display the messages sorted by colour and device. The table below outlines what the coloured messages refer to.

Colour	Device
Green	Encoder
Blue	Logo Inserter
Red	Logging Decoder

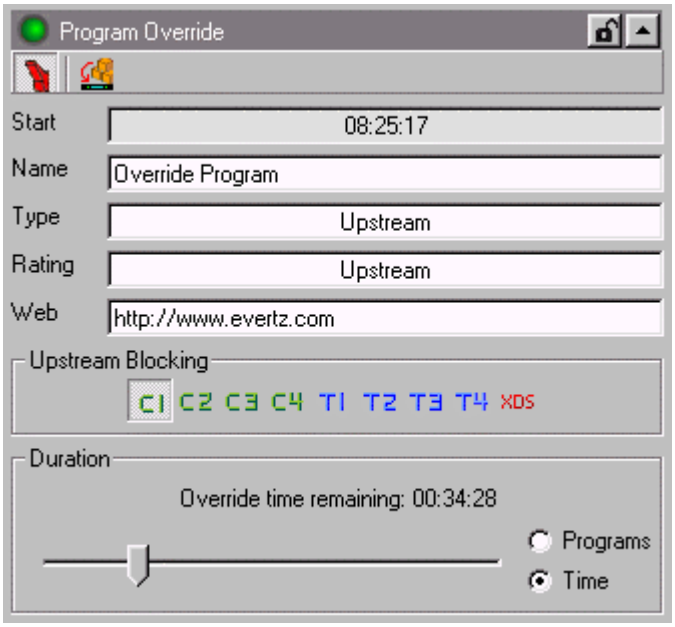
4.6.1. Lights

The light on this page flashes when a new message appears. The light will go green if the message is expected or red if the message indicates an error situation. The MSG light in the status bar behaves identically to this light and double-clicking it will open this page.

(gray)	(green)	(red)
Normal state, no incoming messages.	There is a new message.	This is a new error or warning message.

4.7. PROGRAM OVERRIDE PAGE

This page allows you manually send program information such as name, rating and web URL without the need to create a playlist. It also allows you to quickly override the playlist if you wish to make a last minute change or if you need to edit the playlist without affecting the outgoing data.



The fields on this page correspond to the available program columns in the main event grid. Every parameter sent from a primary or secondary program event can be encoded through this page without having to create the event at the correct time. Clicking the red switch in the toolbar so that the button is depressed and the switch is up, triggers the program override to begin. The override will end as specified by it's duration and control will then return to the playlist.

Start

This field is set automatically when the override begins. Its only purpose is as a reference for the user.

Name

The program name to be encoded in the XDS stream. It must be between 1 and 32 characters in length and may only contain ASCII codes from 32 to 127.

Type

Double-clicking on this field will open the standard Edit Program Type Dialog. A value of upstream means that no program type packet will be encoded.

Rating

Double-clicking on this field opens the standard Edit Rating Dialog for the current rating system. A value of 'Upstream' means that no rating packet will be encoded.

Web

To edit the detail fields for the web link, double-click this field. If you do not wish to encode a web link, set the URL to blank or "http://".

Upstream Blocking

To block an upstream channel, click the corresponding button until it appears depressed.

Duration

The duration indicates how long the override will remain before control returns to the playlist. Duration can be specified in terms of time or programs and adjusted by moving the slider left and right. When specified in programs, MetaCast will return to the playlist once the indicated number of programs have completed. If the slider is moved to the extreme right or left, the override becomes permanent and will remain until the user turns it off. This setting can be useful if you are manually entering v-chip data rather than using a playlist.

4.7.1. Toolbar

Button	Title	Description
	Toggle Override	Toggles whether the override is active or not. Override is engaged when the button is depressed and the switch is up.
	Resend Packets	Resends all XDS packets to the encoder. Normally MetaCast only updates the encoder at the beginning of an event or when the data changes.

4.7.2. Lights

 (gray)	 (green)	 (red)	 (yellow)
The program override is inactive.	Program override is active and all packets are being encoded as expected.	One or more packets are not being encoded as expected.	Transition between states.

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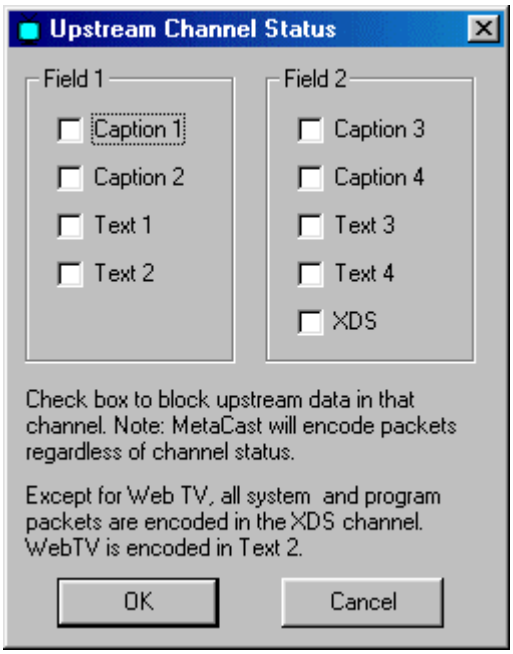
5. FORMS

5.1. CHANNEL STATUS

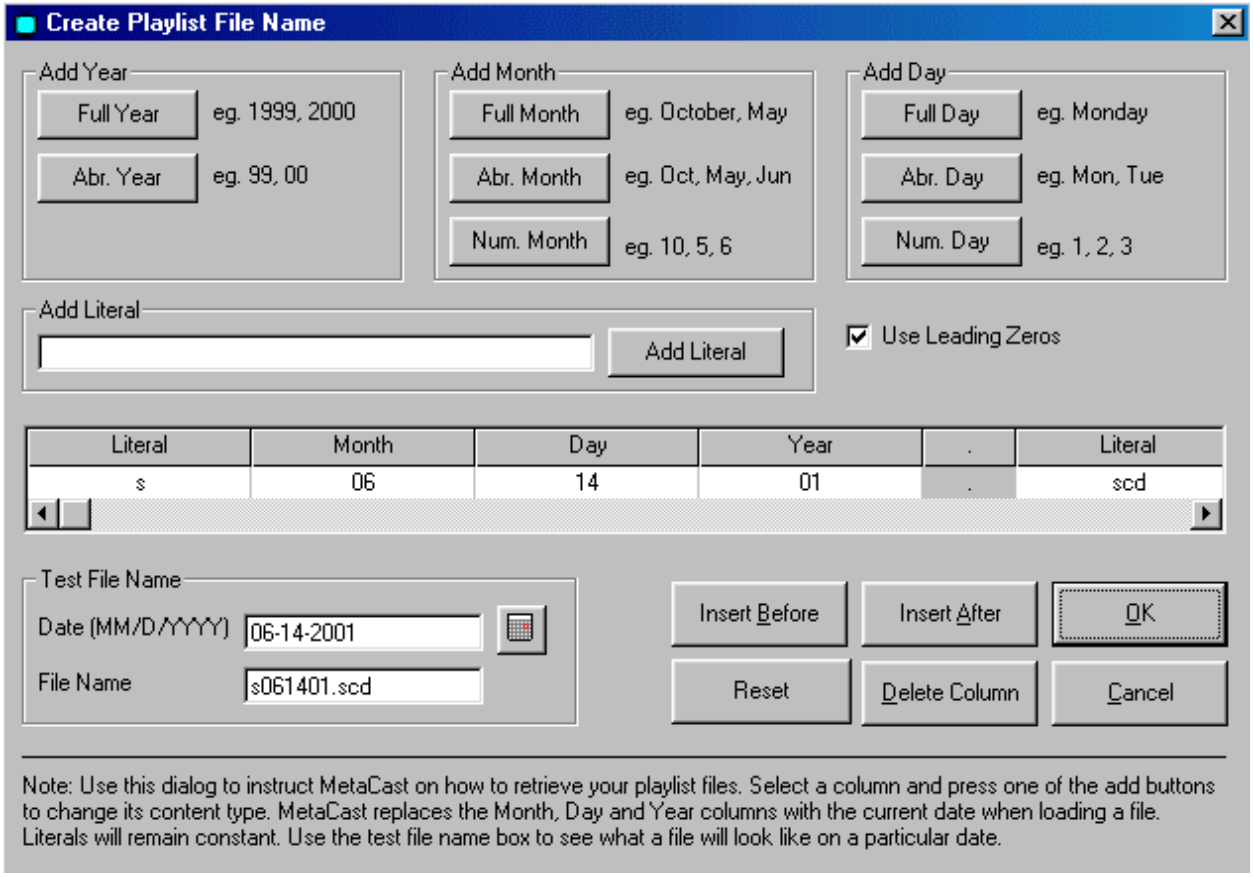


This dialog allows you to change the status of individual data channels for the duration of the event in regards to passing or blocking upstream data. If a box is checked, then upstream data will be blocked and will not be outputted by the encoder. If the box is clear and MetaCast is not inserting its own data, then upstream data will be passed.

Note: All XDS information such as program type, program name, station name, call letters, etc. are encoded in the XDS channel of field 2. The only exception is a program's Web Link which is encoded in text channel two of field one.

You can confirm that your changes have taken effect by pressing SHIFT + DOWN on the encoder front panel which displays the status of each channel. The first block are caption channels 1-4 and the second block is text channels 1-4 and XDS. If a channel has an X in it then it is blocked. See the encoder manual for more information on the feature.

5.2. CREATING CUSTOM FILENAMES



You can use this dialog to create a custom filename format for MetaCast. To use when finding playlists or schedules. The grid in the middle of the screen displays each of the components that make up the file name. Literal columns are displayed as they are entered while Month, Day and Year columns are replaced with the current date when loading a file. You can select a column by clicking on it and then change it using the buttons on the top of the page. You must enter a string into the Add Literal textbox before pressing Add Literal.

The Test File Name area allows you to see what a filename will look like on a particular date. Press the calendar button to choose a date and MetaCast will automatically update the filename box.

You can add or remove columns using the buttons in the bottom right. The Reset button will revert back to MetaCast's default filenames.

Follow these steps to create a custom file format:

1. Examine an existing filename that uses the desired naming conventions. Break it down into Literals, Days, Months and Years. Make sure to separate the title from the extension. **Note:** In Windows, filenames are not case-sensitive.

2. Using the insert and delete functions, set the number of columns to match the number of items you found in your breakdown. **Note:** You cannot insert or delete the separator (.) column.

