



Research & Vehicle Technology
“Infotainment Systems Product Development”

Feature – Behavior Coaching Display Client
v2

APIM Infotainment Subsystem Part Specific
Specification (SPSS)

Version 1.0

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Version Date: November 19, 2018

FORD CONFIDENTIAL



Revision History

Date	Version	Notes	
November 19, 2018	1.0	Initial Release	



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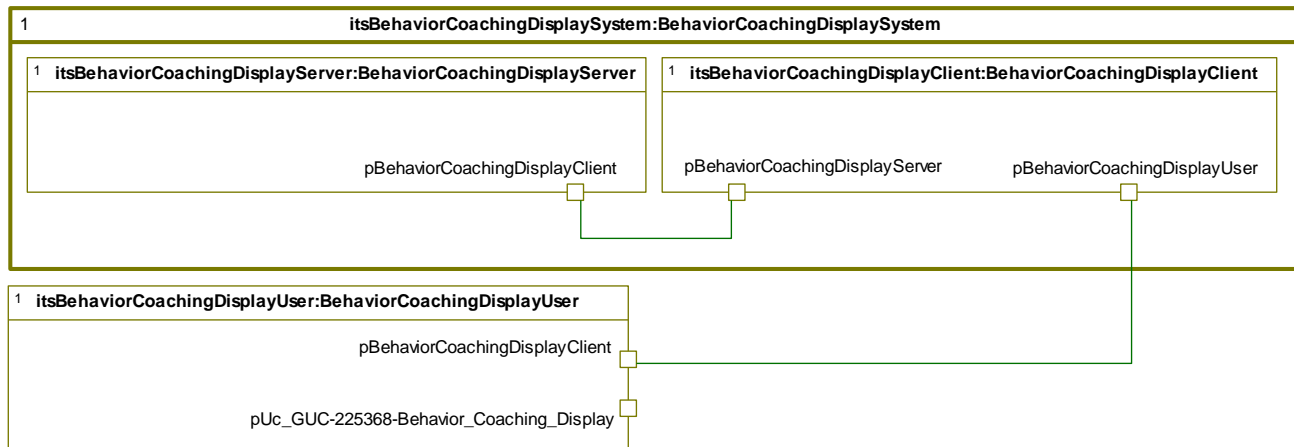
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1 Architectural Design

1.1 EVBI-SV-REQ-333146/A-Behavior Coaching Display System

Internal Block Diagram



1.2 EVBI-CLD-REQ-333147/A-Behavior Coaching Display Client

The behavior coaching display client outputs behavior coaching information to the user based on data received from the behavior coaching display server. Please refer to the relevant HMI specification for information on display format/rules.

1.3 BehaviorCoachingDisplayClient Interface

1.3.1 EVBI-IIR-REQ-333148/A-BehaviorCoachingDisplayClient_Tx

This class does not transmit any signals. However, it provides output to the user.

1.3.2 EVBI-IIR-REQ-333149/A-BehaviorCoachingDisplayClient_Rx

1.3.2.1 MD-REQ-333150/A-BehaviorCoaching_St

Message Type: Status

This signal communicates behavior coaching information.

Name	Literals	Value	Description
AccelTip	-	-	Acceleration tip value (percent / 0.1 resolution)
	0.0	0x0	
	0.1	0x1	
	...		
	102.1	0x3FD	
	No_Data_Exists	0x3FE	
	Faulty	0x3FF	
DecelTip	-	-	Deceleration tip value (percent / 0.1 resolution)
	0.0	0x0	
	0.1	0x1	
	...		
	102.1	0x3FD	
	No_Data_Exists	0x3FE	
	Faulty	0x3FF	
VelTip	-	-	Velocity tip value (percent / 0.1 resolution)
	0.0	0x0	



	0.1	0x1	
	...		
	102.1	0x3FD	
	No_Data_Exists	0x3FE	
	Faulty	0x3FF	

1.4 EVBI-IIR-REQ-323259/A-Logical to Physical CAN signal mapping - Behavior Coaching Display

This Behavior Coaching Display deployment table maps the Behavior Coaching Display logical signals to the physical CAN signals.

Note: This is for reference only. If there is a conflict between the name in the CAN signal name column and what is found in the actual CAN dB then the CAN dB takes precedent. Please bring to Ford's attention if there is a conflict.

