**Manage TSR (SSRS 3.11.5)**

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**Reviewers:**

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**Input documents:**

* Subset 26 §3.11.5
* *List of input documents*

**Description**

*Picture + textual description*

**Functions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | **Store TSR** |
| Definition | 1 | T\_Definition | Stores the TSR in the data base (including TSR data and location data) |
| *Input* | *1* | *T\_Variable* | Packet 65 (TSR)  Reject revocable TSR indicator  *Location reference information (according to data structure for Speed Restrictions)* |
| *Output* | *0..n* | *T\_Variable* | *List of TSR* |
| *Local* | *0..n* | *T\_Variable* |  |
| *Parameter* | *0..n* | *T\_Constant* |  |
| *Requirement* | *0..n* | *T\_Requirement* | *3.11.5.7, 3.11.5.12* |
| *Block* | *1 (optional)* | *T\_FunctionalBlock* |  |
| *Parent* | *0..1* | *T\_Function* |  |
| *Allocation* | *1* | *T\_System* | Kernel |
| Safety | 1 | Boolean |  |

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | **Manage TSR** |
| Definition | 1 | T\_Definition | Handle list of TSR |
| *Input* | *0..n* | *T\_Variable* | *List of TSR*  *Location information (according to the curtain position and the stored TSR location reference, change of direction)*  Packet 66 (revoke TSR information)  Train length (what happens when this information is not available, but needed) |
| *Output* | *0..n* | *T\_Variable* | *List of TSR*  *Active TSR* |
| *Local* | *0..n* | *T\_Variable* |  |
| *Parameter* | *0..n* | *T\_Constant* |  |
| *Requirement* | *0..n* | *T\_Requirement* | *3.11.5.2, 3.11.5.3, 3.11.5.4, 3.11.5.5, 3.11.5.6 (handled via the NID\_TSR), 3.11.5.8 (information from track = packet 66), 3.11.5.9, 3.11.5.10, SA-01* |
| *Block* | *1 (optional)* | *T\_FunctionalBlock* |  |
| *Parent* | *0..1* | *T\_Function* |  |
| *Allocation* | *1* | *T\_System* | Kernel |
| Safety | 1 | Boolean | 1 |

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | **Manage inhibition of revocable TSRs from balises** |
| Definition | 1 | T\_Definition | Set or unset indicator for the inhibition of TSRs |
| *Input* | *0..n* | *T\_Variable* | *Packet 64 (Inhibition command)*  RBC Identifier for reject revocable TSR indicator  *RBC Communication session Management (Information about session termination or RBC handover)* |
| *Output* | *0..n* | *T\_Variable* | Reject revocable TSR indicator  RBC Identifier for reject revocable TSR indicator |
| *Local* | *0..n* | *T\_Variable* |  |
| *Parameter* | *0..n* | *T\_Constant* |  |
| *Requirement* | *0..n* | *T\_Requirement* | *3.11.5.13, 3.11.5.14* |
| *Block* | *1 (optional)* | *T\_FunctionalBlock* |  |
| *Parent* | *0..1* | *T\_Function* |  |
| *Allocation* | *1* | *T\_System* |  |
| Safety | 1 | Boolean |  |

**Variables**

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | List of TSR |
| Definition | 1 | T\_Definition | List storing all know TSRs (TSR information and their location reference information) |
| Source | 1 | T\_SourceDocument | SRS |
| Nature | 1 | T\_VariableNature | Typ Speed Restriction Datatyp with TSR information (database needs to be defined) |
| MinimalValue | 0..1 | T\_Text |  |
| MaximalValue | 0..1 | T\_Text |  |
| SpecialValue | 0..n | T\_Text |  |
| Allocation | 1 | * Interface * Packet * Internal |  |
| *Requirement* | *1..n* | *T\_Requirement* | *3.11.5.1, 3.11.5.2* |
| Store | 0..1 | T\_Variable | (same place as other speed restrictions) |
| Resolution | 0..1 | T\_VariableNature |  |
| Safety | 1 | Boolean |  |

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | Reject revocable TSR indicator |
| Definition | 1 | T\_Definition | Shows when TSRs (revocable and from Balises) shall be rejected |
| Source | 1 | T\_SourceDocument | SRS |
| Nature | 1 | T\_VariableNature | Boolean |
| MinimalValue | 0..1 | T\_Text |  |
| MaximalValue | 0..1 | T\_Text |  |
| SpecialValue | 0..n | T\_Text |  |
| Allocation | 1 | * Interface * Packet * Internal |  |
| *Requirement* | *1..n* | *T\_Requirement* | *3.11.5.13, 3.11.5.14* |
| Store | 0..1 | T\_Variable |  |
| Resolution | 0..1 | T\_VariableNature |  |
| Safety | 1 | Boolean |  |