3. Select each column and change it to the appropriate type using the buttons at the top of the screen. If your numerical dates are padded with zeros as in example 1, make sure to select 'Use Leading Zeros'. MetaCast only supports filenames that pad all or none of their numerical dates with zeros.

4. In the test name area press the Calendar button and choose the date that matches your original example file. When MetaCast updates the filename box, you should find that it matches your original file. If it does not, check the grid to see which column is wrong. You may find that your have to break up a column into small components.

5. Once you have it correct, click OK. MetaCast will now use your filename format when searching for the correct schedule or playlist.

Example 1: log0208.at4

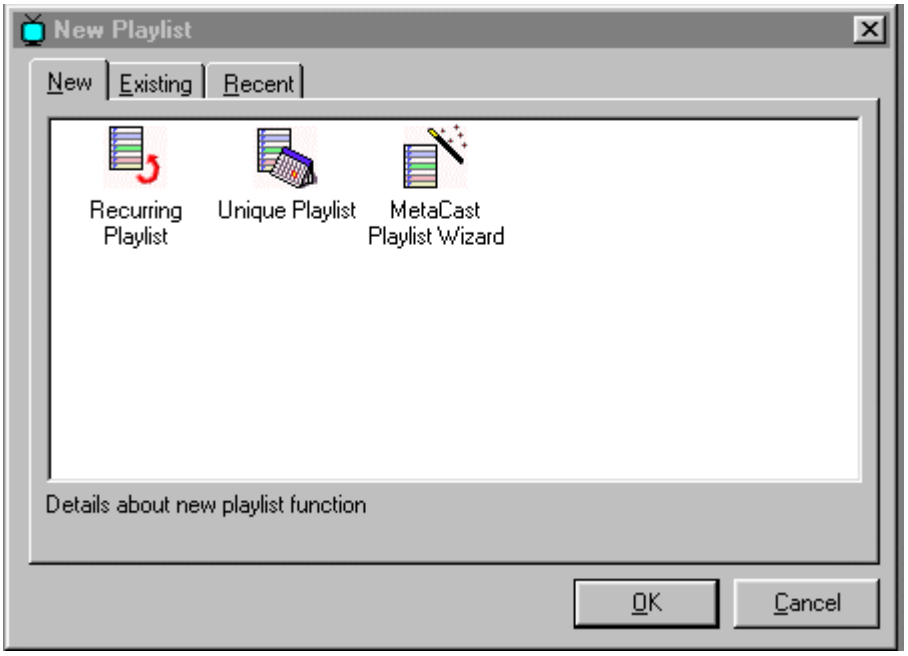
Log	Literal
02	Numeric Day /w Leading Zero
08	Numeric Month /w Leading Zero
.	Separator
at4	Literal

Example 2: MonFebruary82001.log

Mon	Abbreviated Day of Week
February	Full Month
8	Numeric Day
2001	Full Year
.	Separator
log	Literal

5.3. NEW PLAYLIST OPTIONS

The new playlist options form appears when you open MetaCast and when you select 'Create New Playlist' from the File menu,



The 'New' tab gives you different means of creating a new playlist in MetaCast. Clicking any of the icons will display a brief description of what the icons does, and clicking 'OK' will run the selected task.

When this dialog appears after you load MetaCast, you will also have access to the 'Existing' and 'Recent' tabs. The pages allow you to load any version of MetaCast file or import Enterprise logs.

5.3.1. New Playlists

5.3.1.1. Recurring Playlist

Create a recurring playlist if you intend to air the list on more than one day. This can be useful if your programming remains relatively consistent and you wish to simply repeat the same playlist daily, weekly or possibly monthly. The only difference in how MetaCast treats recurring playlists is when you are in edit mode, the day column will display relative dates like 'Day 1', 'Day 2' etc. When you air the playlist, MetaCast will convert the dates so that the events fall over the current broadcast time. This method will take the options off of the 'Create Playlist' page to build the new playlist.

5.3.1.2. Unique Playlist

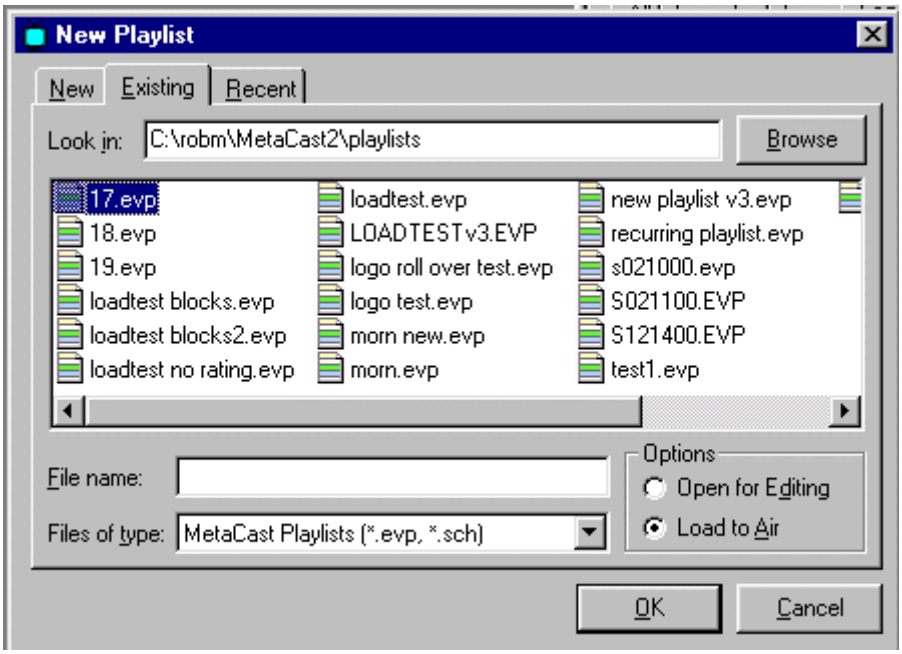
A unique playlist is one that is intended to be aired on a specific date. Due to the large number of files this technique would require, unique playlists are often created automatically by a conversion utility that can extract the correct information from your traffic system. See Playlist File Specifications for information on creating a custom filter. The main difference with this type of playlist, compared to a recurring one, is that when in edit mode, the day column in the event

grid will display the intended air date using the format you have selected. If you try to air the playlist on a date for which it wasn't intended, MetaCast will prompt you to update that air date so that it matches the current broadcast time. This method will take the options off of the 'Create Playlist' page to build the new playlist.

5.3.1.3. MetaCast Playlist Wizard

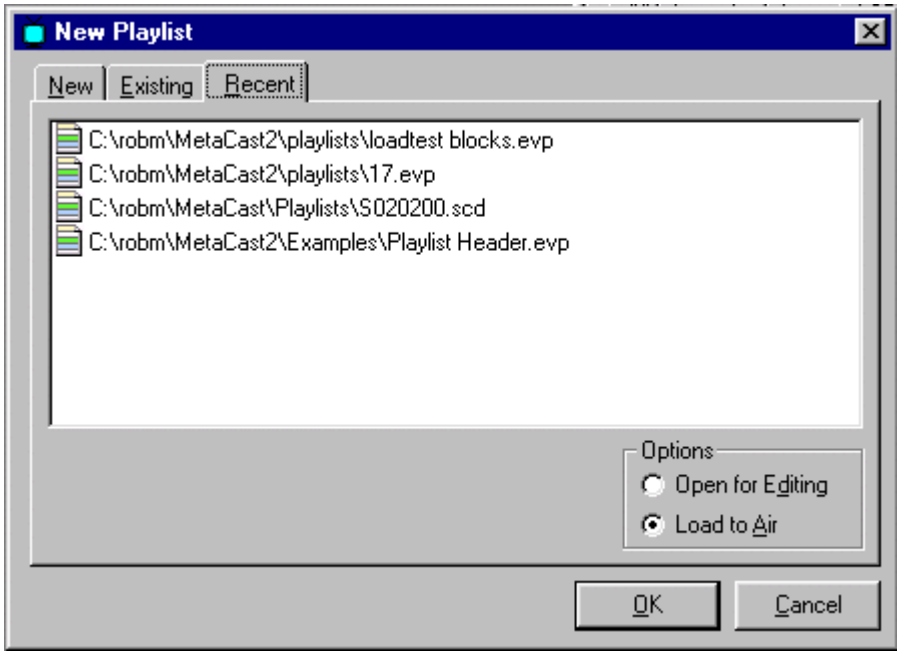
If you have not created a playlist before in MetaCast, it is recommended that you choose the playlist wizard. It will walk you through all of the steps needed to determine what you need and setup the appropriate list. Once you have done the wizard, your settings will be saved on the options page and selecting either a recurring or unique playlist will reuse your last set of options.

Existing



The 'Existing' tab allows you to load files that have been created with any version of MetaCast or from an Enterprise BMS Traffic System. The 'Browse' button allows you to change the folder you're looking in and the 'Files of type' combo allows you to choose which kind of file you are using. The options sections lets you choose whether the playlist will be opened for editing or to be aired immediately. See Airing your Playlist for more information.

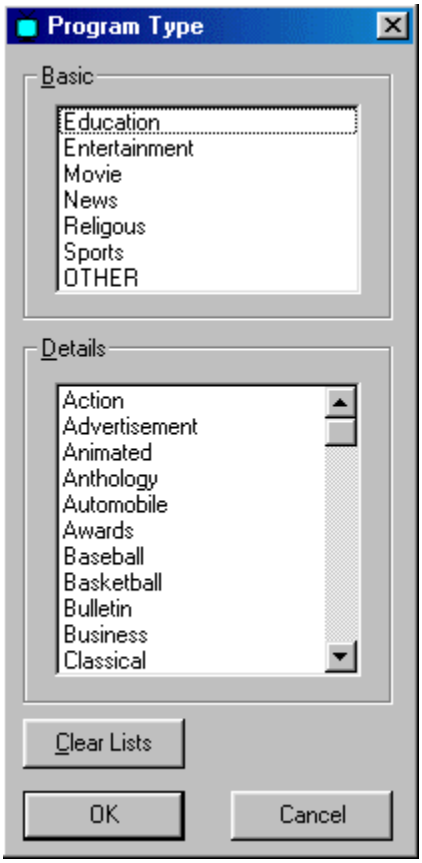
Recent



The 'Recent' tab is a shortcut to load some of the more recent files you have previously opened. Like the 'Existing' tab, the options section lets you choose whether you wish to edit the file or air it immediately.

5.4. PROGRAM TYPE

This dialog allows you to edit a program type for encoding in the XDS stream.



