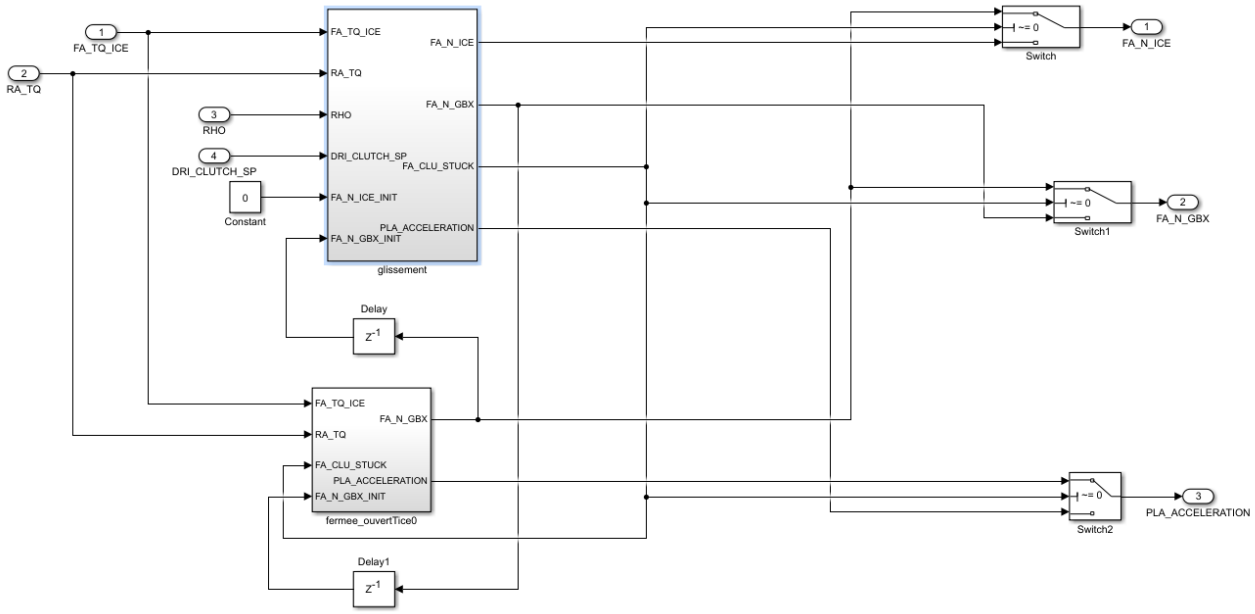
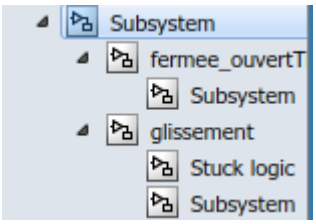
State model

1 Subsystem description

Linear model of the car. Only the bloc which concerns the clutch's command and only for the restart of the ICE.

2 System organization





3 Signals and parameters

Inputs

Name	Description	Note
FA_TQ_ICE	Torque to wheel from the front axle	
RA_TQ	Torque to wheel from the real axle	
RHO	Sensibility	
DRI_CLUTCH_SP	Clutch pedal value	Range [0,1]

Outputs

Name	Description	Note
FA_N_ICE	Rotation speed of the	rpm

		ICE
FA_N_GBX	Rotation speed fo the GBX	rpm
PLA_ACCELERATION	Acceleration of the car	

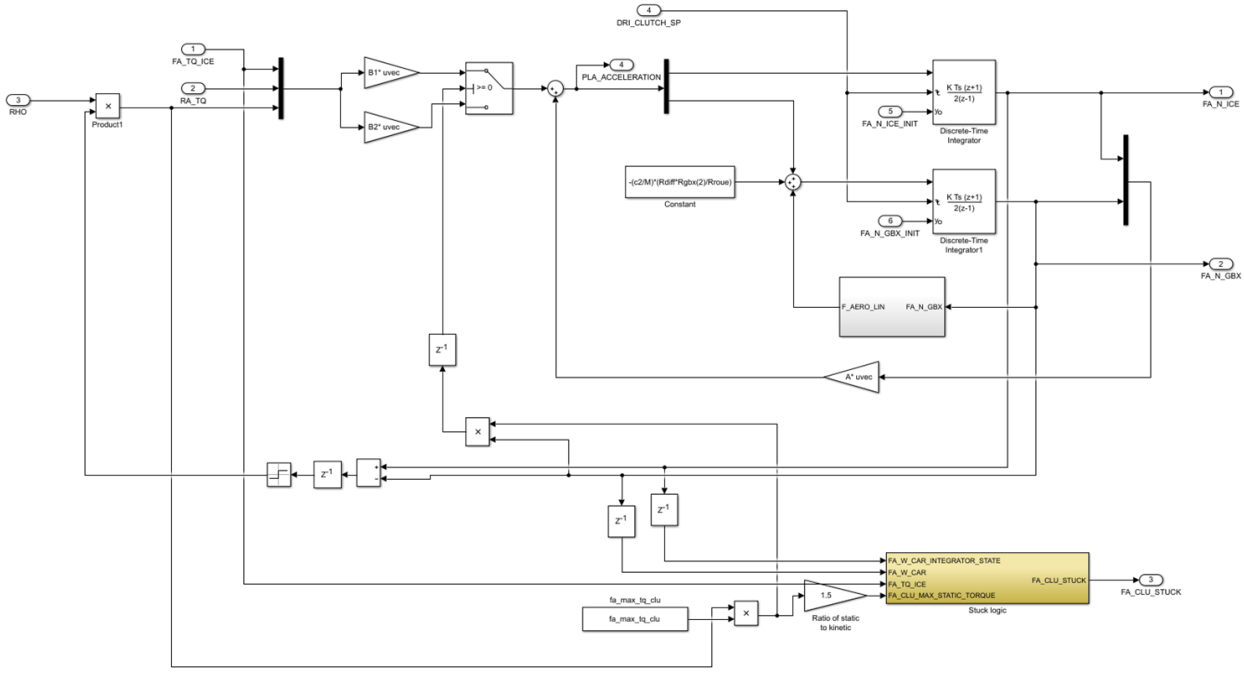
Parameters

Native

Name	Type	Unit	Description	Source	Linked to
B1	Matrix [2x3]		Command matrix (clutch slipping)		
B2	Matrix [2x3]		Command matrix (clutch slipping)		
A	matrix		State matrix (clutch slipping)		
Bferme1	Matrix [2x3]		Command matrix (clutch close)		
Bferme2	Matrix [2x3]		Command matrix (clutch close)		
Aferme	matrix		State matrix (clutch close)		

4 Subsystems description

Slipping state:
Calculate the speed of the ICE and the GBX in slipping mode.



Open state:
Calculate the speed of the ICE and the GBX in close or open state.