



**ERTMS**  
SOLUTIONS

## ERTMSFormalSpecs – Product release info

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## 1. Introduction

This document is the product release information document for ERTMSFormalSpecs.

## 2. Releases

### 2.1. Release 1.0.60

#### 2.1.1. Tool

- Syntax highlighting
- Reviewed the way the MoreInfo view is displayed, to get clean indentation
- EFS no longer request to save when no modification is done on the model (<https://github.com/openETCS/ERTMSFormalSpecs/issues/469> )
- Fixed issues when refactoring. Also allows to clean up the complete model (
- Added the actual value in the structure editor (<https://github.com/openETCS/ERTMSFormalSpecs/issues/605> and <https://github.com/openETCS/ERTMSFormalSpecs/issues/608> )

#### 2.1.2. Model

- New brake handling model
- Refactoring the way Monitoring type hare handled
- Wrong range for Q\_NV\_LOCACC (<https://github.com/openETCS/ERTMSFormalSpecs/issues/611> )

### 2.2. Release 1.0.61

#### 2.2.1. Tool

- Track File System changes and update the model when changes occur
- Allow to provide function values through WCF interface and created a DLL to access this interface.

#### 2.2.2. Model

- Changed the EBD function to only consider the MRSP
- Created a function to provide the release speed for a given target

### 2.3. Release 1.0.63

#### 2.3.1. Tool

- Update model in EFS when file on the file system changes
- Updated the computing of braking curves to limit them to their corresponding target speed
- Detect infinite loop in STABILIZE statements

#### 2.3.2. Model

- Corrected functions IsSvl, d\_W, d\_P

## 2.4.Release 1.0.65

### 2.4.1.Tool

- Refactoring :
  - Complete review of the UI synchronization
  - Box/arrow diagrams
- Complete the mechanism to update part of the model
- Improve performances

### 2.4.2. Model

- Reached 80% model coverage
- Fixed problems when changing monitoring mode
- Split DMI functional tests in another dictionary

## 2.5.Release 1.0.66

### 2.5.1.Tool

- Performance update
- Fixed drag & drop operation in box arrow diagrams
- Graphical display for functions
- Syntax highlighting in the model view
- Scrolling the dynamic time line while executing a test
- Fix problem when refreshing the treeview. Sub nodes did not get their (+) sign when they had sub elements

### 2.5.2. Model

- Provide the DMI functional tests in the release
- Reorganization of namespace Kernel
- Update brake handling
- Complete implementation of section 3.14
- Creates the DataState interface
- Moved LocationInterface and LengthLocationInterface to the Default namespace
- Text messages (to be continued)
- Fixed issue when supervision statuses were not revoked
- Updated Subset-027 to version 3.1.0
- Updated Subset-035 to version 3.1.0
- References Subset-040 to version 3.3.0
- Corrected status revocation conditions for TSM.

### 2.5.3. Bug fixes

- Bug fix #649 : Refresh windows does nothing
- Bug fix #646 : Avoid flickering and system hang ups
- Bug fix #650 : Problems with translation view
- Bug fix #651 : Problem with elements in "Traceability" view
- Bug fix #652 : When the elements are reordered in the tree view, it is not refreshed
- Bug fix #653 : Usages information disappear

- Bug fix #654 : Exception when selecting namespace of a parameter
- Bug fix #657 : Interface relationships are not directly added
- Bug fix #661 : The default mode of new structure elements should be internal
- Bug fix #642 : Problem related to the properties view
- Bug fix #656 : Model location upon installation
- Bug fix #647 : Refresh problem with non translated tests
- Bug fix #39 : Review error messages related to ranges in GUI.log

## 2.6.Release 1.0.67

### 2.6.1.Tool

- Refresh graph view after each step execution
- Bug fixes related to updates handling
- Fix to tree view selecting all model elements on rename
- Fix related to renaming of nodes in the tree view
- Added delayed sub-steps
- Avoid crashing when the model is not correct
- Allow to concatenate two collections

