

# COLLINS AEROSPACE ECMT Line Item overview PRESENTATION

April 2019



# CASE ECMT: Line Item overview

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# CASE ECMT: Line Item overview

## Overview

A line item is a means to define pieces of text inside a checklist along with the formatting or behaviors for that text.

- In ECMT there are five different types of line items:
  - Free Text
  - Action Items
  - Conditionals
  - Multi Select Line Items (MSLI)
  - Notes
- Please be aware that some types of line items may not be available on your aircraft type.

# CASE ECMT: Line Item overview

## Free Text

We will start with the simplest type of Line Item, the Free Text:

- Free Text is non-interactive text to be shown on the display

1. Select a parent or sibling row for your Free Text Item.

1. Use the Add Line Item toolbar button or the right click context menu option.

1. Select the Free Text Item menu option.

The screenshot shows the ECMT Editor interface. The main window displays a tree view of the dataset 'AnECMTDataset' with the following items:

Tree	Text	Type	Number of Lines
B2	AnECMTDataset	DataSet	1
	Normal	Index	1
	Before Landing	Normal Checklist	1
	Abnormal	Index	1
	Procedure	Index	1
	Emergency	Index	1

The 'Free Text' menu option is highlighted in the context menu. The toolbar button for adding a line item is also visible.

# CASE ECMT: Line Item overview

## Free Text

4. Double click the Text cell to enter desired information
  - Press the Tab key or click elsewhere to remove focus.

- Text can be left, right or center justified, using the toolbar buttons.
- Or by using the menu option in the right click context menu.

The screenshot shows the CASE ECMT software interface. A table is displayed with the following data:

Text	Type	Number of Lines	CAS Message	Latchable	Auto Sent Boolean
Flaps....3 degrees	Action Item	1			
Abnormal	Free Text	1			
	Index	1			

The 'Free Text' item is highlighted in blue. A context menu is open over the 'Free Text' cell, showing options for Text Alignment (Left, Center, Right), Freeze Panes, and Unfreeze Panes. A preview pane on the right shows the text 'Before Landing' and 'Flaps....30 degrees' with the text justified to the right.

Notice the preview pane to the right. You will see:

- The addition of the Free Text Item
- The change in text justification.

# CASE ECMT: Line Item overview

## Action Item

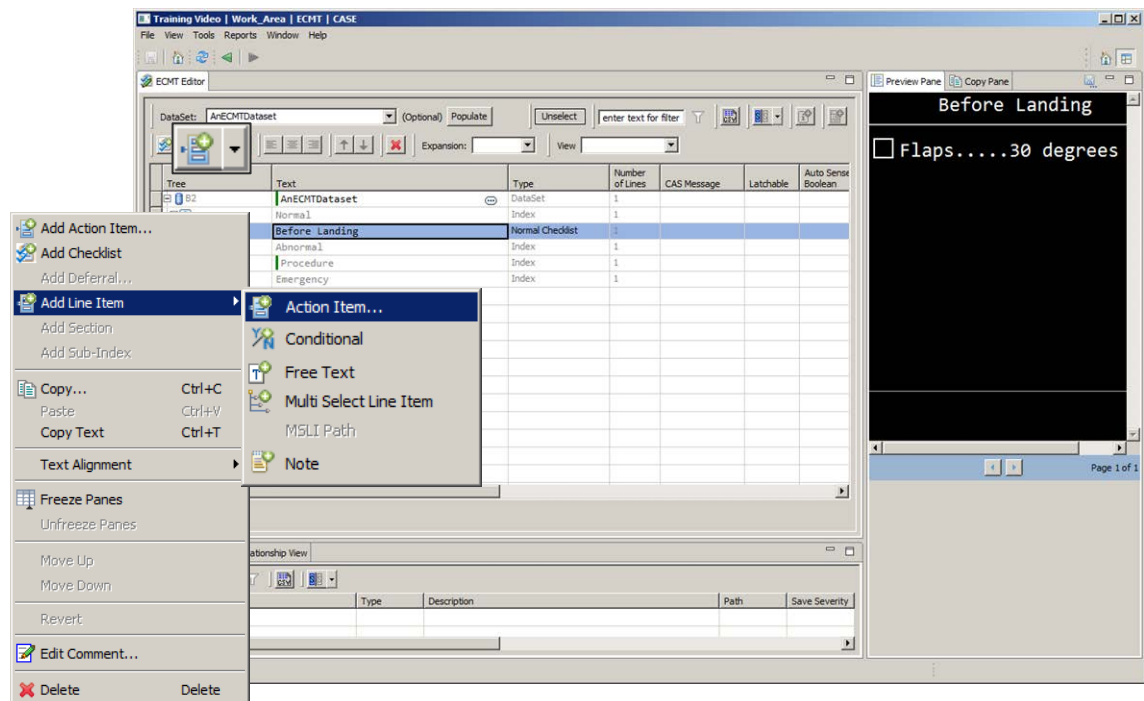
An Action item is for text that requires pilot acknowledgement before a checklist can be completed.

