Research & Vehicle Technology
"Infotainment Systems Product Development"

Feature – Remote Active Park Assist

Infotainment Subsystem Part Specific Specification (SPSS)

Version 1.0
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FORD CONFIDENTIAL

Revision History

Date	Version	Notes	
February 4, 2020	**1.0**	**Initial Release**	

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1 Overview

Remote Active Park Assist is a feature that helps the user by automatically parking and getting a vehicle out of park feature, whenever possible (such as parking spots are available, vehicle is driven within feature limitation speed, etc) .
The documentation provides the interface on how the user will operate the feature through HMI, and feedback that the feature will give back to the user.

2 Architectural Design

2.1 RPA-CLD-REQ-359026/A-REPA Client

RePa Client is the user interface device. It provides feature input and output details to the user.

2.2 RPA-CLD-REQ-359027/A-REPA Server

RePA server is where feature decisions are taken. It acquires the input provided by the user through the client and provides needed feedback or it changes feature behavior to confirm to the requests.

2.3 Logical Signal Mapping

Logical Signal Name	Real Physical Name	Tx	Rx
ApaSlotL1Status		ADAS	HMI
ApaSlotL2Status		ADAS	HMI
ApaSlotL3Status		ADAS	HMI
ApaSlotR1Status		ADAS	HMI
ApaSlotR2Status		ADAS	HMI
ApaSlotR3Status		ADAS	HMI
ApaSlotFrontGtpStatus		ADAS	HMI
ApaSlotRearGtpStatus		ADAS	HMI
ApaSlotL1Pos		ADAS	HMI
ApaSlotL2Pos		ADAS	HMI
ApaSlotL3Pos		ADAS	HMI
ApaSlotR1Pos		ADAS	HMI
ApaSlotR2Pos		ADAS	HMI
ApaSlotR3Pos		ADAS	HMI
ApaSlotFrontGtpPos		ADAS	HMI
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DriverRequest2		ADAS	HMI
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VehicleSpeed		ABS	HMI
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ApaSlotL2FeatureOptn		ADAS	HMI
ApaSlotL3FeatureOptn		ADAS	HMI
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ApaSlotR2FeatureOptn		ADAS	HMI
ApaSlotR3FeatureOptn		ADAS	HMI
ApaOffSelectable		ADAS	HMI
RVCScreenActive		HMI	HMI
DriverFeatureChangeRequest		HMI	ADAS
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ApsiSettingRq		HMI	ADAS
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AnySlotReady		HMI	HMI
PrkInSelector		HMI	HMI
PrkOutSelector		HMI	HMI
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ApaSlotFoundButNotReady		HMI	HMI
PrkAidSwtch_B_Stat_Logical		ADAS	HMI
DrivingDirection		ABS	HMI

2.4 RPA-IIR-REQ-359030/A-RepaClient_Tx

2.4.1 MD-REQ-358593/A-DriverFeatureChangeRequest

DriverFeatureChangeRequest : Transmitted by Client and this signal communicates a driver request to the Active Park Assist (APA) feature to change the APA feature offered for the target slot.

Name	Literals	Value	Description
DriverFeatureChangeRequest	-	-	-
	False	0x0	
	True	0x1	

2.4.2 MD-REQ-358594/A-ApsiSettingRq

ApsiSettingRq: Transmitted by Client and this signal provides feedback from the center stack display system to the Active Park Assist (APA) feature. The "Enable" and "Disable" states are driven by the center stack's settings menu. The "TemporarySuppression" state provides feedback that an action on the center stack display (e.g. timeout or screen change) has temporarily suppressed the notification. Please refer to detailed functional specification.

Name	Literals	Value	Description
ApsiSettingRq	-	-	-
	NoRequest	0x0	
	Enable	0x1	
	Disable	0x2	
	TemporarySuppression	0x3	

2.4.3 MD-REQ-358591/A-ApaDriverSlotSelection

ApaDriverSlotSelection : Transmitted by Client and Communicates which slot the driver has selected via the HMI. This changes the APA target slot.

Name	Literals	Value	Description
ApaDriverSlotSelection	-	-	-
	None	0x0	None
	L1	0x1	Left1
	L2	0x2	Left2
	L3	0x3	Left3
	R1	0x4	Right1
	R2	0x5	Right2
	R3	0x6	Right3
	GtpRear	0x7	Rear
	GtpFront	0x8	Front

2.4.4   MD-REQ-358592/A-DriverFeatureRequest

DriverFeatureRequest : Transmitted by Client and Communicates the Active Park Assist (APA) feature the driver would like to use.