Logical Signal Name		CAN signal name
BehaviorCoaching_st	AccelTip	EcoCochA_Pc_Dsply
	DecelTip	EcoCochDecel_Pc_Dsply
	VelTip	EcoCochCrus_Pc_Dsply



2 Functional Definition

2.1 EVBI-FUN-REQ-333151/A-Behavior Coaching Display Active

This function includes use-cases that describe the behavior coaching display feature in an active state.

2.1.1 Requirements

2.1.1.1 *EVBI-REQ-016430/A-Signals with Percent Values - Erroneous Values (TcSE ROIN-267327-1)*

Signals with percent definitions should always receive values within a standard percent range: 0-100%.

Individual signal definitions may include additional values outside of this range (i.e., 100.4%, 102.1%, etc); however, these erroneous values will be treated as a faulty signal and not be processed by the display client.

2.1.2 Use Cases

2.1.2.1 *EVBI-UC-REQ-016431/A-Behavior Coaching Display Selected (TcSE ROIN-291734)*

Linked Elements

EVBI-REQ-016430/A-Signals with Percent Values - Erroneous Values (TcSE ROIN-267327-1)

Actors	User
Pre-conditions	Ignition Status is equal to Run.
Scenario Description	The user selects the behavior coaching display.
Post-conditions	The behavior coaching display is active. Current behavior coaching information is displayed to the user.
List of Exception Use Cases	E1 – Absence of new Behavior Coaching data
Interfaces	G-HMI, Vehicle System Interface

2.1.2.2 *EVBI-UC-REQ-016432/A-Absence of new Behavior Coaching data (TcSE ROIN-291735)*

Linked Elements

EVBI-REQ-016430/A-Signals with Percent Values - Erroneous Values (TcSE ROIN-267327-1)

Actors	User
Pre-conditions	Same as normal use case.
Scenario Description	The user selects the behavior coaching display and there is no new/updated data being sent to this display.
Post-conditions	The display functions as defined in the relevant HMI specification.
List of Exception Use Cases	N/A
Interfaces	G-HMI, Vehicle System Interface

2.1.2.3 *EVBI-UC-REQ-016433/A-Vehicle power mode change for Behavior Coaching (TcSE ROIN-291736)*

Linked Elements

EVBI-REQ-016430/A-Signals with Percent Values - Erroneous Values (TcSE ROIN-267327-1)

Actors	User
Pre-conditions	Ignition status is equal to Run. Behavior coaching display is active.
Scenario Description	Ignition status changes to a value less than run.



Post-conditions	The display functions as defined in the relevant HMI specification.
List of Exception Use Cases	N/A
Interfaces	G-HMI, Vehicle System Interface