- An action item is typically composed of two parts of text:
  - Challenge - the action you want the pilot to take
  - Response - the result they should get from that action

1. Select a parent or sibling row for the desired Action Item.

1. Use the Add Line Item toolbar button or the right click context menu option.

1. Select the Action Item menu option.



# CASE ECMT: Line Item overview

## Action Item

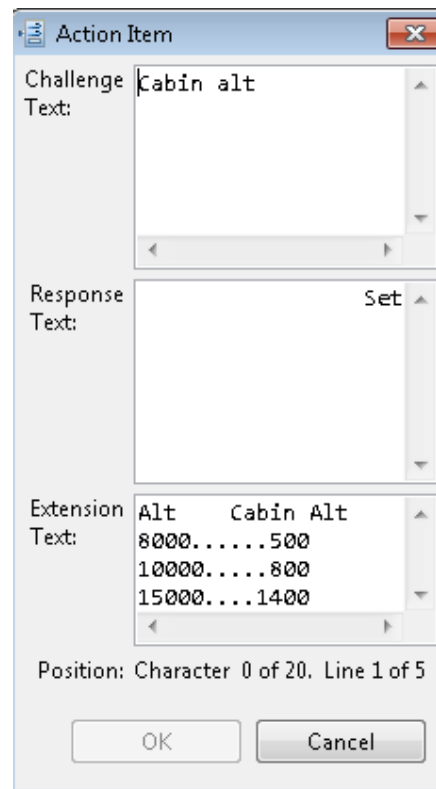
You will see the add action item dialog. Action items consist of three possible text parts:

- The Challenge text (required)
- The Response text
- Extension text

1. Enter the desired text

1. Click the OK button

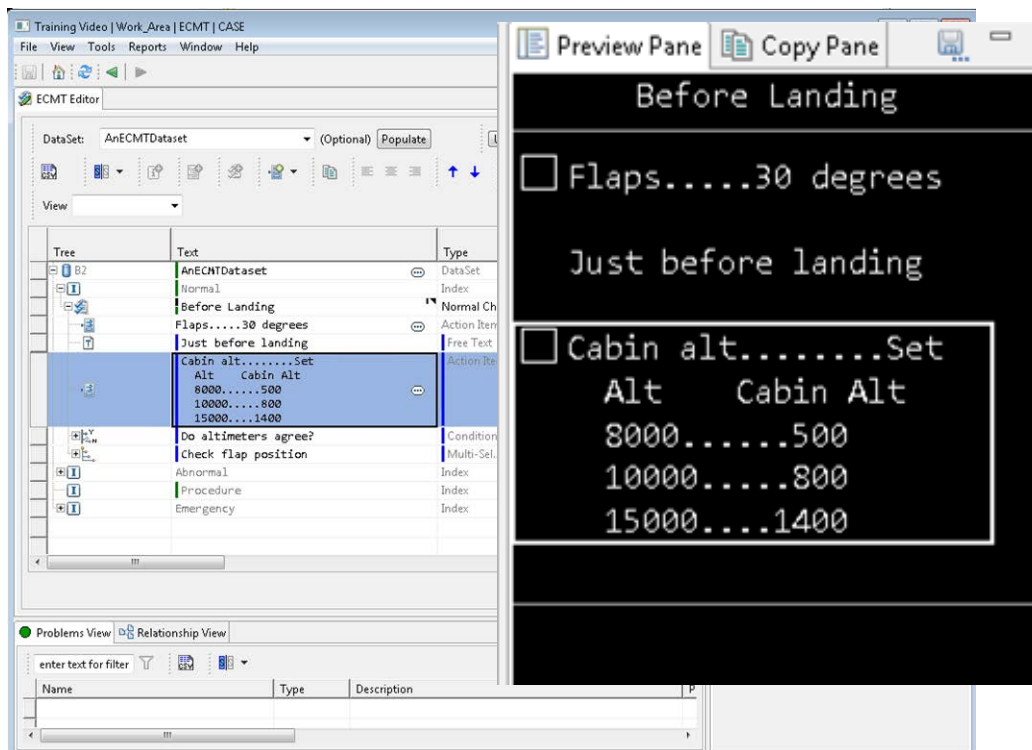
- The Challenge is left justified
- The Response is right justified
- Extension text is left justified and indented by two spaces.
- The resulting combined text can be seen after closing the edit dialog.