Name	Literals	Value	Description
DriverFeatureRequest	-	-	-
	None	0x0	
	ApaParkOut	0x3	
	ApaParkIn	0x4	
	RePA	0x5	
	Off	0x6	
	Faulty	0x7	

2.5   RPA-IIR-REQ-359032/A-RepaClient_Rx

2.5.1   MD-REQ-358520/A-ApaSlotL1Status

ApaSlotL1Status: Transmitted by the server and Communicates if a slot with the ID 1 is available/present on the left side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotL1Status	-	-	
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.2   MD-REQ-358522/A-ApaSlotL2Status

ApaSlotL2Status: Transmitted by the Server and Communicates if a slot with the ID 2 is available/present on the left side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotL2Status	-	-	
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.3   MD-REQ-358523/A-ApaSlotL3Status

ApaSlotL3Status: Transmitted by the Server and Communicates if a slot with the ID 3 is available/present on the left side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotL3Status			
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.4   MD-REQ-358524/A-ApaSlotR1Status

ApaSlotR1Status: Transmitted by the Server and Communicates if a slot with the ID 1 is available/present on the right side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotR1Status			
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.5   MD-REQ-358525/A-ApaSlotR2Status

ApaSlotR2Status: Transmitted by the Server and Communicates if a slot with the ID 2 is available/present on the right side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotR2Status			
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.6   MD-REQ-358526/A-ApaSlotR3Status

ApaSlotR3Status: Transmitted by the Server and Communicates if a slot with the ID 3 is available/present on the right side and what type of slot it is.

Name	Literals	Value	Description
ApaSlotR3Status			
	None	0x0	-
	IPaFound	0x1	Parallel Parking found
	IPaReady	0x2	Parallel Parking Available
	IPeFound	0x3	Perpendicular Parking found
	IPeReady	0x4	Perpendicular Parking Available

2.5.7   MD-REQ-358527/A-ApaSlotFrontGtpStatus

ApaSlotFrontGtpStatus: Transmitted by the server and communicates the presence of a front garage type-parking slot.

Name	Literals	Value
ApaSlotFrontGtpStatus	-	-
	FALSE	0x0
	TRUE	0x1

2.5.8   MD-REQ-358528/A-ApaSlotRearGtpStatus

ApaSlotRearGtpStatus : Transmitted by the server and Communicates the pesence of a rear garage type parking slot.

Name	Literals	Value	Description
ApaSlotRearGtpStatus	-	-	
	FALSE	0x0	
	TRUE	0x1	

2.5.9   MD-REQ-358529/A-ApaSlotL1Pos

ApaSlotL1Pos: Transmitted by Server and Communicates at which position in x the slot on the left side with the ID 1 shall be shown.

Name	Literals	Value	Description
ApaSlotL1Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.10 MD-REQ-358530/A-ApaSlotL2Pos

ApaSlotL2Pos: Transmitted by Server and Communicates at which position in x the slot on the left side with the ID 2 shall be shown

Name	Literals	Value	Description
ApaSlotL2Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.11 MD-REQ-358531/A-ApaSlotL3Pos

ApaSlotL3Pos: Transmitted by Server and Communicates at which position in x the slot on the left side with the ID 3 shall be shown.

Name	Literals	Value	Description
ApaSlotL3Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.12 MD-REQ-358532/A-ApaSlotR1Pos

ApaSlotR1Pos: Transmitted by Server and Communicates at which position in x the slot on the right side with the ID 1 shall be shown.

Name	Literals	Value	Description
ApaSlotR1Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.13 MD-REQ-358533/A-ApaSlotR2Pos

ApaSlotR2Pos: Transmitted by Server and Communicates at which position in x the slot on the right side with the ID 2 shall be shown.

Name	Literals	Value	Description
ApaSlotR2Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.14 MD-REQ-358534/A-ApaSlotR3Pos

ApaSlotR3Pos: Transmitted by Server and Communicates at which position in x the slot on the right side with the ID 3 shall be shown.

Name	Literals	Value	Description
ApaSlotR3Pos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.15 MD-REQ-358535/A-ApaSlotFrontGtpPos

ApaSlotFrontGtpPos : Transmitted by server and Communicates at which position in x the garage type slot in the front shall be shown.

Name	Literals	Value	Description
ApaSlotFrontGtpPos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolutio: 0.02m	

2.5.16 MD-REQ-358536/A-ApaSlotRearGtpPos

ApaSlotRearGtpPos : Is transmitted by server and Communicates at which position in x the garage type slot in the rear shall be shown

Name	Literals	Value	Description
ApaSlotRearGtpPos	-	-	
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution 0.02m	

2.5.17 MD-REQ-358537/A-ApaSlotFrontGtpOffset

ApaSlotFrontGtpOffset: Transmitted by Server and defines the offset in y of the garage type slot in front of the vehicle.

Name	Literals	Value	Description
ApaSlotFrontGtpOffset	-	-	
		Min:-6.4m	
		Max:+6.2m	
		Offset:-6.4m	
		Resolution: 0.2m	

2.5.18 MD-REQ-358538/A-ApaSlotRearGtpOffset

ApaSlotRearGtpOffset: Transmitted by Server and defines the offset in y of the garage type slot in the rear of the vehicle.