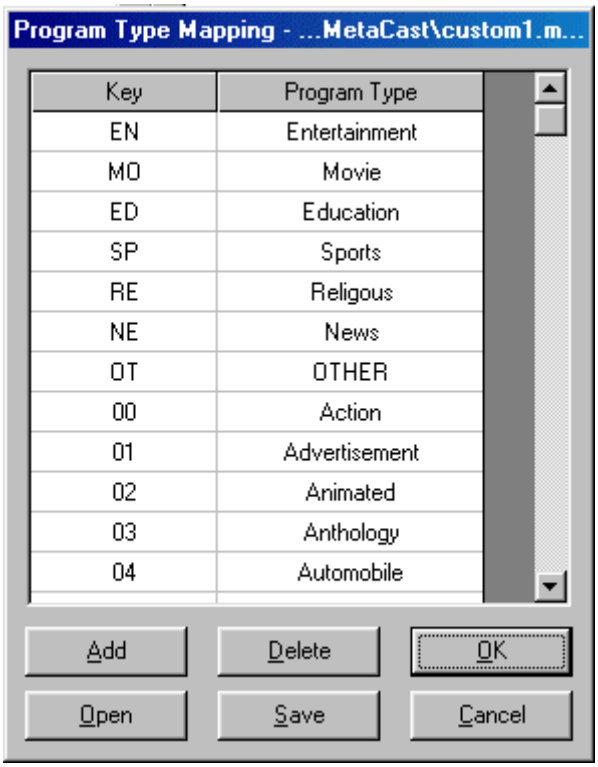
The program type as defined in EIA/CEA-608-B is a set of keywords that define the type or category of a program. The Basic group is used to define the the program at the most general level. For this packet to be encoded, you must select a minimum of one Basic type. Additionally, Detail keywords can be selected up to a maximum of 32 keywords in total including the Basic ones.

The keyword "OTHER" is used when the program does not fit into any of the other Basic types. Only Detail types that accurately describe the content of the program should be included.

See Also:
Program Type Mapping

5.5. PROGRAM TYPE MAPPING

This dialog allows you to alter the mapping scheme used to assign program types to values found in columns 155-158 in an Enterprise log file.



Mapping List

Each row in the grid represents a separate mapping key. The first column contains the key that is compared to the value found in the playlist file. It can be a maximum of two characters. If the key matches the log, than the current program event is assigned the program type found in the second column. A single key can be used to represent multiple program types.

Add

This button will add a new row to the end of the program map.

Delete

Clicking this will remove the current row.

Open

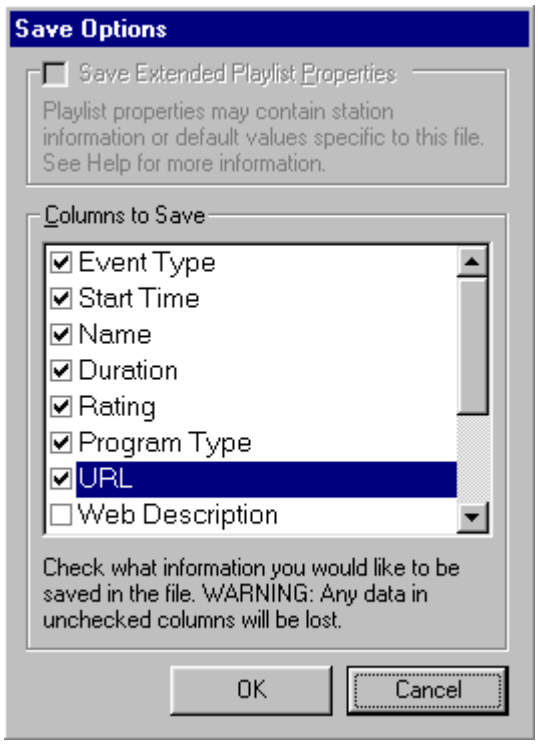
Load a mapping file from disk.

Save

Saves the current mapping list to a file. Warning: If you click OK before saving, all changes will be lost.

5.6. SAVE OPTIONS

This form appears when you save a playlist and it allows you to choose what fields from the event grid will be saved in the file.

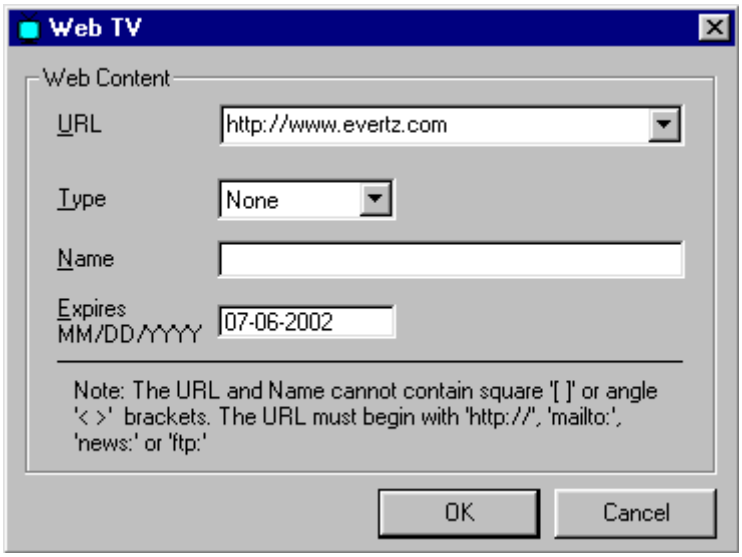


The checkbox at the top of the control allows you to choose whether you wish to save the optional properties with the playlist file. The box will be unavailable if there are no optional properties associated with the current playlist. Optional properties can be edited through the Playlist Properties dialog.

The remaining portion of this page allows you to select what fields you would like to be saved in the file. In is generally recommended that you save all information with the playlist. However, if you would like to keep your files cleaner so that they can easily be edited through a text editor or if you want to retain the appearance of files generated through a custom filter, you can selected fewer fields.

5.7. WEB LINKS

This form allows you to edit the various parameters necessary to associated a web page with a program event. The form can be opened by double-clicking any of the web fields, i.e. URL, Web Desc., Web Type, etc, on the events grid or from the default program options page.



URL

The URL is the universal resource locator for the web page and must contain the protocol, i.e. 'http://', 'ftp:', 'mailto:' etc, in addition to the full file name.

Type

The type of web page the URI points to. This can be 'Program', 'Network', etc. A value of 'None' indicates that this fields will not be encoded.

Name

A text description of the web page. On most web TV decoders, this field will be displayed to the user rather than the URL itself. This field should be as brief as possible to conserve bandwidth.

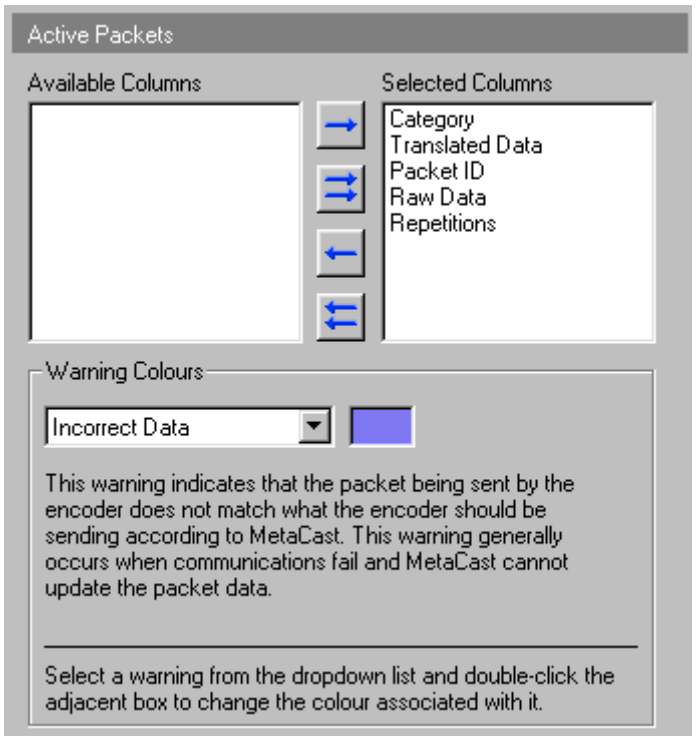
Expires

A date in month/day/year format that indicates when the web page is valid until.

6. OPTIONS

6.1. ENCODER STATUS OPTIONS

The encoder status page displays the current status for XDS packets, web links and upstream blocking. These options allow you to customize how the page is displayed.



The two list boxes at the top of the form allow you to change what columns are displayed in the encoder status grid and in what order they appear. The left list displays the columns that are presently hidden but can be displayed in the grid. The right list displays the visible columns in the order that they appear in the grid. Selecting an item in either list and clicking the single arrows will move it to the other list. The double arrows will move all of the columns.

The columns are described as follows:

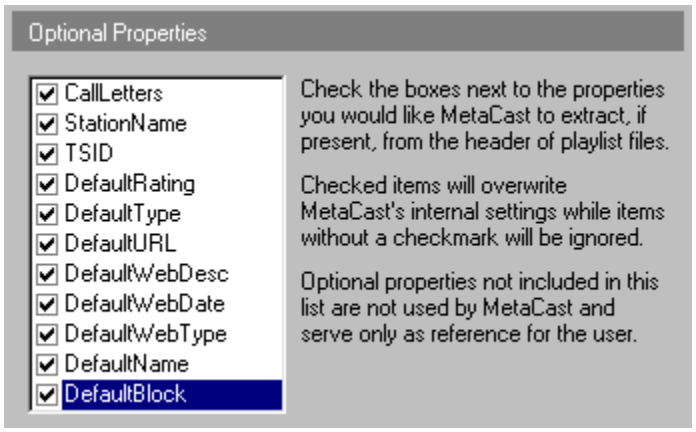
Column	Description
Packet ID	The four number ID for the packet as defined by EIA-608. For web packets, the ID is 'URL' and for upstream blocking the packet is 'Block'.
Category	A descriptive identifier for the packet.
Raw Data	The actual raw data being encoded for the packet. For unknown packets MetaCast may only be able to display the first few characters of data.
Translation	A textual translation of the raw data. For unknown packets MetaCast may not be able to translate the data.
Repetitions	The number of times the packet will be repeated in the video stream. The value is always 9999 which means the packet will be sent indefinitely.

6.1.1. Warning Colours

This portion of the form allows you to change the colour for packets that are not being encoded as expected. To change a colour, select the warning from the dropdown list and then double-click on the coloured box to the right. A description of the particular warning appears beneath the dropdown list.