### 2.6.2. Model

- Fixes for determination of speed and distance monitoring status
- Consider special values for distance subtraction
- Corrected RBC contact information entry and display
- Cleaner way to compute T\_brake\_basic\_eb
- Started implementation of packet translation for system version handling
- Fixed rules/procedures in BTM namespace to look at variable CurrentBaliseGroup instead if Message
- Changed calculation of EOA and SvL to use functions only
- Implementation of text message acknowledgements
- Updated TargetsList function so that it no longer removes the EOA, SvL and Max distance in SR targets after passing them

### 2.6.3. Bug fixes

- Bug fix #669: Refactoring problem
- Bug fix #671: Problem with structure editor
- Bug fix #531: Import requirements from Subset-040
- Bug fix #626: Train data initialization procedures should be moved to Testing namespace
- Bug fix #667: Add procedures for driver actions

## 2.7.Release 1.0.68

### 2.7.1.Tool

- Bug fix related to mutex handling in parser
- Avoid concurrent changes
- Corrected auto-completion of functions

- Added possibility to execute post-actions after contextual menu clicks in structure editor
- Values of an enum can be compared to values of its sub-enums
- Corrected display of graphs

### 2.7.2. Model

- Implemented display of start time for “text message” like elements
- Release speed calculation moved to after the mode change in HandleInputs
- Renamed FLOI to SBI in JRU
- Changed type of SlipperyRailsSelectedByDriver to include the information about driver’s selection
- Maximum speed set to 600
- Tests and fixes on text messages

## 2.8. Release 1.0.68

### 2.8.1. Tool

- Extended WCF interface to allow suspending a client
- Extended the checks on the model
- Removed background processing tasks (compilation)
- Bug fix : the cache for predefined functions was not cleared and induces invalid computations
- Review text highlighting to speed up the process
- Files only holding tests are no more split into several sub files
- Performance improvements
- Completed the graphical view to display Functions, Procedures, Rules, Structures, Ranges and Enumerations
- Bug fixes #672, #162, #251, #178, #262, #261, #73, #602

### 2.8.2. Model

- Refactored Text messages
- Fixed braking curves computation
- Reviewed state machines for supervisions status
- Update the reference location for a balise group to take into account the antenna distance
- System version management (ongoing)
- Reimplementation of National Values
- Implementation of RV mode

## 2.9. Release 1.0.70

### 2.9.1. Tool

- Ensure that the same variable is not written twice during the same execution phase with different values



### 2.9.2. Model

- Model changes according to the check that the same variable is not written twice during the same execution phase with different values
- System version management
- Refactoring of DMI outputs
- Override procedure (ongoing)
- Fixed a bug where the system would always transition to Normal Status after passing a target
- Fixed issue where the pre-indication location was not properly calculated
- Corrected issue where too many MRSP segments were sent to the DMI
- Corrected bug where the EBD foot of the LOA was not correctly set

## 2.10. Release 1.0.71

### 2.10.1. Tool

- Corrected menu items (it was impossible to add enter actions)
- Bug fix #698: fixed deletion of enter and leave actions
- Bug fix #696: corrected default values of enums
- Bug fix #690 related to enums full names

### 2.10.2. Model

- Override mode overhaul
- Target type added to targets
- Handled Stop in SR mode message
- Start of mission in Level 2 and DMI interactions

## 2.11. Release 1.0.72

### 2.11.1. Tool

- Intellisense based on precise input
- Display step description correctly for subset-076 tests
- Avoid freezes using WCF interface
- Review test execution mode to allow mix between tree view and step by step buttons
- Bug fix #573
- Bug fix #655

### 2.11.2. Model

- Completed Level 2 start of mission integration with DMI
- Refactored Text message handling
- Reviewed packet handling and integrated them for EURORADIO
- Stop displaying level transition orders when the level transition is executed
- Use MRDT only as displayed target, not for computing braking curves
- Review System version management for EURORADIO