Name	Literals	Value	Description
ApaSlotRearGtpOffset	-	-	
		Min:-6.4m	
		Max:+6.2m	
		Offset:-6.4m	
		Resolution: 0.2m	

2.5.19 MD-REQ-358539/A-ApaSlotTarget

ApaSlotTarget : Transmitted by Server and Identifies the slot that is currently targeted by the Active Park Assist (APA) or Remote Park Assist (RePA) feature

Name	Literals	Value	Description
ApaSlotTarget	-	-	
	None	0x0	
	L1	0x1	
	L2	0x2	
	L3	0x3	
	R1	0x4	
	R2	0x5	
	R3	0x6	
	GtpRear	0x7	
	GtpFront	0x8	

2.5.20 MD-REQ-358540/A-ApaDriverSlotSelection

ApaDriverSlotSelection : Transmitted by Server and Communicates which slot the driver has selected. This changes the Active park Assist (APA) target slot.

Name	Literals	Value	Description
ApaSlotTarget	-	-	
	None	0x0	
	L1	0x1	
	L2	0x2	
	L3	0x3	
	R1	0x4	
	R2	0x5	
	R3	0x6	
	GtpRear	0x7	
	GtpFront	0x8	

2.5.21 MD-REQ-358542/A-ApaMvngSlots

ApaMvngSlots : Transmitted by Server and Communicates if the dynamic/ moving slot display is active or not.

Name	Literals	Value	Description
ApaMvngSlots	-	-	
	Off	0x0	
	On	0x1	

2.5.22 MD-REQ-358543/A-ApaOptnSelect

ApaOptnSelect : Transmitted by Server and Communicates if slot target and slot option selection via the center stack display's touch option is available. The variable depends on a speed threshold.

Name	Literals	Value	Description
ApaOptnSelect	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.23 MD-REQ-358544/A-ApaParkInSelectable

ApaParkInSelectable : Transmitted by Server and Reflects if the Active Park Assist (APA) feature option for parking into slots is selectable.

Name	Literals	Value	Description
ApaParkInSelectable	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.24 MD-REQ-358545/A-ApaParkOutSelectable

ApaParkInSelectable : Transmitted by Server and Reflects if the Active Park Assist (APA) feature option for parking out of slots is selectable.

Name	Literals	Value	Description
ApaParkInSelectable	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.25 MD-REQ-358567/A-RePAParkInSelectable

RePAParkInSelectable: Transmitted by Server and Reflects if the Remote Park Assist (RepA) feature option is selectable.

Name	Literals	Value	Description
RePAParkInSelectable	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.26 MD-REQ-358570/A-ApaSlotPos1X

ApaSlotPos1X: Transmitted by the Server and Used only during the active phase of the maneuver. Defines the x-position of point 1 of a slot. Please refer to detailed requirements.

Name	Literals	Value	Description
ApaSlotPos1X	-	-	-
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.27 MD-REQ-358571/A-ApaSlotPos2X

ApaSlotPos2X : Transmitted by the Server and Used only during the active phase of the maneuver. Defines the x-position of point 2 of a slot. Please refer to detailed requirements.

Name	Literals	Value	Description
ApaSlotPos2X	-	-	-
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolutio n: 0.02m	

2.5.28 MD-REQ-358572/A-ApaSlotPos1Y

ApaSlotPos1Y: Transmitted by Server and Used only during the active phase of the maneuver. Defines the y-position of point 1 of a slot. Please refer to detailed requirements.

Name	Literals	Value	Description
ApaSlotPos1Y	-	-	-
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.29 MD-REQ-358573/A-ApaSlotPos2Y

ApaSlotPos2Y : Used only during the active phase of the maneuver. Defines the y-position of point 2 of a slot. Please refer to detailed requirements.

Name	Literals	Value	Description
ApaSlotPos2Y	-	-	-
		Min: -20.96m	
		Max: +19.98m	
		Offset: -20.96m	
		Resolution: 0.02m	

2.5.30 MD-REQ-358574/A-SystemState1

SystemState1 : Transmitted by server and this is the "Mains" signal for showing the Active Park Assist (APA) on the vehicle's center stack display. The display function shall only trigger APA content if the signal is set to a state other than "Off".

Name	Literals	Value	Description
SystemState1	-	-	-
	Off	0x0	
	HmiMenu	0x1	
	HMIFullScreen	0x2	

2.5.31 MD-REQ-358575/A-SystemState2

SystemState2 : Transmitted by Server and Communicates if the Active Park Assist (APA) system is currently actively controlling vehicle actuators or not.

Name	Literals	Value	Description
SystemState2	-	-	-
	InActive	0x0	
	Active	0x1	

2.5.32 MD-REQ-358576/A-SystemState3

SystemState3: Transmitted by Server and communicates various operational modes and system states of the Active Park Assist (APA) feature.