6.2. OPTIONAL PROPERTIES OPTIONS

This page allows you to instruct MetaCast on what headers should be read from MetaCast playlist files.



Accessible by clicking on 'Optional Properties' on the options dialog, this list box allows you to select what properties you want MetaCast to extract when loading playlist files. The properties listed are optional and may or may not be present in the playlist file.

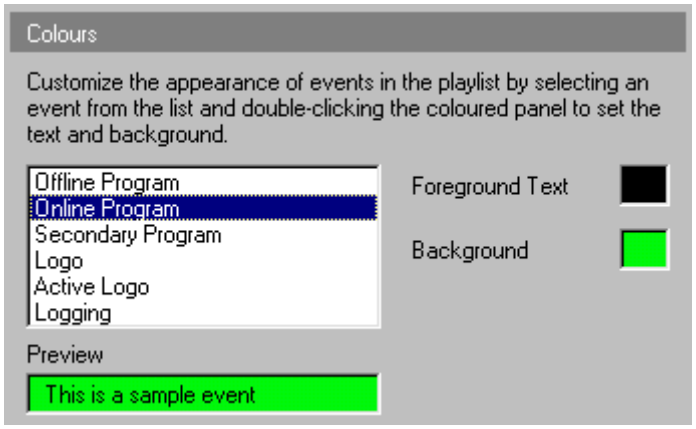
Optional playlist properties can be added to a playlist through the Playlist Properties dialog or inserted into a file by a custom filter. MetaCast will always read user-defined playlist properties

but these values are not processed by MetaCast and serve only as a reference for the user. All properties can be viewed through the Playlist Properties dialog.

If MetaCast encounters a valid playlist property that it has been instructed to read, this value will be processed and used accordingly. If the property includes system information such as call letters, station name or TSID, the value will be copied to the corresponding control on the Station page. If the property contains default program data it will be used in place of MetaCast's own internal defaults. See Default Programs for more information on how MetaCast uses default data.

6.3. PLAYLIST COLOURS

The options on this page allow you to change the colours for various events on the playlist event grid.



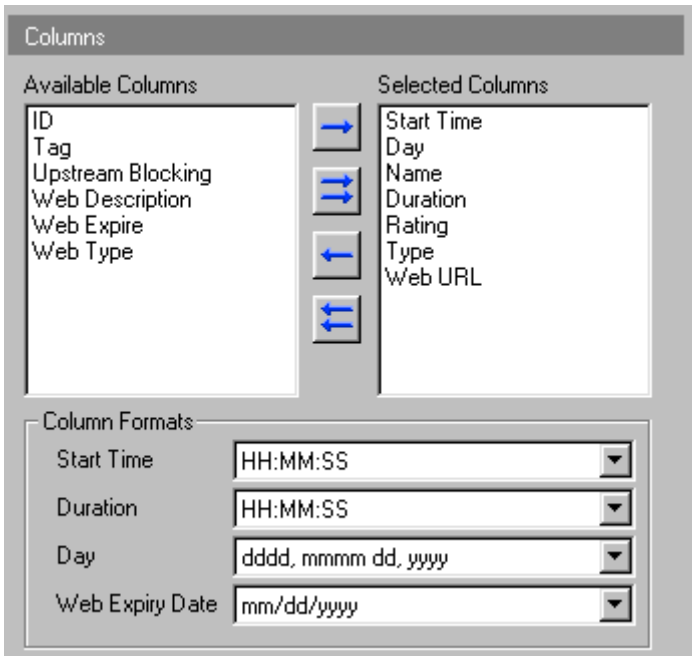
To change an event colour, select the item from the list and then double-click on either of the two coloured boxes to the right of the list. You will be prompted with a standard Windows colour selection box in which you can choose your new colour. The top box allows you to change the colour of the text while the bottom box lets you change the background colour. An example of how the event will appear can be seen in the preview box.

The contents of the list box are defined in the following table:

List Box	Description
Offline Program	The current program event, secondary or primary, when you are not encoding the playlist.
Online Program	The current program event, secondary or primary, when the playlist data is being sent to the encoder.
Secondary Program	Non-current secondary programs.
Logo	Primary, Secondary or V-Chip logos that are not active.
Active Logo	Primary, Secondary or V-Chip logos that span the current broadcast time and should therefore be visible onscreen.
Logging	Any logging event.

6.4. PLAYLIST COLUMNS

The options on this page allow you to customize what information appears in the event grid and how it is formatted.



6.4.1. Showing / Hiding Columns

The two list boxes at the top of the form allow you to change what columns are displayed in the events grid and in what order they appear. The left list displays the columns that are presently hidden but can be displayed in the grid. The right list displays the visible columns in the order that they appear in the grid. Selecting an item in either list and clicking the single arrows will move it to the other list. The double arrows will move all of the columns.

The columns are defined in the following table:

Column	Description
Start / Day	The start time and date of the program.
Name	The name of the program, logo or log.
Duration	The length of the event.
Rating	The program rating.*
Type	The program type.*
URL	A URL web link associated with the event*
WebDesc	A description of the associated web page.*
WebType	The type of web page.*
WebDate	The last date on which the web page will be valid*
Block	Upstream channels to block i.e. Captions 1- 4, Text 1-4 or XDS
ID	An identifier for the event that is unique for this instance of MetaCast. This value is set when events are added, pasted, loaded or imported; it cannot be edited. This number is referred to in the Logo Status grid to identify what event is controlling a particular logo.
Tag	This field stores miscellaneous information about the current event. Generally, primary events will always be set to -1 while secondary events will contain the ID of their parent.

* Only valid for program events

6.4.2. Formatting Columns

The controls at the bottom of this page allow you to customize how MetaCast displays various time related fields. The options for each field are comprised of the following codes:

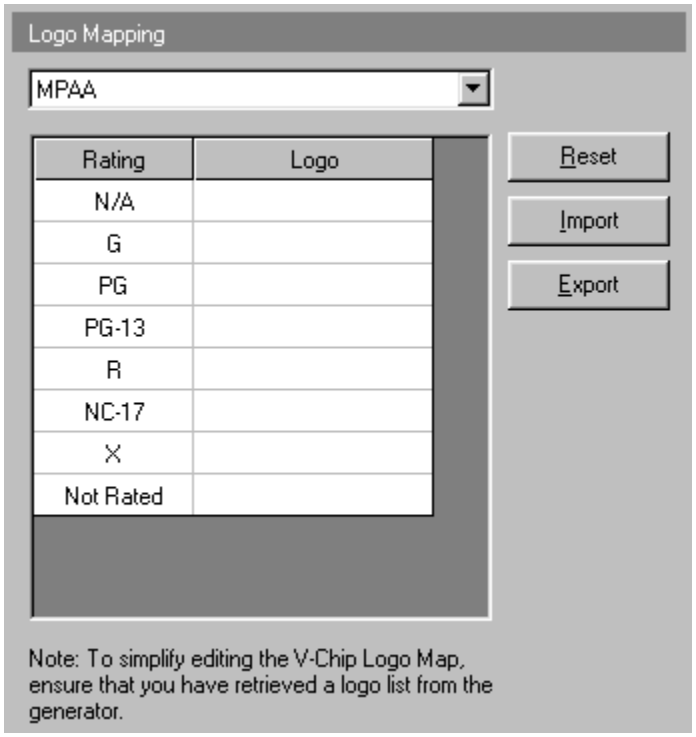
Code	Description	Example (June 9, 2001 - 1:38:10 PM)
HH	Hours in 24 hour format.	13
H	Hour in 12 hour format	01
MM	Minutes	38
SS	Seconds	10
AM/PM	Morning/Afternoon Indicator	PM
Offset	The day offset as stored in the playlist file.	If start date is June 8, day would equal 1.
d	Numerical day	9
dd	Numerical day with leading zero	09
ddd	Day of week abbreviation	Sat.

Code	Description	Example (June 9, 2001 - 1:38:10 PM)
dddd	Full day of week.	Saturday
mm	Numerical month with leading zero	06
mmm	Abbreviated name of month	Jun.
mmmm	Full name of month	June
yyyy	Full year	2001

6.5. V-CHIP LOGO MAPPING

The v-chip logo map allows MetaCast to automatically display the appropriate rating logo for program events that would normally only encode the XDS rating. This mapping can be used in conjunction with the Auto Create V-Chip Events feature to provide a completely automated means of displaying v-chip logos.

The map is triggered whenever the rating is changed for a primary program event. When this happens, MetaCast will search for any secondary v-chip logo events attached to the program and will update the logo that appears in the name column to suit the new rating. If a logo cannot be found for that rating, the logo name will be blank and no logo will be displayed.



To change a logo map, choose the desired rating system from the top combobox, find the rating within the list and click the logo column to type a new name. If MetaCast is connected to the Logo Inserter and a valid logo list has been retrieved (See Connecting to a Logo Inserter), you will be able to select logos directly from the combobox that appears when you click in the logo column.

Reset

The Reset button will clear the entire logo map and allow you to enter new data. Warning: This action cannot be undone, even if you click Cancel on the Options page.

Import

This button allows you to import a text logo map file. MetaCast only fills entries that are defined in the file, pre-existing entries that are not in the file will remain intact. See Logo Map Files for more information the file format.

Export

This button allows you to export a text logo map file. MetaCast will only save map entries with designated logos, blank entries will not appear in the file. See Logo Map Files for more information the file format.

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7. AUTOMATING METACAST

Once you have created or loaded a playlist and are ready to begin broadcasting, you will need to take MetaCast out of edit mode and begin airing your playlist; the details of this are discussed in Airing your Playlist. When the playlist is on the air, MetaCast will begin moving through the events and triggering the corresponding hardware. However, sooner or later MetaCast will reach the end of the playlist and the playlist indicator in the status bar will turn red and change to say 'EXPIRED". At this point MetaCast will begin using the program defaults that you may have defined in the options page but will no longer air events from the playlist.

To continue broadcasting playlist events you have a couple of options:

- **Append new events to the end of the playlist.** To do this make sure the playlist is unlocked by selecting 'Unlock Playlist' from the Edit menu and then right click on the last event in the playlist and select 'Insert Events'. The Insert dialog allows you to insert as many events as you wish after the last event. From this point see Creating Playlists using MetaCast's Editor for more information.

- **Another alternative is to simply load a new playlist.** Clicking 'Load Playlist to Air' from the File menu, MetaCast will open a playlist file and automatically adjust its airdate so that you can air it immediately. You can even reload the same playlist is you wish to simply loop back to the beginning.

