

GT-问题解答 多循环实现

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1 多个循环

- 问题描述

- 动力学模式下实现连续多种循环模式的加载

- 问题解决

- 使用控制模块
- 基础模型为
 \V7.0.0\tutorials\modeling_applications\Vehicle_Drive_line_and_Hev\03-DynamicDrivignCycle\DynamicDrivingCyle-Final.gtm
- 示例模型不包括换档和离合调节，按照原来例子进行
- 模型另存为DynamicDrivingCyle-Final-2ftp.gtm
- 模型将改为ftp75+NEDC

1 多个循环

- 创建模块

Edit Object: ftp75

Template: SignalGenerator

Object: ftp75

Comment:

Attribute	Unit	Object Value
Signal Type		constant_or_reference
Constant or Dependency Reference Object		FTP75
Equation		ign
Out Of Range Flag for Equation		error_message

Cancel Apply

Edit Object: NEDC

Template: SignalGenerator

Object: NEDC

Comment:

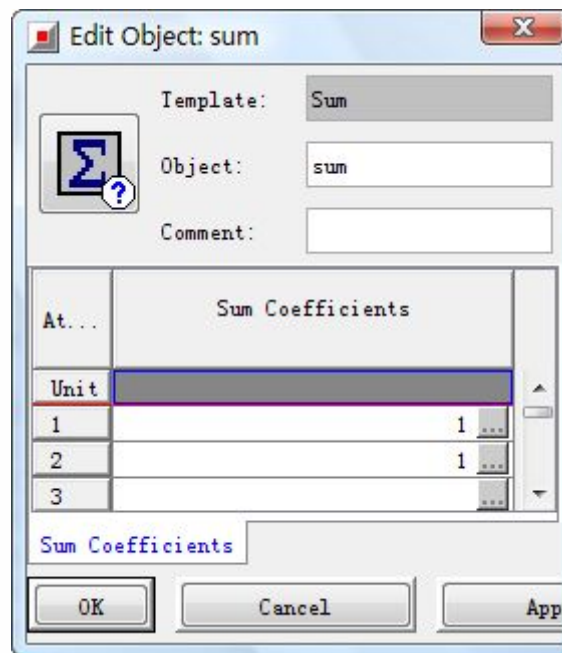
Attribute	Unit	Object Value
Signal Type		constant or reference
Constant or Dependency Reference Object		NEDC
Equation		ign
Out Of Range Flag for Equation		error_message

Main

OK Cancel Apply

1 多个循环

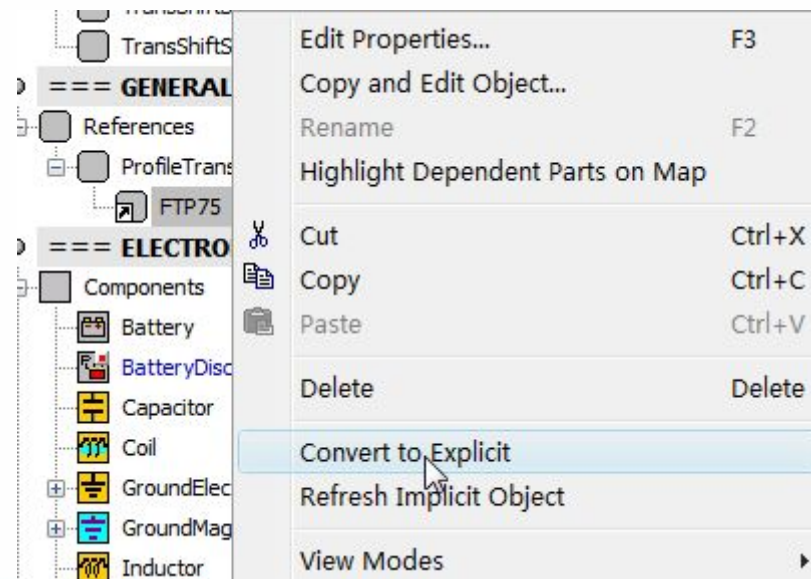
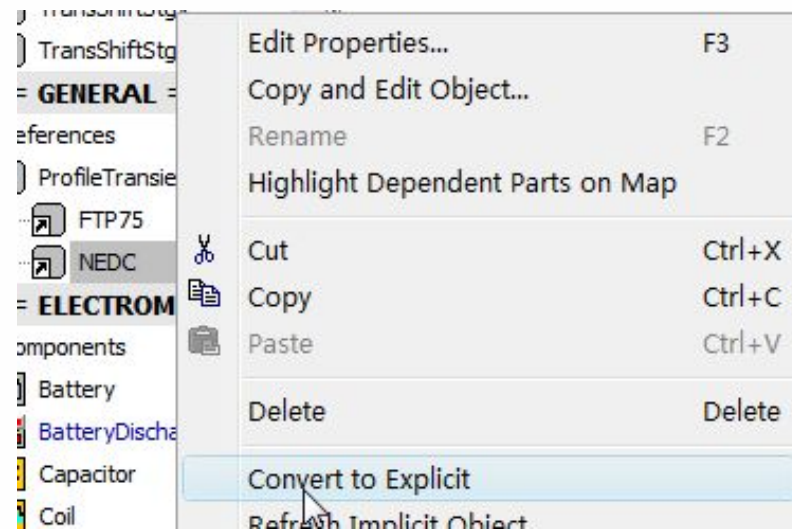
- 创建模块