Name	Literals	Value	Description
SystemState3	-	-	-
	NormalOps	0x0	
	Pause	0x1	
	Overspeed	0x2	
	NotAvailable	0x3	
	Cancelled	0x4	
	Finished	0x5	
	Faulty	0x6	
	BothSidesSelectable	0x7	
	LeftSideSelectable	0x8	
	RightSideSelectable	0x9	
	NoSideSelectable	0xA	

2.5.33 MD-REQ-358577/A-SystemState4

SystemState4 : Transmitted by Server and reflects which Active Park Assist (APA) feature is currently active.

Name	Literals	Value	Description
SystemState4	-	-	-
	None	0x1	
	ApaParkOut	0x4	
	ApaParkIn	0x5	
	RePA	0x6	

2.5.34 MD-REQ-358578/A-DriverRequest1

DriverRequest1 : Transmitted by Server and this signal communicates a first set of driver requests the Active Park Assist (APA) system can set during APA usage.

Name	Literals	Value	Description
DriverRequest1	-	-	-
	NoRequest	0x0	
	Shift_to_R	0x1	
	Shift_to_D	0x2	
	Shift_to_N	0x3	
	Shift_to_P	0x4	
	PressApaButton	0x5	
	ExitVehicle	0x6	

2.5.35 MD-REQ-358579/A-DriverRequest2

DriverRequest2 : Transmitted by Server and this signal communicates a second set of driver requests the Active Park Assist (APA) system can set during APA usage.

Name	Literals	Value	Description
DriverRequest2	-	-	-
	NoRequest	0x0	
	Stop	0x1	
	DriveForward	0x2	
	DriveBackward	0x3	
	ReleaseBrake	0x4	
	ReleaseSteering	0x5	
	ReleaseEPB	0x6	
	TakeControl	0x7	
	CloseDoor	0x8	

2.5.36 MD-REQ-358580/A-DriverInfo

DriverInfo : Transmitted by Server and this signal communicates various Active Park Assist (APA) text messages or symbols.

Name	Literals	Value	Description
DriverInfo	-	-	-
	None	0x0	
	WaitForSteering	0x1	
	ObstacleInPath	0x2	
	BrakeEvent	0x3	
	SpeedLimitExceeded	0x4	
	WrongDirection	0x5	
	SteeringInteraction	0x6	
	DoorOpen	0x7	
	HighInclination	0x8	
	WheelSlip	0x9	
	TCSdeactivated	0xA	
	TrailerAttached	0xB	
	SensorsBlocked	0xC	
	AccelPedalInactive	0xD	
	TrailerFeature_NotAvailable	0xE	
	ReducedFunction	0xF	

2.5.37 MD-REQ-358581/A-ApaSlotL1FeatureOptn

ApaSlotL1FeatureOptn : Transmitted by Server and Communicates if the left side slot with the ID 1 is available for another feature.

Name	Literals	Value	Description
ApaSlotL1FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.38 MD-REQ-358582/A-ApaSlotL2FeatureOptn

ApaSlotL2FeatureOptn : Transmitted by Server and communicates if the left side slot with the ID 2 is available for another feature..

Name	Literals	Value	Description
ApaSlotL2FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.39 MD-REQ-358583/A-ApaSlotL3FeatureOptn

ApaSlotL3FeatureOptn : Transmitted by Server and communicates if the left side slot with the ID 3 is available for another feature..

Name	Literals	Value	Description
ApaSlotL3FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.40 MD-REQ-358584/A-ApaSlotR1FeatureOptn

ApaSlotR1FeatureOptn : Transmitted by Server and communicates if the right side slot with the ID 1 is available for another feature.

Name	Literals	Value	Description
ApaSlotR1FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.41 MD-REQ-358585/A-ApaSlotR2FeatureOptn

ApaSlotR2FeatureOptn : Transmitted by Server and communicates if the right side slot with the ID 2 is available for another feature.

Name	Literals	Value	Description
ApaSlotR2FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.42 MD-REQ-358586/A-ApaSlotR3FeatureOptn

ApaSlotR3FeatureOptn : Transmitted by Server and communicates if the right side slot with the ID 3 is available for another feature.

Name	Literals	Value	Description
ApaSlotR3FeatureOptn	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.43 MD-REQ-358587/A-ApaOffSelectable

ApaOffSelectable : Transmitted by Server and Reflects if the interface is selectable.

Name	Literals	Value	Description
ApaOffSelectable	-	-	-
	Not Available	0x0	
	Available	0x1	

2.5.44 MD-REQ-358588/A-ApsiSetting

ApsiSetting : Transmitted by Server and this is the current state of the Active Park Assist (APA) function that can trigger a slot indication on the center stack display even if the driver has not activated APA. It is used by the center stack's setting menu.