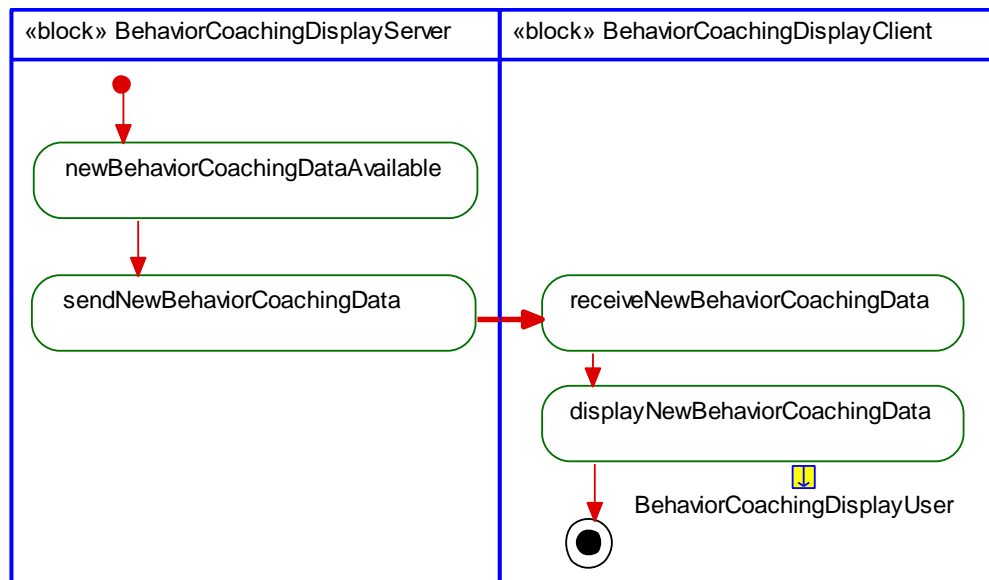
2.1.3 White Box View

2.1.3.1 Activity Diagrams

2.1.3.1.1 EVBI-ACT-REQ-333152/A-Behavior Coaching Display Selected

Linked Elements

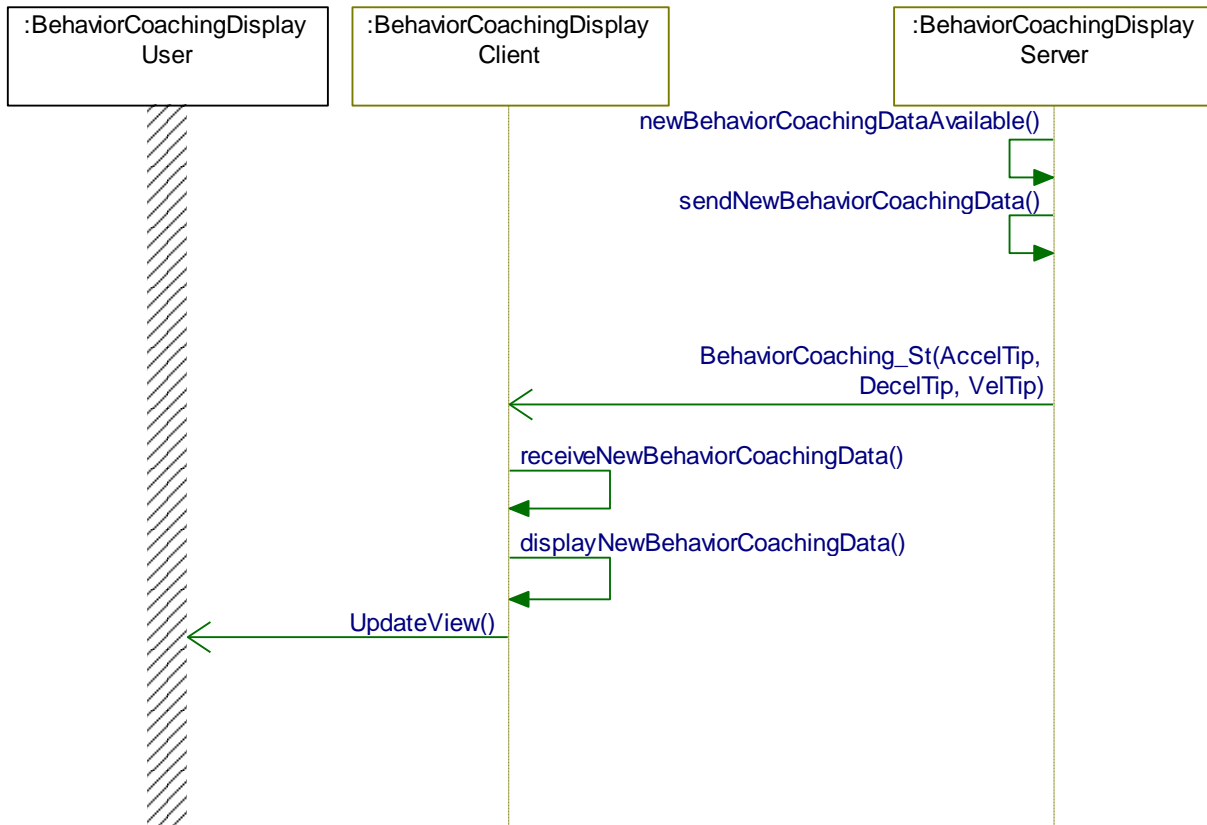
EVBI-SD-REQ-333153/A-Behavior Coaching Display Selected





2.1.3.2 White Box Scenarios

2.1.3.2.1 EVBI-SD-REQ-333153/A-Behavior Coaching Display Selected





3 Appendix: Reference Documents

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