1 多个循环

● 修改参考对象

- 由于实现模式为ftp75+NEDC, 所以NEDC的时间要偏移ftp工况的时间1874s
- 所以要将ftp75和NEDC转为explicit



1 多个循环

● 修改

- Ftp75车速单位为mile/h, 改为km/h需要乘以一个系数

Edit Object: FTP75

Template: ProfileTransient

Object: FTP75

Comment: UDDS followed by the first 505 seconds of the UDDS (10 min. pause removed) X Data = Time--s; Y Data = Speed--mph

Attribute	Unit	Object Value
Action Outside of Time Range		endpoints
Time Shift	sec	def
Time Multiplier		def
Y Shift		def
Y Multiplier		1.6093427
Lookup Method		interpolate
Output Plot of Profile		☐

Main Arrays

OK Cancel Apply

1 多个循环

- 修改

- NEDC工况偏移时间1874s

Edit Object: NEDC

Template: ProfileTransient

Object: NEDC

Comment: New European Driving Cycle combined from Urban and Extra-Urban Driving Cycle X Data = seconds; Y Data = kph

Attribute	Unit	Object Value
Action Outside of Time Range		endpoints ▼
Time Shift	sec ▼	1874 ...
Time Multiplier		def ...
Y Shift		def ...
Y Multiplier		def ...
Lookup Method		interpolate ▼
Output Plot of Profile		☐