Name	Literals	Value	Description
ApsiSetting	-	-	-
	Disabled	0x0	
	Enabled	0x1	

2.5.45 MD-REQ-358589/A-SlotIndicationRq

SlotIndicationRq : Transmitted by Server and this signal can trigger a (center stack display) notification for "active park assist has found a slot " even if the drier has not activated the Active Park Assist (APA) feature.

Name	Literals	Value	Description
SlotIndicationRq	-	-	-
	False	0x0	
	True	0x1	

2.5.46 MD-REQ-358590/A-PrkAidSwtch_B_Stat_Logical

PrkAidSwtch_B_Stat_Logical : Transmitted by Server and this is a logical signal from the ADAS to HMI to indicate if the Photkey is pressed.

Name	Literals	Value	Description
PrkAidSwtch_B_Stat_Logical	-	-	-
	NotPressed	0x00	
	Pressed	0x01	

2.5.47 MD-REQ-358595/A-VehicleSpeed

VehicleSpeed : Transmitted by Server and the current speed of the vehicle.

Name	Literals	Value	Description
VehicleSpeed	-	-	-
			Min: 0
			Max: 655.35
			Resolution: 0.01
			Unit: Kilometers/Hour

2.5.48 MD-REQ-358596/A-DrivingDirection

DrivingDirection: Transmitted by Server and this is a logical signal from the Active Park Assist (APA) feature ADAS to the center stack display to indicate driving direction..

Name	Literals	Value	Description
DrivingDirection	-	-	-
	Forward	0x0	
	Backward	0x1	
	Unknown	0x2	
	Failed	0x3	

2.6 RPA-REQ-359033/A-RepaClient_InternalParameters

2.6.1 RPA-REQ-358737/A-RVCScreenActive

RVCScreenActive : This is an internal signal. Provides information if the RVC screen is currently shown or not. Needs to be derived from the RVC activation requirements.

Name	Literals	Value	Description
RVCScreenActive	-	-	-
	FALSE	0x00	
	TRUE	0x01	

2.6.2 RPA-REQ-358738/A-AnySlotReady

AnySlotReady: This is an internal signal. It describes if any slot is present, with a state found, but not ready. Refer to dedicated requirements. It simplifies the overall set up of the truth tables for Texts and Symbols.

Name	Literals	Value	Description
AnySlotReady	-	-	-
	FALSE	0x00	
	TRUE	0x01	

2.6.3   RPA-REQ-358739/A-PrkInSelector

PrkInSelector : This is an internal parameter. It describes if the state of the touch selection interface for ApaParkIn. The value is determined based on the logic below.

```
If
     (ApaSlotL1Status == IPaReady)
 OR (ApaSlotL1Status == IPeReady)
 OR (ApaSlotL2Status == IPaReady)
 OR (ApaSlotL2Status == IPeReady)
 OR (ApaSlotL3Status == IPaReady)
 OR (ApaSlotL3Status == IPeReady)
 OR (ApaSlotR1Status == IPaReady)
 OR (ApaSlotR1Status == IPeReady)
 OR (ApaSlotR2Status == IPaReady)
 OR (ApaSlotR2Status == IPeReady)
 OR (ApaSlotR3Status == IPaReady)
 OR (ApaSlotR3Status == IPeReady)
 OR (ApaSlotFrontGtpStatus == True)
 OR (ApaSlotRearGtpStatus == True)
set AnySlotReady = True
Else
set AnySlotReady = False
```

2.6.4   RPA-REQ-358742/A-RePASelector

RePASelector : This is an internal signal. It describes if the state of the touch selection interface for RePA.

2.6.5   RPA-REQ-358743/A-ApaSlotFoundButNotReady

ApaSlotFoundButNotReady : This is an internal parameter. It describes if any slot is present, with a state found, but not ready. It simplifies the overall set up of the truth tables for Texts and Symbols.

Name	Literals
ApaSlotFoundButNotReady	-
	FALSE
	TRUE

Its value determination is done based on the logic below.

```
If       (ApaSlotL1Status ~= IPaReady)
   AND (ApaSlotL1Status ~= IPeReady)
   AND (ApaSlotL2Status ~= IPaReady)
   AND (ApaSlotL2Status ~= IPeReady)
   AND (ApaSlotL3Status ~= IPaReady)
   AND (ApaSlotL3Status ~= IPeReady)
   AND (ApaSlotR1Status ~= IPaReady)
   AND (ApaSlotR1Status ~= IPeReady)
   AND (ApaSlotR2Status ~= IPaReady)
   AND (ApaSlotR2Status ~= IPeReady)
```

```
   AND (ApaSlotR3Status ~= IPaReady)
   AND (ApaSlotR3Status ~= IPeReady)
   AND (ApaSlotFrontGtpStatus == False)
   AND (ApaSlotRearGtpStatus == False)
   AND
   (     (ApaSlotL1Status == IPaFound) OR (ApaSlotL1Status == IPeFound)
    OR (ApaSlotL2Status == IPaFound) OR (ApaSlotL2Status == IPeFound)
    OR (ApaSlotL3Status == IPaFound) OR (ApaSlotL3Status == IPeFound)
    OR (ApaSlotR1Status == IPaFound) OR (ApaSlotR1Status == IPeFound)
    OR (ApaSlotR2Status == IPaFound) OR (ApaSlotR2Status == IPeFound)
    OR (ApaSlotR3Status == IPaFound) OR (ApaSlotR3Status == IPeFound)   )
set ApaSlotFoundButNotReady = True
Else
set ApaSlotFoundButNotReady = False
```