- **Use MetaCast Automation.** The last alternative utilizes MetaCast's built-in automation features to either load the next playlist in a predefined sequence, a unique playlist named according to the current date or to simply loop back to the beginning of the current playlist. The remainder of this topic discusses how to set up these different scenarios.

7.1. METACAST AUTOMATION

MetaCast's automation features are available through the Automation page which can be opened by clicking the similarly named item in the View menu. The automation page contains a list of playlists that MetaCast will load in order and loop when it reaches the end. There are generally three different methods of using MetaCast automation which can further be combined to suit any broadcasting setup.

The first mode simply involves repeating the same playlist indefinitely. This will typically be used by stations that have very similar programming from day to day or are using MetaCast for general operations that can be applied to multiple programs. To configure MetaCast to operate in this mode, simply ensure that the playlist you wish to repeat is the only one appearing in the list and then click the play button on the toolbar immediately above the list. If the playlist you want is not in the list, open it using the 'Open Playlist for Editing' item in the File menu and then click the Clear button in the automation toolbar. When you are instructed that the operation is irreversible, click 'Yes'. After you have pressed the play button the automation light in the statusbar will turn green indicating that automation has been engaged. **Note:** When you close MetaCast, your automation list is saved as part of the configuration and therefore will be restored when you open the same configuration again; however, you will have to press the play button again to start automation.

The second method is to create a series of playlists that cover a week, month or any fixed block of time and set them to loop in sequence. This situation is ideal for stations who wish to broadcast specific information for each program but who do not want to spend the time creating unique playlists for every day. The most common approach to this sort of automation is to create seven playlists, one for each day of the week, and then repeat them week after week. You may need to update the files occasionally to cover special events but the amount of editing required once the initial lists are complete is kept to a minimum. To setup this scenario you can simply open the file folder in Windows where your playlists are located and drag them one by one, or as a group, over the automation list and release the mouse button. MetaCast will append them to the list and you can drag them from there using the left mouse button to arrange them in any order you wish. To remove unnecessary items, right-click over them and select Delete. **Note:** If the currently loaded playlist should not appear in your list you will have to load another playlist before deleting the current playlist's corresponding entry. To do this, simply right-click another entry and select 'Open/Load'. To run the playlist, right-click on the entry where you wish to start and select 'Run from Here'. The 'AUTO' light in the statusbar should turn green indicating automation has been engaged.

The final method of automating playlist loading is to use the 'Load by Date' function. This function instructs MetaCast to dynamically retrieve the appropriate playlist by formulaically determining the playlist file name based on the current broadcast clock. Any entry in the list can be a 'Load by Date' entry and you can toggle this by selecting 'Toggle Load by Date' from the right click context menu. When 'Load by Date' is engaged, a small calendar/file folder icon will appear in the left-most column and the name field will indicate the calculated file name as well as the formula used to derive it. Double-clicking the name column allows you to modify the naming formula, see Creating Custom File Names for more information. Once you know how to create 'Load by Date' entries you can use the same setup as the first mode to repeat the one entry indefinitely or the second mode to mix 'Load by Date' entries with fixed playlists to create any sort of sequence you require.

7.2. BROADCAST TIME

MetaCast maintains an internal clock referred to as Broadcast Time which is used primarily for finding the current event and also for synchronizing the encoder depending on the settings you choose on the Clock page. The Broadcast Time is calculated as the local time based on the current time zone settings and the UTC (Universal Time Code a.k.a. Greenwich Mean Time) as driven from either the Windows PC clock, the encoder's internal clock or a time you manually enter yourself. See Clocks for more information on configuring MetaCast's time source.

The Broadcast Time is displayed in 24 hour format on the far right side of the status bar and in full format on the Clocks page. If you have an Encoder connected, the Broadcast Time is also visible on the front panel; however, if Daylight Saving is enabled but not observed in the current time zone, the encoder front panel will be off by one hour. See Daylight Saving Time for more information.

7.3. CLOCKS

MetaCast's internal clock is referred to as BroadCast Time and can be configured through the Clock page and on the General page in the Options dialog. The Broadcast clock is responsible for determining which events are current and, if used with an encoder, the broadcast clock determines the content of time related XDS packets.

7.3.1. Time Source

The first issue when configuring MetaCast's time features is to determine what device will be driving the clock. This can be chosen from the Clock page and may have one of the following values:

Time Source	Description
PC Clock	MetaCast takes all date, time and time zone information from the hosting Windows PC.
Encoder	Time is taken from the encoder's internal clock. Although MetaCast will maintain the time when not connected to the encoder, you will have to be connected to remain synchronized.
Manual	MetaCast uses the PC clock to count seconds but maintains the Broadcast time independently.

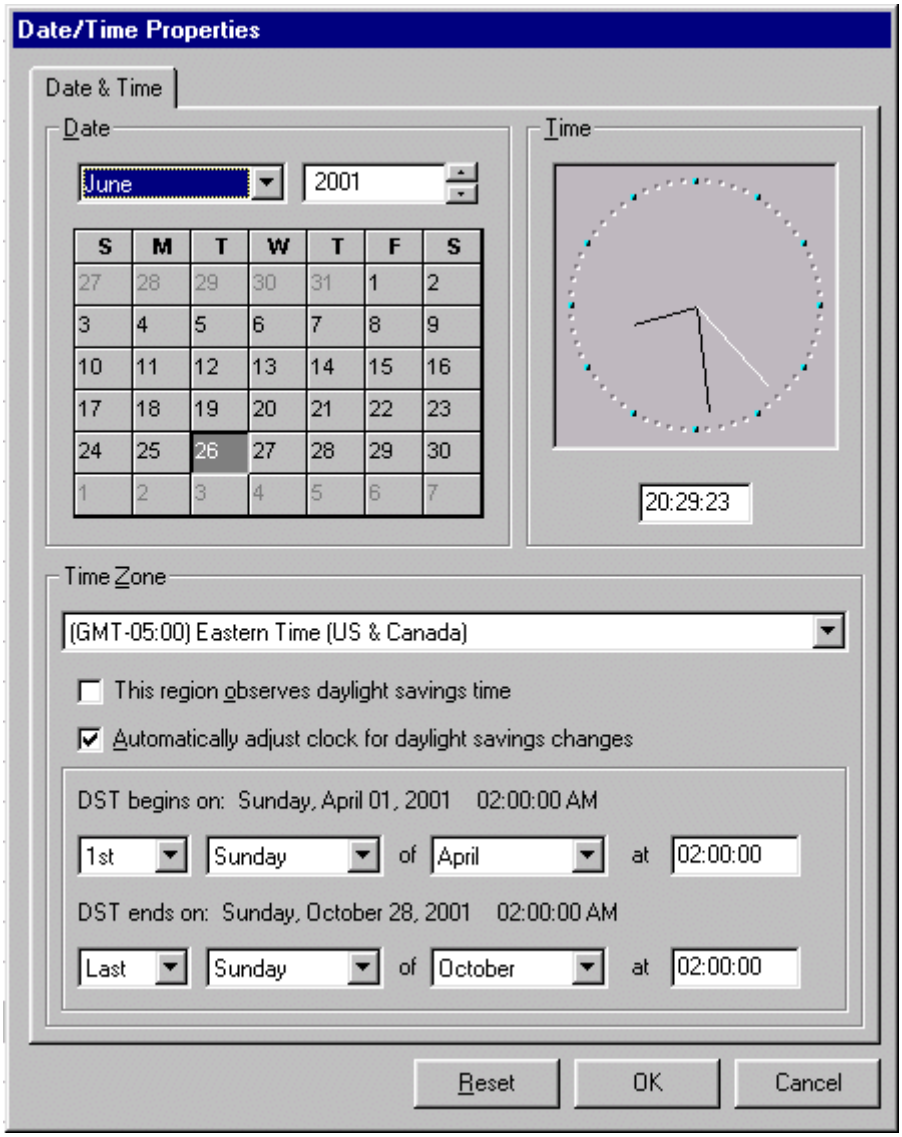
The source you choose will depend on what hardware you have connected and how you wish to synchronize to house time. **Note:** It is not required that you connect to house time but it is recommended since both the encoder and the PC will drift over time.

If you have an Encoder with the LTC reader option, you can sync the Encoder's clock to your house time and then sync MetaCast to the Encoder. If you get MetaCast to set the PC Clock by checking the option on the General Options page, additional instances of MetaCast not connected to the Encoder, but running on the same PC, can also be synchronized by selecting PC Clock or Manual as their time source.

If you do not have an encoder, or your encoder does not have an LTC reader, you can buy a third party time code reader for the PC which will lock the PC Clock to your house time and allow MetaCast to accurately synchronize the encoder. This setup will prevent clock drift for any instances of MetaCast running on the PC with time sources set to PC Clock or Manual.

7.3.2. Setting the Time

Depending on what time source you selected you may now need to set additional Clock options not available through your source.



7.3.2.1. PC Clock

For PC Clock mode, Date, Time and Time Zone are taken from the PC's settings so, if they are correct, there is nothing more to do. If they are not however, click 'Set Time' from the Clock toolbar and update the clock. After exiting the Windows 'Date/Time Properties' page you will need to click 'Sync MetaCast and Encoder' to fully apply those new settings to MetaCast. **Note:** If you select a time zone under Windows that does not use Daylight Saving Time (DST), such as Indiana or Saskatchewan, you will need to set the DST flag manually if you wish to properly implement Time of Day and Time Zone XDS packets. See Daylight Saving below for more information.

7.3.2.2. Encoder

If you select an Encoder as your time source, you will need to set the time zone so that it can properly convert between UTC and local time. Click the 'Set Clock' button on the Clock toolbar and select a new time zone from the dropdown list. MetaCast uses Windows' time zone database to build the options list. If your time zone does not appear, consult the Microsoft web page for information on adding time zones. The Date and Time options on this page are not available since this information will be taken from the Encoder; however, the Daylight Saving settings will need to be configured to match your house time source. See below for more information on setting the Daylight Saving options.