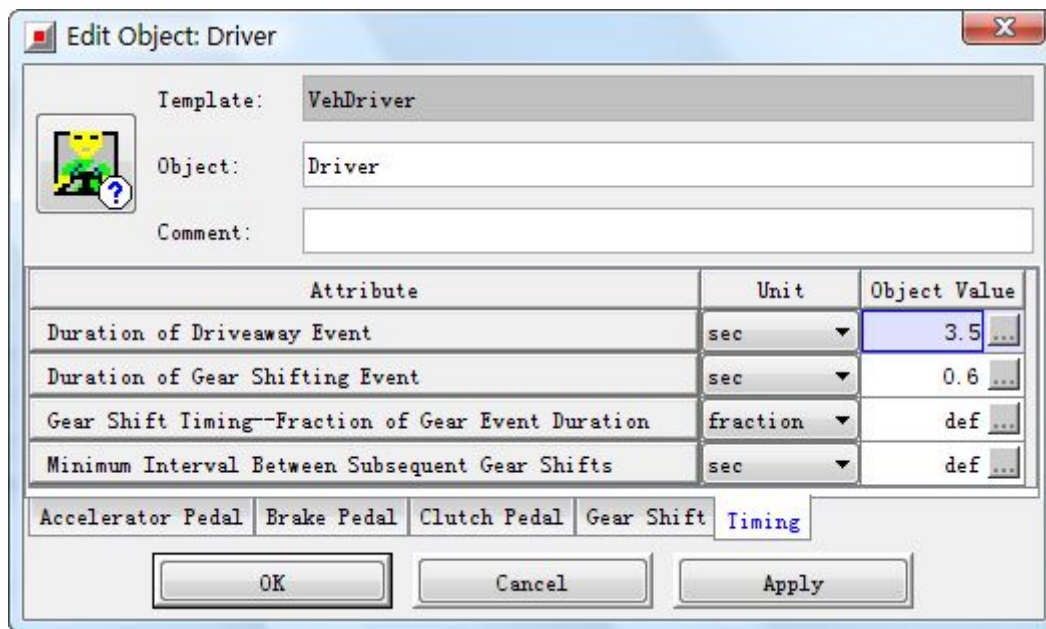
Main Arrays

OK Cancel Apply

1 多个循环

- 修改

- Nedc工况车速变化较慢，起步时间调大。



Edit Object: Driver

Template: VehDriver
 Object: Driver
 Comment:

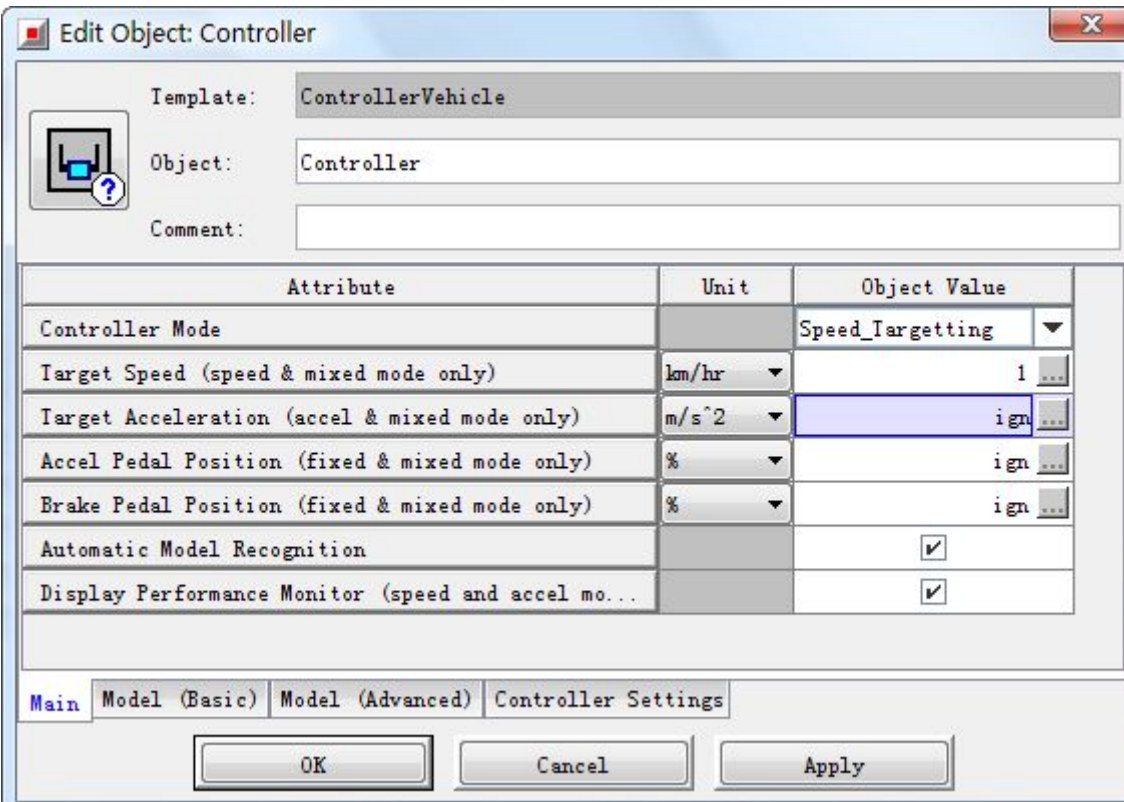
Attribute	Unit	Object Value
Duration of Driveaway Event	sec	3.5
Duration of Gear Shifting Event	sec	0.6
Gear Shift Timing--Fraction of Gear Event Duration	fraction	def
Minimum Interval Between Subsequent Gear Shifts	sec	def

