Title and contract N°	**WP3b T3.6**	**C592**
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Diffusion :		
Object :	Presentation of the SCADE model of the function "Procedure On Sight"	

1. CONTEXT

This note presents the description, the assumptions, the choices and the parts treated of the model SCADE to complied the function “Procedure On Sight” in the §5.9 of the SRS subset-026-5, issue 3.3.0.

For this model, we used Scade Suite 6.4.2.

2. PRESENTATION OF THE MODEL

The aim of this model is to try to model an ERTMS/ETCS function.

For that, we decided to model the EVC software containing only the necessary functions to understand the context of the function “Procedure On Sight”.

Presentation of the nodes:

- **EVC**:
  Main node with calls of the modules. Only the necessary modules are present.
- **M01_A00_EXTRACT_DATAS_IN:**
  Module which contains the list of the inputs for EVC (from the others ETCS sub-systems)
- **M02_A00_DATA_CONSISTENCY:**
  Module which checks and proceeds the datas from balises or radio according to the ETCS level to provide generic inputs to the other functions
- **M03_A00_DETERMINE_TRAIN_SPEED_AND_POSITION:**
  Module which provides the train speed and the train positions. For this example, we just define the max safe front position and the min safe front position of the train.

  These positions are defined as simple as possible to cover the case-study and without compliance to the SRS. The choice here is just to present the evolution of the positions and the speed of the train during different cycles of the software EVC.

  It’s why we decided to reset these positions when a new “track kilometre reference value” was received and to increment the positions to the distance from the last cycle (given by the ODO sub-system) otherwise.
- **M04_A00_DETERMINE_MODE_AND_LEVEL:**
  - *M04_A01_DETERMINE_TRANSITIONS_CONDITIONS:*
    Action which details the conditions for the transitions from any mode to the OS mode. This action also presents the events like “Service brake command” or “Request acknowledgement OS mode”.

- *M04_A02_DETERMINE_MODE:*
  Action which determines the EVC mode. This action contains only the transitions from any mode to the OS mode.
- *M04_A03_MANAGEMENT_TIMER:*
  Action which manages the timer for driver acknowledgement

- **M05_A00_SUPERVISE_TRAIN_SPEED:**
  Module which supervises the train speed. This module is only present to show the interface between the module “Determine mode and level” and this module. Indeed, the requirement 5.9.3.5 has to be in this module but following an event of the module “Determine mode and level”.
- **M10_A00_BUILD_DATAS_OUT:**
  Module which contains the building of the outputs for the others ETCS sub-systems

3. ASSUMPTIONS

FIN DE DOCUMENT