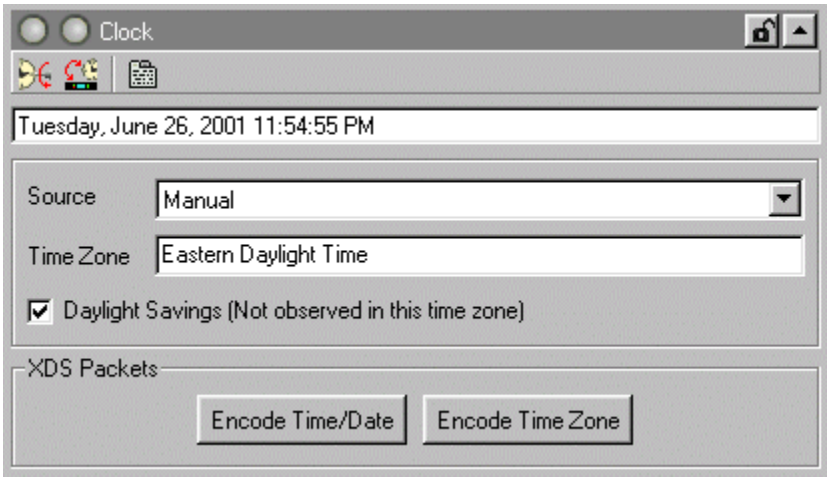
7.3.2.3. Manual

If you are running MetaCast from a Manual source, you will need to enter date, time and time zone information by clicking 'Set Clock' on the Clock toolbar. The date can be chosen from the calendar control and the time can be entered in 24 hour format underneath the large analog clock. To select a time zone, click the down arrow on the combobox and select your region from the dropdown list. MetaCast uses Windows' time zone database to build the options list. If your time zone does not appear, consult the Microsoft web page for information on adding time zones. For information on choosing your Daylight Saving options, see below.

7.3.3. Daylight Saving Time

Daylight Saving Time (DST) in MetaCast is controlled by two independent flags. The first flag maintains whether DST is currently being observed or not. It is available on the Clocks page and can be set either manually, by Windows or by MetaCast's automatic DST adjustment controls. The second flag indicates whether the current region you are broadcasting to observes DST or not. MetaCast, and any televisions or VCRs receiving XDS clock packets, use this flag to indicate if they should add the DST offset or ignore it. **Note:** Even in regions that do not use DST, you must still turn on the DST flag in accordance with surrounding regions so that they can properly calculate their local time.

How you set these flags depends on what your time source is, but in all cases the status of each can be monitored on the Clocks page. When DST is active, the box next to the text 'Daylight Saving' will become checked. For regions that do not observe Daylight Saving, the comment '(Not observed in this region)' will be added to the checkbox caption.



7.3.3.1. PC Clock

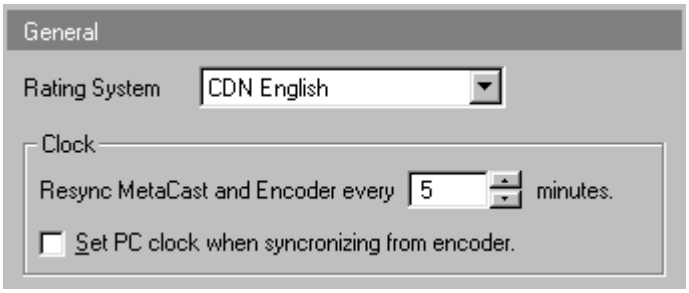
Generally in PC Clock mode, Windows will control the DST adjustment. The exception is if you choose a time zone, such as Indiana or Saskatchewan, that does not use DST. In this case Windows will not adjust for DST automatically and, in order to properly encode XDS clock packets, you must check the Daylight Saving box manually on the Clock page. In North America you will want to check the box on the first Sunday of April, and uncheck it on the last Sunday in October. Since DST is ignored locally, this will not affect your BroadCast time.

7.3.3.2. Encoder or Manual

If you are taking your time from the encoder you can choose how MetaCast adjusts for DST on the Date/Time Properties page available by clicking 'Set Time' on the Clock toolbar. The box immediately below the time zone list lets you choose whether DST is observed in your region. This value is updated from Window's Time Zone database whenever you select a new time zone. The box immediately below that lets you choose whether MetaCast should automatically adjust for DST or not. When clear, this enables the DST box on the Clock page so that you can toggle it manually. If the box is checked, the DST box on the Clock page is disabled but the time controls below become available allowing you to configure when MetaCast will automatically adjust for DST. By default, the dates are taken from Windows' Time Zone database but you can adjust them to any time you wish. **Note:** If MetaCast is synchronized with your house time, it is important that both MetaCast and your house clock are configured to switch to DST at the same time otherwise inaccuracies could occur.

7.3.4. Synchronizing Clocks

Once your clocks have been set, the final task is to ensure that everything remains synchronized. You can resync MetaCast, the PC and your Encoder by clicking 'Resync MetaCast and Encoder' on the Clock toolbar. MetaCast will also automatically resynchronize your devices periodically according to your settings on the General Options page.



The 'Set PC' check box instructs MetaCast to set the PC clock in addition to its internal BroadCast time assuming the PC is not already the source time. This allows additional instances of MetaCast running on the PC to be synced to one Encoder with an LTC reader.

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8. FILE SPECIFICATIONS

8.1. LEGACY PLAYLIST FILE FORMATS

MetaCast 2.0 and greater will load files created MetaCast version 1.x. If you are creating custom filters it is possible to the old file format described below but it is recommended that you upgrade to version 3 playlist files as they are more flexible and can utilize the new features of MetaCast 2.x

8.2. PLAYLIST FILE SPECIFICATIONS V. 2.01

This file is stored as ascii text and every field must be encased in quotations and separated by either a comma or a carriage return. In order to automate the loading of daily playlists, each file should be named according to the date it will air. The format is as follows:

SMMDDYY.EVP

Example file names:

s010100.evp	January 1, 2000
s021002.evp	February 10, 2002

8.2.1. Header

Title	"MetaCast - Schedule File"
Version	"2.01"
Air Date	"12/25/2001"
Rating System	"TVPG". "MPAA", "CDN English", "CDN French"
Column Headers	See Below

8.2.2. Air Date

Date on which this playlist will be broadcast. Must be in MM/DD/YYYY format. This date is included as a reference for the user. If a schedule is opened on a different date, the user will be prompted to update the file so that it can be aired anyways.

8.2.3. Rating System

Rating system used in this playlist. Must be one of the following:

"TVPG", "MPAA", "CDN English" or "CDN French"

8.2.4. Column Headers

A list of column headers that describe the data in the body of the file. Data will be formatted and entered into the playlist according to which column it falls under. Therefore, playlist information must appear in the same order as the column headers. The following column headers are mandatory but may appear in any order:

"Start"	The start time of the program in HH:MM:SS format
"Duration	The length of the program in HH:MM:SS format
"Name"	The title of the program. Can be no longer than 32 characters and may only contain ascii characters from 32 to 127 i.e. accented characters are not allowed.
"Rating"	The v-chip rating assigned to the program. Must be valid for the current rating system.

The following columns are optional and so may or may not be included. If not included, MetaCast will insert default data into these fields.

"Type"	Program type in EIA 608 format, i.e "21"= Education, "262D" = OTHER & Baseball. Default value = "26", OTHER.
"Day"	The day on which this program will air relative to when it starts. i.e. if a schedule starts at 6:00 in the morning it, and every other program up to midnight, will have the day value set to zero. Every program after midnight should have a value of 1. Subsequently, programs that begin past the second midnight should have a day value of 2. If this column is not included, MetaCast decides when the next day begins by checking if the start of the current program precedes the start of the last program. When this happens, MetaCast increments the day field.
"URL"	The URL for a web page associated with the program. Must be in the format http://www.webpage.com. Default value is blank.
"WebDesc"	Description of the web page. Should be kept as short as possible to reduce bandwidth consumption. Default value is blank.
"WebType"	Type of web page, can be "Program", "Network", "Station", "Sponsor" or "Operator"
"WebDate"	Expiry date for the web page in the format MM/DD/YYYY. Default value is January 1, 2000.

Note: Column headers are not case sensitive.

8.2.5. Body

The body of the playlist consists of individual program lines separated by carriage returns. Each line is made up of program information that is separated by commas and contained within quotations according to the order of the column headers.

8.2.6. Example

This example may be loaded into MetaCast by copying it into Windows Notepad and saving the file.

```
"MetaCast - Schedule File"
"2.01"
"02/10/2000"
"TVPG"
"Start", "Duration", "Rating", "Name"
"05:00:00", "00:30:00", "TV-G","D"
"05:30:00", "00:30:00", "TV-14-DS", "C"
"06:00:00", "00:30:00", "TV-MA", "B"
"06:30:00", "17:30:00", "TV-Y7-FV", "A"
"00:00:00", "01:00:00", "TV-G", "F"
"01:00:00", "00:30:00", "TV-PG", "J"
```

8.3. LOGO MAP FILES

The MetaCast logo map is used to relate particular v-chip ratings with a logo that should appear on screen. This map can be editing from within MetaCast and is saved along with your configuration. However, if you wish to transfer maps between computers or maintain multiple maps within one configuration, you can export the map to a text file. MetaCast also comes included with various text map files for the standard v-chip logos that are available through a custom or complete install.

When MetaCast imports a logo map, it merges it with the current one within the configuration. This means that you can load multiple map files, perhaps one for each rating system, into one configuration.

8.3.1. File Specifications

A logo map file is simple ASCII text which can be created though Windows Notepad or any other simple text editor. There are two different types of entries in the map file and each entry appears on an individual line separated by carriage returns and line feeds.

The first line format indicates the rating system for the rating/logo pairs to follow. It must be contained by square brackets and must be one of the following values.

Rating System	Logo Map Entry
Canadian English	[CDN English]
Canadian French	[CDN French]
TV Parental Guidelines	[TVPG]
Motion Picture Association of America	[MPAA]

The lines that follow that immediately follow the rating system consist of rating/logo pairs separated by commas. For example if you wished to relate a Canadian C8+ to a logo named 'canengc8' the entry would appear as follows:

```
C8+, canengc8
```

You can have as many pairs as you wish but they must relate to the last rating system entry. If they do not match with the rating system they will be ignored. If ratings appear more than once, the last one will be used.

One file may contain maps for more than one rating system by adding an additional rating system entry followed by more rating/logo pairs.

8.3.2. Example

```
[CDN English]
 C, canengc
 C8+, canengc8
 G, canengg
 PG, canengpg
 14+, caneng14
 18+, caneng18
```

9. CREATING A PLAYLIST USING ENTERPRISE'S BMS TRAFFIC SYSTEM

(this document is included in doc format in your MetaCast directory)

9.1. OVERVIEW

This paper describes the steps required to set up and maintain a link between Enterprise System Group's Broadcast Management System (BMS) and Evertz' MetaCast system.

The primary function of MetaCast that Enterprise is concerned with is the ability to encode V-Chip information in outgoing broadcast signals.

At stations presently utilizing Louth Automation, an Enterprise WinDEI interface makes it possible for Louth to control the Evertz system, and by extension, we can send Louth instructions that may ultimately be passed on to Evertz.