Accelerator Pedal | Brake Pedal | Clutch Pedal | Gear Shift | **Timing**

OK Cancel Apply

1 多个循环

- 修改，目标车速为任意常数即可



Template: ControllerVehicle

Object: Controller

Comment:

Attribute	Unit	Object Value
Controller Mode		Speed_Targetting ▼
Target Speed (speed & mixed mode only)	km/hr ▼	1 ...
Target Acceleration (accel & mixed mode only)	m/s ² ▼	ign ...
Accel Pedal Position (fixed & mixed mode only)	% ▼	ign ...
Brake Pedal Position (fixed & mixed mode only)	% ▼	ign ...
Automatic Model Recognition		☒
Display Performance Monitor (speed and accel mo...)		☒

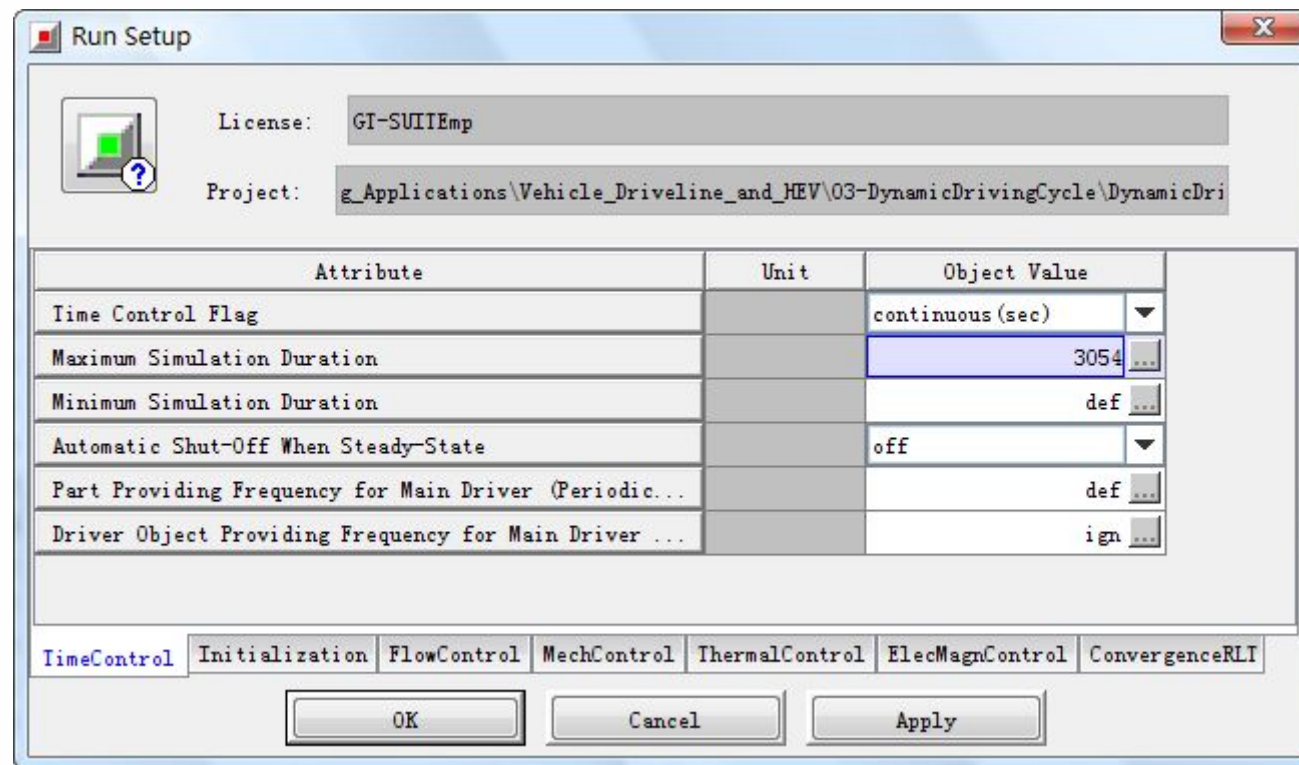
Main | Model (Basic) | Model (Advanced) | Controller Settings