# CASE ECMT: Line Item overview

## Action Item

Here you see the Preview Pane for the newly created Action Item:



- Now with the newly created action item still selected, notice the preview pane to the right.
- There you can see the action item and roughly how it will look on the aircraft display.
- The Preview Pane displays Action Items with the same text, dots, wrapping behavior and number of lines as shown in the Text cell.
- The Preview Pane appends a checkbox control to Action Items to indicate they need to be acknowledged.

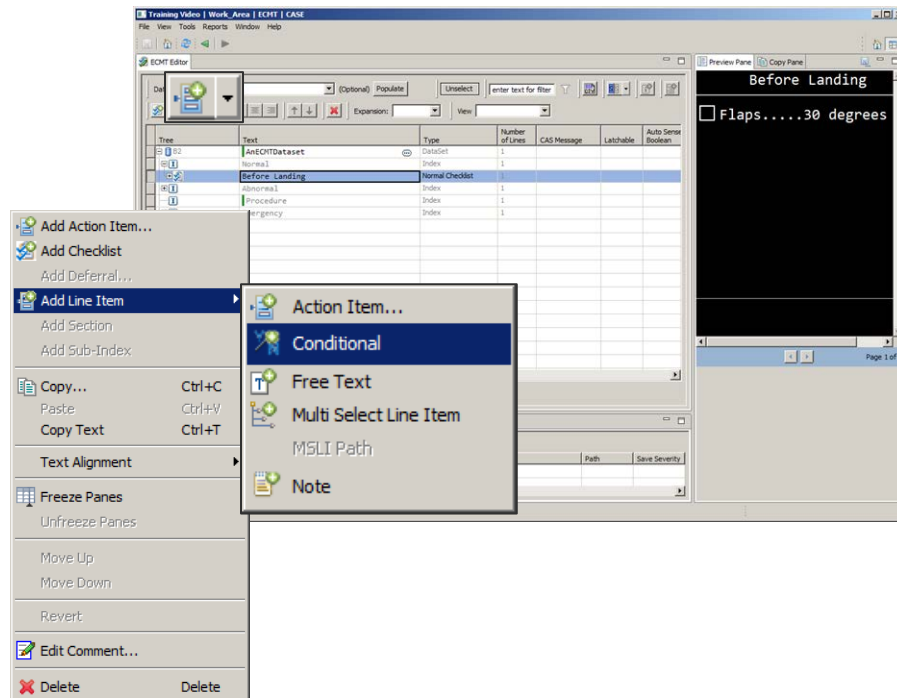


# CASE ECMT: Line Item overview

## Conditional

A Conditional is a Yes-No question to the pilot

1. Select a parent or sibling row for your Conditional Item.
1. Use the Add Line Item toolbar button or the right click context menu option.
1. Select the Conditional menu option.



# CASE ECMT: Line Item overview

## Conditional

A Conditional is a Yes-No question to the pilot:

- The first row is for the text of the conditional question.
1. Double click the Text cell to enter this information.
    - Press the Tab key or click elsewhere to close the edit box.

- Adding a Conditional in ECMT automatically creates the Yes and No options.
- Each Yes and No option may contain further line items which will be enabled or disabled at runtime depending on whether the pilot selects the Yes or No response for the conditional.
- Please note that each Yes or No option should contain at least one child line item.

The screenshot shows the ECMT Editor interface. The top pane displays a tree view of line items:

Tree	Text	Type	Number of Lines	CAS Message	Latchable	Auto Sensed Boolean	Invert Se Boolean
B2	AnECMTDataset	DataSet	1				
	Normal1	Index	1				
	Before Landing	Normal Checklist	1				
	Flaps.....30 degrees	Action Item	1				
	Test	Free Text	1				
	Do a thing.....Did a	Action Item	3				

The middle pane shows a preview of the 'Before Landing' checklist with radio buttons for 'YES' and 'NO'.