## 2.12. Release 1.0.73

### 2.12.1. Tool

- Bug fix in refactoring facility : THIS keyword
- Performance : do not try to evaluate rules for variables when the type does not references (directly or indirectly) any rule for the given priority
- Performance : try to reduce wait time
- Better positioning of the arrow labels in Box/Arrow diagrams
- Allow *concurrent* insertion in a Collection
- Bug fix #461: train's position, speed and confidence interval is shown on graph view
- Bug fix #569: gradient profile can be displayed on graphs
- Rule check disabling for Namespaces, TestFrames, Chapters and Translation folders

### 2.12.2. Model

- System version order (BTM and EURORADIO)
- Review implementation of EURORADIO according to testing
- Implemented standstill supervision, reverse movement protection and rollaway protection
- Review text messages implementation
- Review location principles
- Refactor JRU outputs
- Enforced naming convention
- Reviewed Infill implementation
- Disabled warnings in Messages namespace

## 2.13. Release 1.0.74

### 2.13.1. Tool

- Checked rule activation by cycle priority
- Allow selecting: rules by priority, variables by accessibility mode
- Allow assigning an image by namespace for action boxes in tests
- All DMI OUT variables are set or disables in each cycle

### 2.13.2. Model

- Fixed onboard reference timer for euroradio
- Changed handling of Train Running Number and Virtual Balise Cover buttons in the Driver ID window
- Fixed handling of the Repositioning Information packet
- Fixed issue where linked BGs were not removed from linkings
- Implemented JRU message 12: Balise Group Error

## 2.14. Release 1.0.75

### 2.14.1. Tool

- APPLY keyword can be used on the return value of a function
- Created tool to find Subset-076 test using a certain packet

- Improve display of rule conditions in Explain View
- Add statistics about the number of translated tests to the Subset-076 findings report
- Subset-076 test translations can be applied to a single test, rather than the whole series

#### **2.14.2. Model**

- Overhauled BG reception and linking supervision procedures
- Refactored EURORADIO namespace into smaller sub-namespaces
- Implementation of Infill BG messages
- RBC OUT messages created in Processing cycle phase, instead of Update OUT
- Send information End of MA to the DMI, fixing display or the MRSP
- Fixed LRBG location accuracy
- Allow the RBC to order disconnection
- Handle signaling related speed restriction with Infill

### **2.15. Release 1.0.76**

#### **2.15.1. Tool**

- Updated Subset-076 generated report
- The changes in a test sub step must now all be compatible
- Extend rule check disabling to sub sequences
- Bug fixes
- Fixed the braking curves importer

#### **2.15.2. Model**

- Change to RBC selection during connection or disconnection
- Record trackside malfunction
- Various bug fixes
- Updated definition of odometry messages
- Provide the trip reason when entering TR mode
- Allow level change when the train is at standstill
- Change of train orientation
- Fixed Geographical position

### **2.16. Release 1.0.77**

#### **2.16.1. Tool**

- <No changes>

#### **2.16.2. Model**

- Implemented timers in EURORADIO
- MA Request timers
- Implementation of geographical position
- Bug fix to pre-indication location

## 2.17. Release 1.0.78

### 2.17.1. Tool

- <No changes>

### 2.17.2. Model

- LRBG is considered to be the most recently-seen BG that qualifies for LRBG (instead of being saved separately)
- Changed transition location between PIM and TSM
- Fixes to the Big Metal Masses Track Conditions
- Fixes to target distance calculation

## 2.18. Release 1.0.79

### 2.18.1. Tool

- Removed invisible differences applied automatically to tests that contain translations, such as the Subset-076 test sequences

### 2.18.2. Model

- Many improvements to the implementation of the safe radio connection request
- Corrected termination of the communication session during EoM
- Refactoring of EURORADIO message reception procedure
- Refactoring of DMI elements
- New procedures for testing: InitializeTerminals and InitializeRBCCConnection

*End of Document*