3 General Requirements

3.1 RPA-REQ-359177/A-Tuning Parameters

These are parameters that help with Image affects in Client HMI. These have been included here on a temporary basis so there is no discontinuity of requirements. ==Proper location should be discussed with HMI team.==

| Parameter	Description	Value/ Range	Initial setting
RequestTimeOut	Used to time out requests from HMI to ADAS if the expected response from ADAS is not received. Prevents "stuck" signal requests.	0 to 800ms	400ms
ApsiDeactMax	The maximum number of deactivations the driver can temporarily deactivate the APSI notification. If the driver deactivates the notification more often, the HMI function sends a request to ADAS to disable APSI.	0 to 10	3
ApaRearSlotIndication	The scaled distance for which a rear slot is still visible on the HMI display if the APA feature is active. The unit of this parameter is given in "m". The HMI design team needs to convert this (real world) value into a reasonable unit for the screen.		16 m
ApaFrontSlotIndication	The scaled distance for which a front slot is still visible on the HMI display if the APA feature is active. The unit of this parameter is given in "m". The HMI design team needs to convert this (real world) value into a reasonable unit for the screen.		8 m
RePARearSlotIndication	The scaled distance for which a rear slot is still visible on the HMI display if the RePA feature is active. The unit of this parameter is given in "m". The HMI design team needs to convert this (real world) value into a reasonable unit for the screen.		12 m
RePAFrontSlotIndication	The scaled distance for which a front slot is still visible on the HMI display if the RePA feature is active. The unit of this parameter is given in "m". The HMI design team needs to convert this (real world) value into a reasonable unit for the screen.		12 m
FadeInTime	Used to smoothly fade in Gtp slots.	0 to 1000ms	500ms
FadeOutTime	Used to smoothly fade out Gtp slots.	0 to 1000ms	500ms

4 Functional Definition

4.1 RPA-FUN-REQ-359001/A-Park Slot Indication

4.1.1 APSI Slot Indication Overview

APSI Slot Indication Menu is a settings menu, that allows the user to enable or disable the Parking Slot Notification. The pictures below will clarify this, but keep in mind the pictures are for information purposes ONLY and not a solid requirement that forces the Client HMI to look in certain way. The text and the "looks" of the menu could be different.
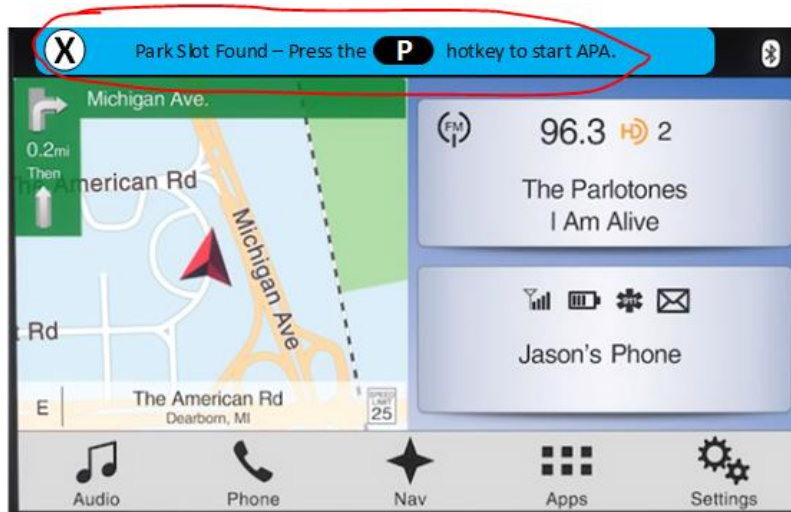
The top bar, circled in red, is the Parking Slot reminder. It is triggered from the states of signal SlotIndicationRq.
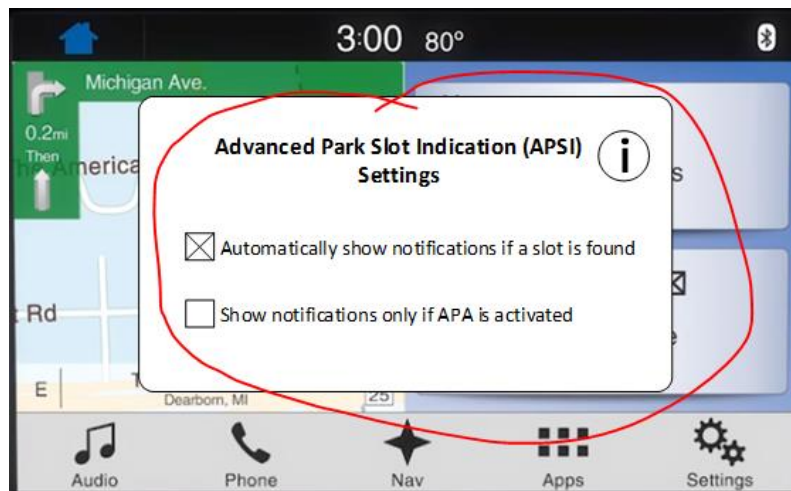
The option to control the Parking Slot Reminder whether to show or not show it, is controlled the settings menu above. User input is signal ApsiSettingRq and state status is provided by the server through the signal ApsiSetting.