The bottom pane shows a table of line items:

Text	Type	Number of Lines
Conditional	Conditional	3
YES	Selection Path	1
NO	Selection Path	1

The bottom-most pane shows the 'Problems View' with a table of errors and warnings:

Name	Type	Description	Path	Save Severity	Build Sev
vps	Conditional	Text for a Conditional - Open cannot be empty.	ANECH..._mgj/	Error	Error
	Selection Path	Selection Path does not contain Line Item(s)	ANECH..._TES	Warning	Error

# CASE ECMT: Line Item overview

## Conditional

Using previous steps, add free text items and nest another conditional:

1. Add free text item to each option.
  1. Add one more conditional nested under the NO path.
- ECMT displays each Conditional and its Yes/No options with individual expansion nodes, where a node is a parent to rows added beneath it.
  - Conditionals can nest other Conditionals to create branching choices so that a single checklist can handle multiple situations.

The screenshot shows the ECMT Editor interface with a tree view on the left and a Preview Pane on the right. The tree view shows a conditional item 'Do altimeters agree?' nested under the 'NO' path. The Preview Pane shows the rendered output: 'Before Landing', 'Do altimeters agree?' with radio buttons for YES and NO, and two free text items: 'Altimeters agree.' and 'Altimeters do not agree.'

- At the Preview pane, you will see Conditional text, followed by a separate line for the Yes-No selection.
- The Preview Pane can only show the order of the line items, and it does not simulate the behavior of selecting Yes or No.
- Selection on the item in the editor is synced to the item in the preview pane.
- It may be helpful to use the selection syncing from the ECMT editor to follow the paths in the preview pane.

# CASE ECMT: Line Item overview

## Multi Select Line Items (MSLIs)

An MSLI is used for a question to the pilot that has answer choices beyond just Yes or No:

1. Select a parent or sibling row for your MSLI.
1. Use the Add line item toolbar button or the right click context menu option.
1. Select the MSLI menu option.

The screenshot displays the ECMT Editor software interface. A context menu is open over the 'Before Landing' item in the 'Tree' view. The menu options include: Add Action Item..., Add Checklist, Add Deferral..., Add Line Item (highlighted), Add Section, Add Sub-Index, Copy... (Ctrl+C), Paste (Ctrl+V), Copy Text (Ctrl+T), Text Alignment, Freeze Panes, Unfreeze Panes, Move Up, Move Down, Revert, Edit Comment..., and Delete (Delete). The 'Multi Select Line Item' option is highlighted in blue. The background shows a table with columns: Text, Type, Number of Lines, CAS Message, Latchable, and Auto Sense Boolean. The 'Before Landing' item is selected in the table. To the right, a preview pane shows a flight deck display with the text: 'Before Landing', 'Flaps.....30 degrees', 'Just before landing', and 'Cabin alt.....Set Alt Cabin Alt 8000.....500 10000.....800 15000.....1400'.

# CASE ECMT: Line Item overview

## Multi Select Line Items (MSLIs)

- An MSLI consists of question text and at least two answer choices
- You may define up to four or five possible choices, depending on the aircraft type

1. Double click on the text cell of the first row.
1. Enter the question text.
1. For an MSLI you can also modify the text for each answer choice.

The screenshot displays the ECMT Editor software interface. The main window shows a table with columns for Text, Type, Number of Lines, CAS Message, Latchable, and Auto Set Boolean. The table contains several entries, including 'Before Landing' (Normal Checklist), 'Flaps.....30 degrees' (Action Item), 'Just before landing' (Free Text), and 'Cabin alt.....Set' (Action Item). A preview pane on the right shows a 'Before Landing' checklist with two radio buttons. A table below the main window shows a 'Multi-Select Line Item' with 3 lines, and two 'Selection Path' entries, each with 1 line. A 'Problems View' pane at the bottom shows two error messages: 'Text for an Multi-Select cannot be empty.' and 'Text for an MSLI SelectorPath cannot be empty.'

Text	Type	Number of Lines	CAS Message	Latchable	Auto Set Boolean
AnECMTDataset	DataSet	1			
Normal	Index	1			
Before Landing	Normal Checklist	1			
Flaps.....30 degrees	Action Item	1			
Just before landing	Free Text	1			
Cabin alt.....Set	Action Item	5			
Alt Cabin Alt					
8900.....500					

Text	Type	Number of Lines	CAS Message	Latchable	Auto Set Boolean
Multi-Select Line Item		3			
Selection Path		1			
Selection Path		1			

Name	Type	Description	Path	Save Sev
	MSLI	Text for an Multi-Select cannot be empty.	AnECM...ing//	Error
	Selection Path	Text for an MSLI SelectorPath cannot be empty.	AnECM...inc//	Error