OK Cancel Apply

- [illegible]

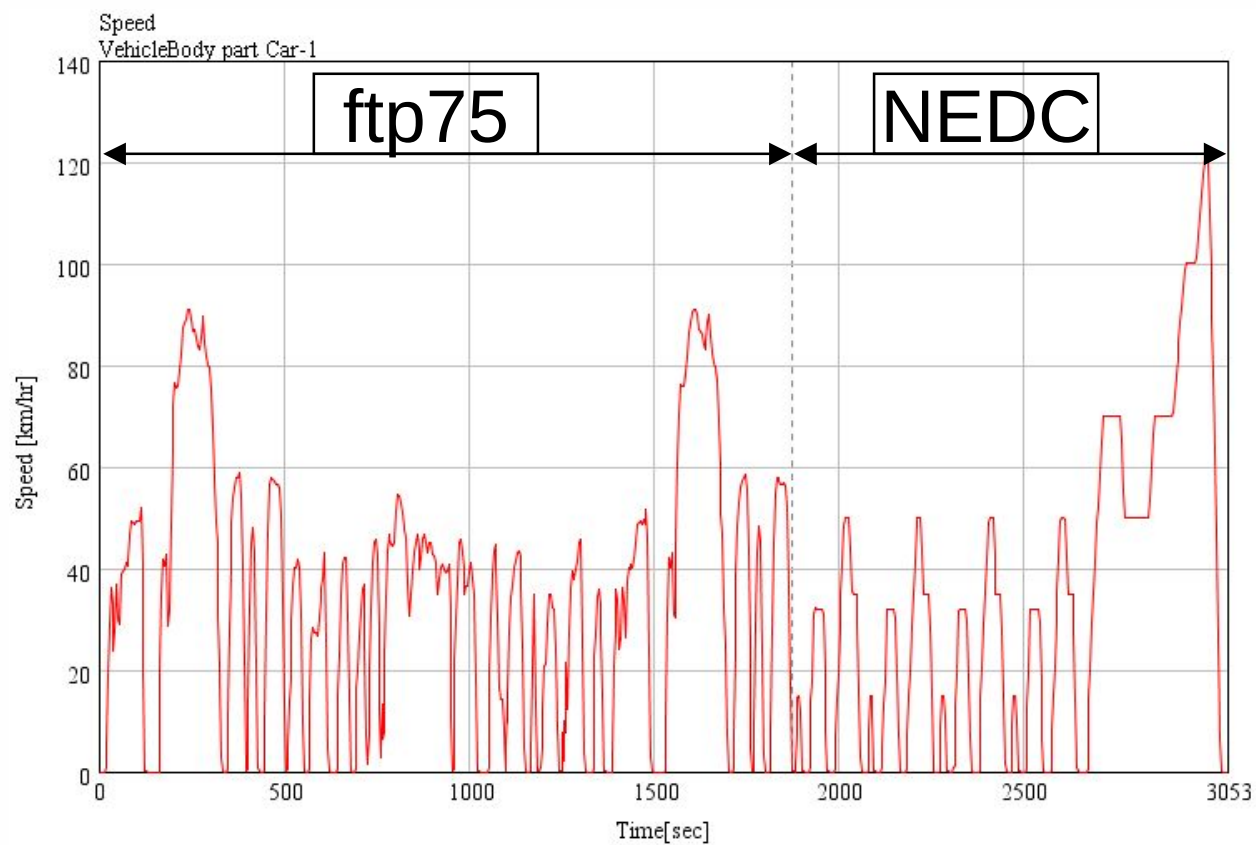
1 多个循环

- Run Setup
 - 运行时间 $1874+1180=3054$



1 多个循环

- 运行
- 后处理



GT-Star耦合

- 本培训手册由西迪阿特公司完成，未经许可，禁止修改和通过网络或其他途径传播。如有问题，请及时与本公司联系：

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