The subsequent functional section will describe the interface and use cases for this section of the feature.

4.1.2 RPA-REQ-359175/A-Requesting Same State

If ApsiSetting is "Enabled" or "Disabled" and the driver selects the "Enabled" or "Disabled" option, respectively, the signal ApsiSettingRq shall remain set to "NoRequest".

4.1.3 RPA-REQ-359176/A-Temporary Supression

If the [ApsiCenterStackNotification] is shown and the driver changes the center stack screen (e.g. from Home to Navigation), the [ApsiCenterStackNotification] shall be deactivated and the ApsiHmi function shall set ApsiSettingRq from "NoRequest" to "TemporarySuppression".

4.1.4 RPA-REQ-359178/A-Timeout Supression

If ApsiSettingRq has been set to "Enable", "Disable" or "TemporarySuppression" for longer than [RequestTimeOut], the signal ApsiSettingRq shall be set to "NoRequest".

4.1.5 Use Cases

4.1.5.1 RPA-UC-REQ-359181/A-Requesting Same State as The Current State

Actors	User
Pre-conditions	Vehicle is On.
Scenario Description	User requests same state that the menu is currently in.
Post-conditions	There are no changes in the menu state. Client sends a "NoRequest" state whenever the user requests same state.
List of Exception Use Cases	
Interfaces	Client HMI Interface.

4.1.5.2 RPA-UC-REQ-359185/A-Enabling APSI Menu

Actors	User
Pre-conditions	Vehicle is on. Settings Menu is disabled.
Scenario Description	User request to enable to APSI menu.
Post-conditions	Client send an "Enable" request. Upon menu becoming enabled, client sends "NoRequest" state.
List of Exception Use Cases	
Interfaces	Client HMI

4.1.5.3 RPA-UC-REQ-359186/A-Disable APSI Menu

Actors	User
Pre-conditions	APSI Menu is enabled
Scenario Description	User requests APSI Menu to be disabled.
Post-conditions	Client sends "Disable" request to Server. Server changes the menu state and updates the client accordingly. Client sends "NoRequest" state to server.
List of Exception Use Cases	
Interfaces	Client HMI

4.1.5.4   RPA-UC-REQ-359187/A-Temporary Suppression

Actors	User
Pre-conditions	APSI Menu is enabled.
Scenario Description	Server sends APSI notification. User changes the HMI screen thus overriding the Server notification
Post-conditions	Client sends "TemporarySuppression" to server.
List of Exception Use Cases	
Interfaces	Client HMI