# CASE ECMT: Line Item overview

## Multi Select Line Items (MSLIs)

To add an additional option:

1. Select a row of the MSLI
1. Open the Add Line Item toolbar button or the right click context menu option
1. Select the MSLI Path menu option

The screenshot displays the CASE ECMT Editor interface. The main window shows a table with columns: Tree, Text, Type, Number of Lines, CAS Message, Latchable, and Auto Set Boolean. The 'Check flap position' row is selected. A context menu is open over this row, showing options: Add Action Item..., Add Checklist, Add Deferral..., Add Line Item (highlighted), Add Section, Add Sub-Index, Copy... (Ctrl+C), Paste (Ctrl+V), Copy Text (Ctrl+T), Text Alignment, Freeze Panes, Unfreeze Panes, Move Up, Move Down, Revert, Edit Comment..., Delete, and a sub-menu for MSLI Path. The sub-menu includes: Action Item..., Conditional, Free Text, Multi Select Line Item (highlighted), MSLI Path (highlighted), and Note. A preview pane on the right shows a checklist for 'Before Landing' with options '0 or 1' and '3, 4 or 5', and instructions 'Adjust to pos 2' and 'Monitor windspeed'.

Tree	Text	Type	Number of Lines	CAS Message	Latchable	Auto Set Boolean
ECMTDataset	ECMTDataset	Dataset	1			
Before Landing	Before Landing	Index	1			
Flaps...30 degrees	Flaps...30 degrees	Normal Checklist	1			
Just before Landing	Just before Landing	Free Text	1			
Cabin alt.....Set	Cabin alt.....Set	Action Item	5			
Alt Cabin Alt	Alt Cabin Alt	Action Item	5			
8000.....500	8000.....500	Action Item	5			
10000.....2000	10000.....2000	Action Item	5			
15000.....1400	15000.....1400	Action Item	5			
Do all pilots agree?	Do all pilots agree?	Conditional	3			
Check flap position	Check flap position	Multi Select Line Item	2			
P1	0 or 1	Selection Path	1			
P2	3, 4 or 5	Selection Path	1			
Abnormal	Abnormal	Index	1			
Procedure	Procedure	Index	1			
Emergency	Emergency	Index	1			

# CASE ECMT: Line Item overview

## Multi Select Line Items (MSLIs)

To add an additional option:

Similar to conditionals, you will add further line items to each possible choice:

1. Enter a name for P3
1. Add a free text item to each path.

The screenshot displays the ECMT Editor interface. The main window shows a tree view of line items with columns for Text, Type, Number of Lines, CAS Message, Latchable, and Auto Ser Boolean. A pop-up window is overlaid on the tree, showing a list of items:

Name	Type	Number of Lines
Do altimeters agree?	Conditional	3
Check flap position	Multi-Select Line Item	4
P1 0 or 1	Selection Path	1
P2 3, 4 or 5	Selection Path	1
P3	Selection Path	1

The preview pane on the right shows a black background with white text for a 'Before Landing' checklist:

```
Before Landing
Check flap position
  O0 or 1
  O3, 4 or 5
  O
Adjust to pos 2
Monitor windspeed
```