However, not every Enterprise client uses Louth, and even some that do use it require a direct interface between Enterprise's Broadcast Management System (BMS) and Evertz that will server as a backup in case Louth's control of Evertz is interrupted.

9.2. REQUIREMENTS

- Evertz MetaCast II system
- License agreement with Enterprise to use WinDEI Evertz interface
- Enterprise's Broadcast Management System (v5.4.1 and above)
- Enterprise's WinDEI software (v1.1.1 and above) with Evertz interface installed. Accept the system defaults when adding this interface. The only setting you will probably have to adjust to suit your own needs is the Copy File to Path. This specifies how to send the file to Evertz (using a mapped drive).

9.3. ASSUMPTION:

Most shows normally have a default rating that applies to the majority of episodes. Following this assumption, the V-Chip information can be set up on the show format level in BMS, which means it does not have to be edited on a daily basis (unless needed). The show format serves as a template containing show elements "the way they normally should be".

9.4. SEPARATION OF LOGO BUG EVENTS AND EVERTZ RATING EVENTS:

Many stations already have a “rating bug” event included in their show formats (within BMS) for the purposes of displaying a graphical V-Chip “rating bug” on the viewer’s screen. *Because the needs are sufficiently different for rating bugs versus v-chip encoding, separate events will be needed on the log for each.* Although both events will often be found within a show format, that does not necessarily have to be the case. A rating bug event can be present without the need for v-chip encoding, and v-chip encoding can be included on a show with no rating bug.

9.4.1. Building The V-Chip Encoding Events in BMS

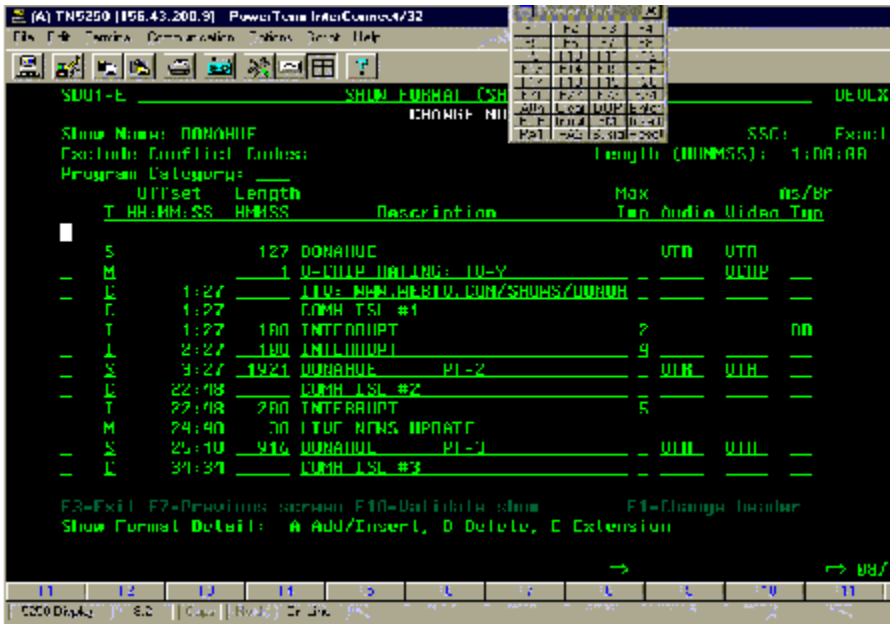
V-Chip rating events can be built in BMS show formats to instruct Evertz to begin encoding a rating. If Louth Automation is used, these same events are used to instruct Louth to trigger Evertz to begin encoding a rating.

Refer to the “V-CHIP RATING: TV-Y” line in the example on the screen captures that follow on the next page.

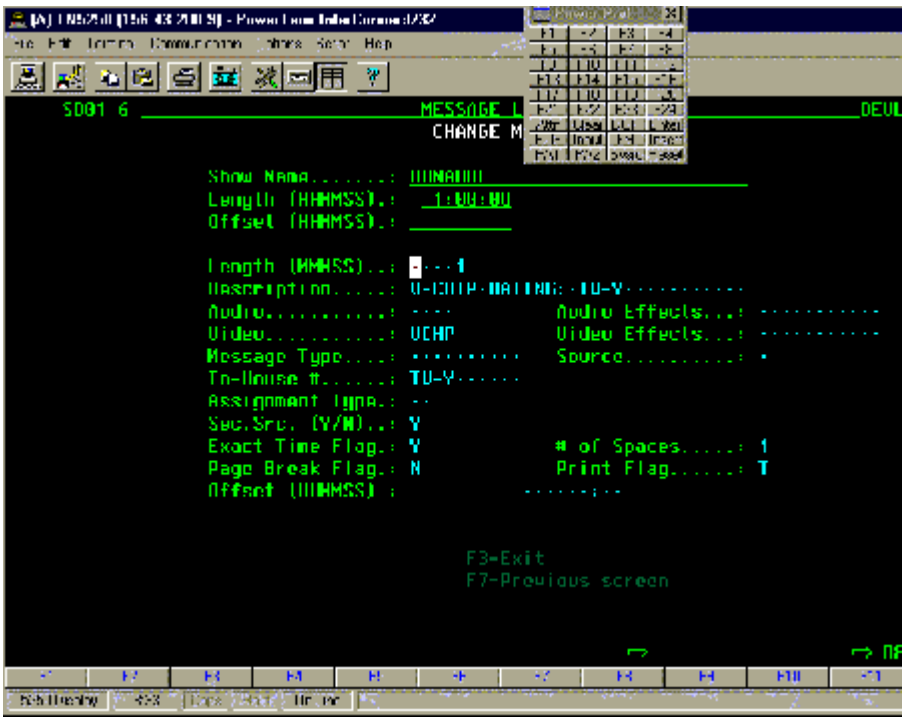
- The V-Chip event should immediately follow the first program segment of the show.
- Use a Video source that differentiates this event as a V-Chip event. A Value of “VCHP” is required.
- A length of 1 second was used on this event. This is an arbitrary length, but all stations should use this length for consistency.
- **Note:** Evertz will not use this duration. Since they are only concerned with the total show duration, a calculation will be used by Evertz. What Evertz needs for duration is the length of time between the start of the current show, and the start of the next show. By taking the start time of the first segment of the next show (First Event In Show = Y), the subtracting from that the start time of the V-chip event, an appropriate duration may be calculated.
- A V-Chip event should be built on every show format you air, except shows for which the station wants the V-Chip data already encoded on the tape to pass through with no interference from Evertz.
- On shows which should not have any encoding of the v-chip rating at all, a code of “not rated” should be used (NR). This could apply to shows such as newscasts. It should be noted, however, that the remainder of the XDS data will be encoded with a “NR” show.

Note: The ITV event which appears after the V-Chip event on the example shown is an illustration of the possible communication of ITV information from Enterprise to Evertz. Any event description that begins with ITV: or WEBTV: will be interpreted as a web site associated with the current program. The text following the colon will be taken as a standard URL and must therefore begin with either ‘http://’, ‘news:’, ‘ftp:’ or ‘mailto:’.

An illustration of how the v-chip events should be included into show formats is shown below.



Placing an “E” next to this message line and pressing ENTER will provide access to the extension screen (shown below), where more details may be specified.



On the extension screen, you can specify more details about this message line (event).

- A house # is used to indicate which rating to use. In this case, "TV-Y" was used. This requires a mapping to the corresponding V-Chip setting by Evertz and Louth. Refer to the table that follows for a complete listing of legal values to use for the various V-Chip ratings.

- It is important on this extension screen that the user specify that this message line is a Secondary Source (by placing a "Y" in the Sec.Src. field).

- If the encoding of the rating should not begin concurrent with the start of the first segment, an offset value (hhmmss) can be entered on this screen.

9.4.2. File to be sent to Evertz

A new WinDEI interface exists which will handle the creation of playlists for Evertz. This interface was created after version 1.1.1 of WinDEI was released, and will be shipped to all ESGI clients in WinDEI version 2.0. If a station requires this interface prior to the availability of v2.0, they should contact their Enterprise Regional Sales Manager.

WinDEI's Evertz V-Chip download can be invoked for any finalized (but not yet posted) BMS log. In case of changes, this download can be re-executed, transmitting updated information to Evertz. Each transmission of a V-Chip log to Evertz will consist of an entire broadcast day's log.

9.4.3. How Evertz and Louth detect a V-Chip Rating event in Enterprise files:

Field	Pos	Value(s)	Used For	LOOK FOR THIS	Traffic Notes
Secondary Source	165	Y	Indicates this may be a v-chip event (see video source)	On V-Chip event itself	On all V-Chip events Secondary Source = Y
Secondary Source Offset	167-171	Defaults to 00000	If event is secondary, this indicates # of seconds offset from primary event.	On V-Chip event itself	If you don't want V-Chip encoding to begin until "x" seconds into show, this may be used.
Video Source	30-41	VCHP	Along with Secondary Source of Y, indicates to Evertz this is a v-chip event	On V-Chip event itself	Must be set to VCHP.
Scheduled Time	17-22	Hhmmss	Scheduled start time for encoding	On V-Chip event itself	Will be correct as long as V-Chip event immediately follows segment #1 of each show.

Field	Pos	Value(s)	Used For	LOOK FOR THIS	Traffic Notes
In-House #	74-93	TV-Y TV-Y7 TV-Y7-FV TV-G TV-PG TV-PG-DLSV TV-PG-DLS TV-PG-DLV TV-PG-DSV TV-PG-LSV TV-PG-DL TV-PG-DS TV-PG-DV TV-PG-LS TV-PG-LV TV-PG-SV TV-PG-D TV-PG-L TV-PG-S TV-PG-V TV-14 TV-14-DLSV TV-14-DLS TV-14-DLV TV-14-DSV TV-14-LSV TV-14-DL TV-14-DS TV-14-DV TV-14-LS TV-14-LV TV-14-SV TV-14-D TV-14-L TV-14-S TV-14-V TV-MA TV-MA-LSV TV-MA-LS TV-MA-LV TV-MA-SV TV-MA-L TV-MA-S TV-MA-V NR	Indicates which rating to encode NR is used to indicate “not rated”. If this field is blank, MetaCast will encode a default rating as defined on the Options page	On V-Chip event itself	Only those listed in the value(s) column of this table are acceptable. Evertz and Louth will utilize these codes to determine the correct rating to be encoded.