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | RBC Identifier for reject revocable TSR indicator |
| Definition | 1 | T\_Definition | Shows RBC which ordered the rejection |
| Source | 1 | T\_SourceDocument | SRS |
| Nature | 1 | T\_VariableNature | RBC Identifier |
| MinimalValue | 0..1 | T\_Text |  |
| MaximalValue | 0..1 | T\_Text |  |
| SpecialValue | 0..n | T\_Text |  |
| Allocation | 1 | * Interface * Packet * Internal |  |
| *Requirement* | *1..n* | *T\_Requirement* | *3.11.5.14* |
| Store | 0..1 | T\_Variable |  |
| Resolution | 0..1 | T\_VariableNature |  |
| Safety | 1 | Boolean |  |

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| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | Information Active TSR |
| Definition | 1 | T\_Definition | The current TSR that has to be checked for the MRSP (to be defined based on the needed input by the MRSP calculation) |
| Source | 1 | T\_SourceDocument |  |
| Nature | 1 | T\_VariableNature |  |
| MinimalValue | 0..1 | T\_Text |  |
| MaximalValue | 0..1 | T\_Text |  |
| SpecialValue | 0..n | T\_Text |  |
| Allocation | 1 | * Interface * Packet * Internal |  |
| *Requirement* | *1..n* | *T\_Requirement* |  |
| Store | 0..1 | T\_Variable |  |
| Resolution | 0..1 | T\_VariableNature |  |
| Safety | 1 | Boolean |  |

**Requirements**

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| --- | --- | --- | --- |
| **Name** | **Occurrence** | **Type** | **Description** |
| Name | 1 | T\_Text | SA01 |
| Definition | 1 | T\_Definition | Deleting not active TSRs |
| Nature | 1 | * Structural * Functional * Definition | A set of TRS data, stored in the TRS List shall be deleted if the location until which the Restriction is applied (“start distance”+”length”) is in rear of the trains front end. |
| Source | 1 | T\_SourceDocument | System Analysis |
| Discussion | 1 (Optional) | T\_Text | A deletion of TRS is needed if the locations are passed completely |
| Parent | 0..1 | T\_Requirement |  |
| Allocation | 0..1 | T\_System |  |
| Safety | 1 | Boolean |  |

**Type:**

Variale Typ TSR (stored in the same speed)

- identifier (0-126 Reserved for non RBC transmission (balise, loop or radio infill)

127-254 Reserved for RBC transmission

255 Non-revocable speed restriction (applicable for all transmission media))

- Restricted Speed

-Distance to TSR

- Length of TSR

* Boolean
* Integer
* Floating point
* T\_text: textual description
* T\_ident: based on a textual description
* T\_Version = {3.0.0, 3.3.0}
* T\_VariableNature = {Acceleration, Distance, Gradient, Length, Miscellaneous, Number, ClassNumber, IdentityNumber, Qualifier, TimeDate, Speed, Text}
* T\_SourceDocument = {subset-26, subset-34}
* T\_Definition : a textual and graphical description (all kind of picture, table and diagram are allowed)

**Constant: T\_Constant**

*Do we need to separate Variables and constants ?*

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| **Name** | **Occurrence** | **Type** | **Description** |
| Definition | 1 | T\_Definition | Textual and graphical description of the variable |
| Source | 1 | T\_SourceDocument | the document where the variable is defined the first time (SRS, FIS, SSRS,...) |
| Nature | 1 | T\_VariableNature | Nature of the Variable (Acceleration, Speed, Ident,...) |
| Value | 1 | T\_Text |  |
| Allocation | 1 | * Interface * Packet * Internal |  |
| *Requirement* | *1..n* | *T\_Requirement* | *The set of requirement which defined the constant (at least one)* |
|  |  |  |  |

**Functional Block: T\_FunctionalBlock**

*Are functional blocks really necessary ?*

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| **Name** | **Occurrence** | **Type** | **Description** |
| Definition | 1 | T\_Definition | Textual and graphical description of the function |
| *Function* | *1..n* | *T\_Function* | *Set of function of this block* |
|  |  |  |  |