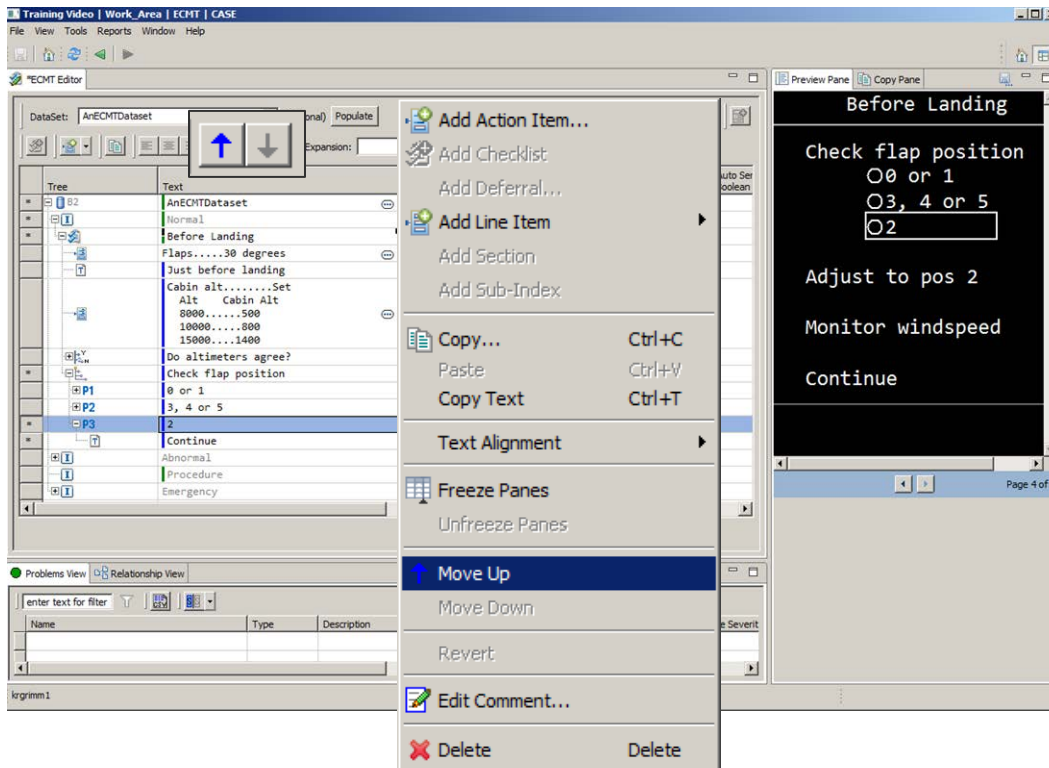
At the bottom, the Problems View shows two warnings:

Name	Type	Description	Path	Save Sev
	Selection Path	Text for an MSL SelectorPath cannot be empty.	AnECM...ion/	Error
	Selection Path	Selection Path does not contain Line Item(s)	AnECM...ion/	Warning

# CASE ECMT: Line Item overview

## Multi Select Line Items (MSLIs)

On a Conditional line item the Yes choice is always shown first, but for an MSLI you are free to change the order of each choice as needed:



- Select the bottom MSLI Path. Using the right click context menu or toolbar buttons you may move the choice and its child items in relation to the other choices.
- In the Preview pane you will see the added MSLI, followed by separate lines for each path. Below the listed choices, the line items are listed in order of each choice.
- As with conditionals, it may be helpful to use the selection syncing from the ECMT editor to follow the paths in the preview pane.

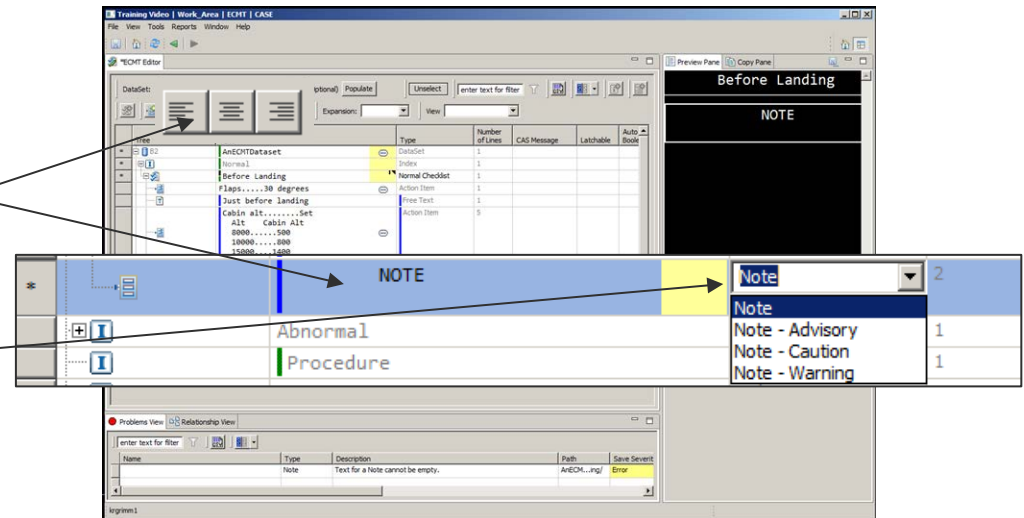


# CASE ECMT: Line Item overview

## Note

Notes are text that the pilot must acknowledge, which comes with a header of NOTE, ADVISORY, CAUTION, or WARNING.

1. Double click into the Text cell of the note and add the desired text.
1. As with Free text, the Note Text entered may be left, right or center justified
1. Next, a Note type can be set with one of the following levels using the Type cell



Notice that the Preview Pane displays the header text, and possibly the note text itself, in a color relative to the note type, depending on your aircraft type.