Field	Pos	Value(s)	Used For	LOOK FOR THIS	Traffic Notes
Description	95-124	e.g. SEINFELD	Program name	On program segment immediately preceding V-Chip event.	Be sure to include show name in description of first program segment – some stations currently don't do this.
Program Type	155-164	e.g. E	Type of program. "E" may mean Entertainment	On program segment immediately preceding V-Chip event.	Be sure this is input accurately on show formats.

"Pos" indicates position(s) of this field in the playlist file

9.4.4. Rules for Extracting V-Chip Rating Data From Enterprise File

Evertz/Louth will be able to look in the Enterprise playlist file, and look for records with:

Secondary Source = Y (indicates secondary source)

Video Source = VCHP (indicates v-chip event)

On those events, Evertz will extract:

- Scheduled Time (when this event should be triggered)
- In-house # (identifying the specific rating to be sent)

On the program segment (detected by Record Type = P) preceding the secondary V-Chip event, Evertz will extract:

- Description (Name of program is being broadcast)
- Program Type (e.g. entertainment, news, etc)

By means of a calculation:

- Duration (how long this V-Chip code applies to the signal being broadcast). This is obtained by taking the start time of the first segment of the next show (record type=P and Show Segment #=01), the subtracting from that the start time of the v-chip event, an appropriate duration may be calculated.

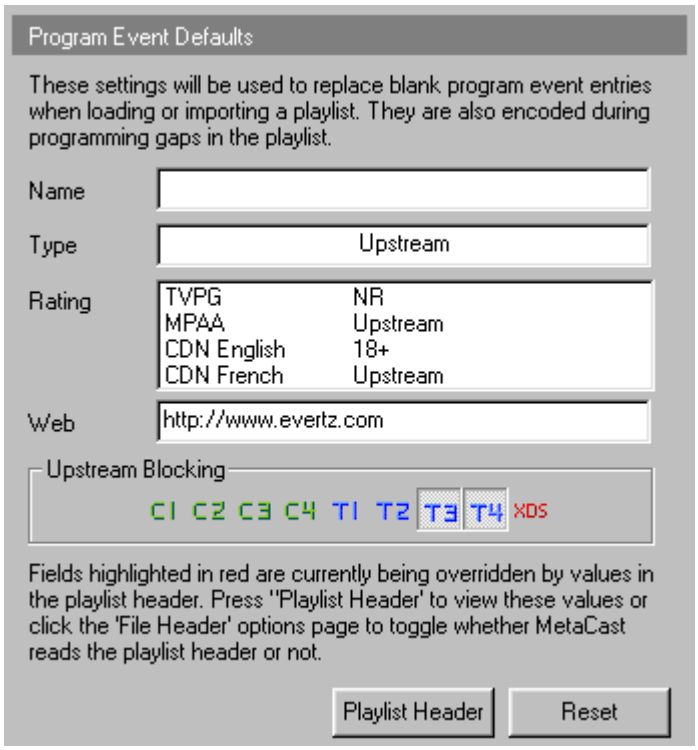
In addition, the file header should contain the log date (air date) because MetaCast will use this to properly automate when the playlist should begin.

Here is a sample of how such a playlist file could appear, with the appropriate pieces of data highlighted. A ruler line is provided at the top.

```
#########1#########2#########3#########4#########5#########6#########7#########8####
12345678901234567890123456789012345678901234567890123456789012345678901234567890123
0010000040197KESGTV 23ESI TUESDAY 97091
 0110001 060000T000600V V RWOODY WOODPECKER CE P Y01R
 0610002 232
 1310003 060000 000020VCHP TV-Y V-CHIP RATING: TV-Y YI00000
 0610004 ITV:WWW.WEBTV.COM/SHOWS/WOODYWOODPECKER.HTML M
 0610005 BREAK 1 M
 0210006 060600 000030VT VT 1951 G MILLS - C.S.O./ GIHJ2436 CM S
 0410007 060630 000030VT VT 0110 PRO/BRUNO THE KID FAMILY WEEKDAYS 7A PR S
 0410008 060700 000030VT VT 0621 PRO/FAB GEN 30 TDY 10A PR S
 0410009 060730 000030VT VT 0614 PRO/NHL IMAGE #1/PLAYOFFS 30 COMING IN APRIL PR S
 0110010 060800 000600V V RWOODY WOODPECKER CE P 02
 0610011 BREAK 2 M
 0410012 061400 000010VT VT 0333 PRO/AFHV SERIES #1 TONIGHT-5P PR S
 0210013 061410 000030VT VT 1032 G MILLS - C.S.O./ GICJ6936 CM S
 0210014 061440 000030VT VT 3268 GM/CSO/DC GOLDEN GRA GIDC8937 CM S
 0310015 061510 000030VT VT 0944 FILL PSA/PARTNERSHIPDRUGFREEAMNOSES PS S
 0410016 061540 000020VT VT 0711 PRO/SIMP A A20 TUE TNT 530P PR S
 0110017 061600 000600V V RWOODY WOODPECKER CE P 03
 0610018 BREAK 3 M
 0410019 062200 000030VT VT 0113 PRO/EERIE, INDIANA GEN SAT 9:30A PR S
```

9.5. DEFAULT PROGRAMS

For stations whose programming remains largely the same or those who have a particular set of data they wish to encode between programs, MetaCast allows the creation of a default program event.



Located in the options dialog under Program Defaults, this page allows you to enter default values for every field associated with a playlist program event. MetaCast uses the default program data to fill in undefined fields when loading or importing a playlist. MetaCast will also encode the default event during program gaps in the playlist.

A program field might be undefined for any of the following reasons:

- In a playlist that follows the MetaCast file specifications i.e. one saved through MetaCast or created by a custom filter, undefined fields are those that have no corresponding column and therefore no data in the file body.

- For imported playlists such as Enterprise logs, some pieces of data such as upstream blocking cannot be stored in the file while other fields such as web links may not have been present in the traffic system when the log was created.

- Users may also choose not to save particular fields in the Save Options dialog when creating playlists within MetaCast. This can help keep playlists smaller and more readable.

- A field is also considered undefined if the value in the file is invalid i.e. a rating does not match the current rating system.

MetaCast also supports extraction of default program data stored in the header of the playlist file. If MetaCast encounters this data when loading a playlist it is considered to be more relevant and will therefore override MetaCast's internal defaults. On the Playlist Properties page in the options dialog, you can instruct MetaCast to read or ignore individual playlist properties. Unchecking any of the default properties will allow MetaCast to use its internal values as they are set on this page. Default fields that are presently being overridden by values in the current playlist will be highlighted in red. To view the actual property values, click 'Playlist Properties' at the bottom of the page.

9.5.1. Default Program Fields

9.5.1.1. Name

The program name to be encoded in the XDS stream. It must be between 1 and 32 characters in length and may only contain ASCII codes from 32 to 127.

9.5.1.2. Type

Double-clicking on this field will open the standard Edit Program Type Dialog. A value of upstream means that no program type packet will be encoded.

9.5.1.3. Rating

Double-clicking on any row in this field opens the standard Edit Rating Dialog for the indicated rating system. A value of 'Upstream' means that no rating packet will be encoded. MetaCast stores separate default ratings for each of the four rating systems. When required, MetaCast will use the rating that matches the current system as defined on the 'General' options page.

9.5.1.4. Web

To edit the detail fields for the web link, double-click this field. If you do not wish to encode a web link, set the URL to blank or "http://".

9.5.1.5. Upstream Blocking

To block an upstream channel, click the corresponding button until it appears depressed.

9.5.2. Buttons

9.5.2.1. Playlist Properties

Opens the Playlist Properties dialog that allows you to view and edit properties such as program defaults and station information for the current playlist.

9.5.2.2. Reset

Clears the default event so that each field is set to a value that will not encode data i.e. blank for program name and web link and Upstream for rating and type.

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10. TROUBLESHOOTING

10.1. TROUBLESHOOTING ENCODER COMMUNICATIONS

Solutions to common communications problems:

10.1.1. Cannot Detect Encoder

- Ensure the comm port settings are the same on the box as they are in MetaCast. Encoder comm settings are available under the Encoder menu for MetaCast and from the engineering menu on the hardware. Check your 80XX manual for information on configuring the comm settings.

- Make sure you have a NULL modem cable connecting the PC to the encoder. A NULL modem cable is significantly different from the straight through cable used on the logo inserter; neither device will communicate if the incorrect cable is used.

- If the Message window displays garbled characters when trying to connect try switching both the box and MetaCast to 9600, None, 8, 1 which is the recommended setting.

- If the Message window displays a long string of bars when you try to connect it is likely that you have attempted to connect to a logo inserter rather than an encoder. Check that the cables are connected to the correct devices.

- If you have the comm port configured to use hardware flow control you will need a complete NULL modem cable that includes the RTS and CTS lines. See your 80XX manual for wiring diagrams.

10.1.2. Errors Sending / Removing Packets

If you find the Message window displays 'Unknown Error' when you try to communicate with the encoder this is because MetaCast did not receive the acknowledgement signal for the last command. Try turning on 'Perform Secondary Check' form the Confirmation page in the Options dialog. This feature will cause MetaCast to verify that the box is still communicating after any errors occur. If the box responds correctly to this command MetaCast assumes the previous command was successful. If this step does not fix the problem then refer to the above list for solutions to common communication problems.

If you receive errors while trying to remove packets from the encoder, this is likely caused by another device removing the packet unbeknownst to MetaCast. All 80XX encoders have multiple comm and/or modem ports which allow any device to control packets just as MetaCast does. For proper operations you must ensure that other devices to do not interfere with MetaCast's control over the box.

10.2. TROUBLESHOOTING LOGO INSERTER COMMUNICATIONS

If you are experiencing problems connecting to the logo inserter or find that the logo inserter is periodically disconnecting from MetaCast due to errors, the following solutions may help:

- Ensure you are using a straight-thru serial cable to connect the PC to the logo inserter. This cable is significantly different from the NULL modem cable used with the encoder. A straight-thru cable can usually be recognized by having one male connector and one female one.

- Check that the cable is connected to the same port on the PC as you have chosen in the Comm Settings dialog under the logo inserter menu.

- If you find MetaCast is periodically going offline, try changing to a slower baud rate.

- If MetaCast is going offline whenever you try to cue or fade in animated logos, check that you have the latest version of firmware in your box. MetaCast requires at least version 1.6 build 113 to operate correctly.

- Make sure you do not exceed the recommended cable lengths between the PC and the logo inserter. If you need to span a very large distance, consider converting to RS422 using external adapters.on the PC and the inserter.

11. CONTACT INFORMATION

Please visit our Web site at http://www.evertz.com.

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