4.1.6   White Box View

4.1.6.1   Activity Diagrams

4.1.6.1.1   RPA-ACT-REQ-359294/A-APSI Slot Indication
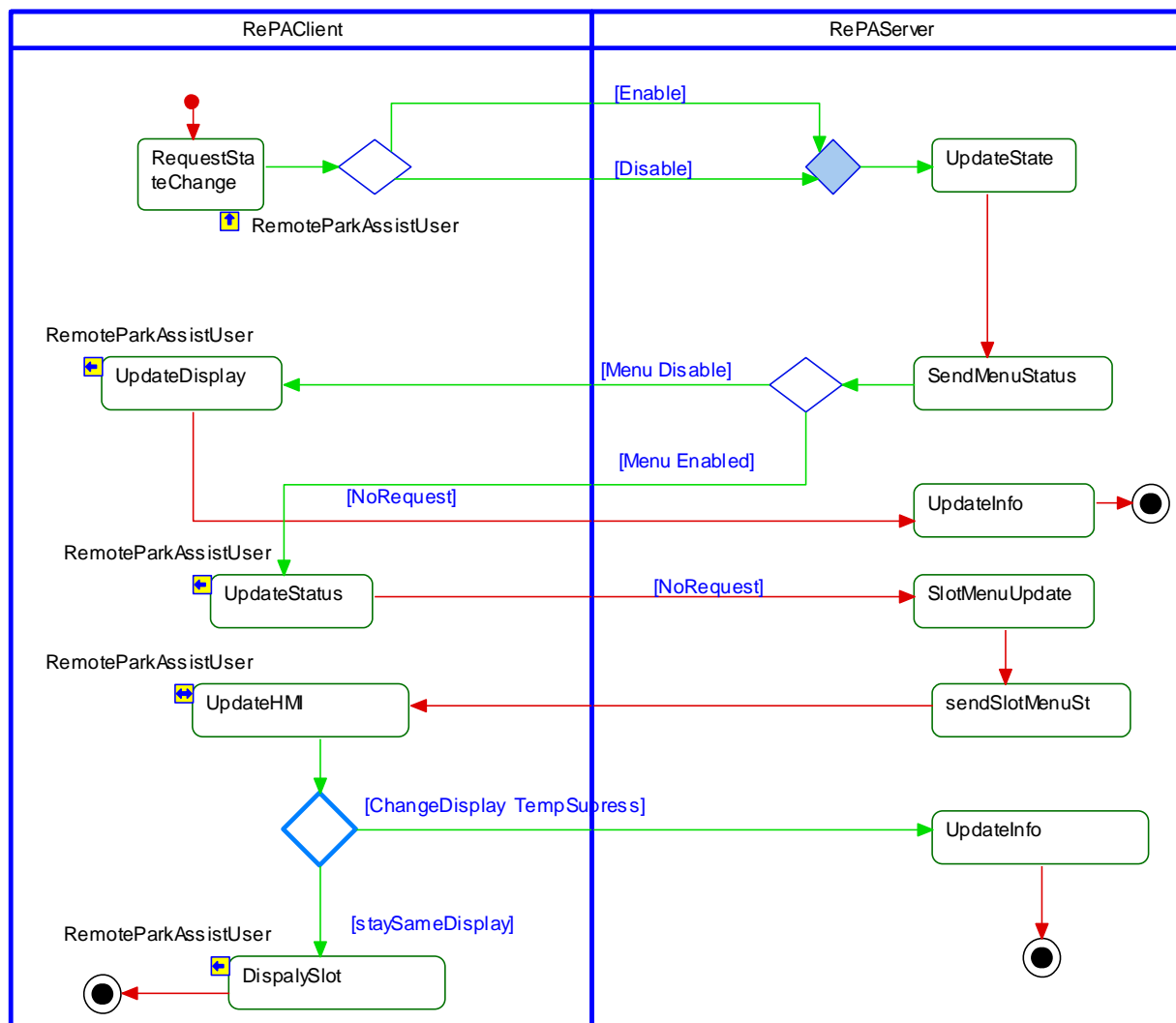
4.1.6.2   Sequence Diagrams

4.1.6.2.1   RPA-SD-REQ-359295/A-APSI Slot Indication

:RemotePark AssistUser | :RemotePark AssistClient | :RemotePark AssistServer

RePaMenuStateChange()

ReqestStateChange()

alt

[Menu Initially Enabled]

ApsiSettingRq(Disable)

updateState()

ApsiSetting(Disabled)

updateDisplay()

updateView()

ApsiSettingRq(NoRequest)

[Menu Initially Disabled]

ApsiSettingRq(Enable)

updateState()

ApsiSetting(Enabled)

ApsiSettingRq(NoRequest)

alt

[Slot Indication Off]

SlotIndicationRq(False)

[Slot Indication On]

SlotIndicationRq(True)

updateDisplay()

updateView()

alt

[Navigate Away From HMI Screen or Close The Notification]

ApsiSettingRq(TemprorarySupression)

4.2 RPA-FUN-REQ-359617/A-Feature Determination

4.2.1 RPA-REQ-360829/A-Return To Default Feature Request

As mentioned, earlier this signal DriverFeatureRequest is used to change the active feature to any of the available ones such as ParkIn, ParkOut and RePaParkIn. Initial request should not be the same as the current parameter of SystemState4.

Once the feature request has been confirmed by SystemState4 (it will come with same parameter that DriverFeatureRequest is sending) than DriverFeatureRequest signal should be sent with parameter None.

4.2.2 Use Cases

4.2.2.1 RPA-UC-REQ-360743/A-Change Current Feature

Actors	User
Pre-conditions	ParkIn, ParkOut and RepaParkIn are selectable. System already has one of the above features active.
Scenario Description	User selects a feature that is not active.
Post-conditions	Client+Server will activate the feature the user requested.
List of Exception Use Cases	
Interfaces	Client HMI

4.2.3 White Box View

4.2.3.1 Activity Diagrams

4.2.3.1.1 RPA-ACT-REQ-360744/A-Feature Determination
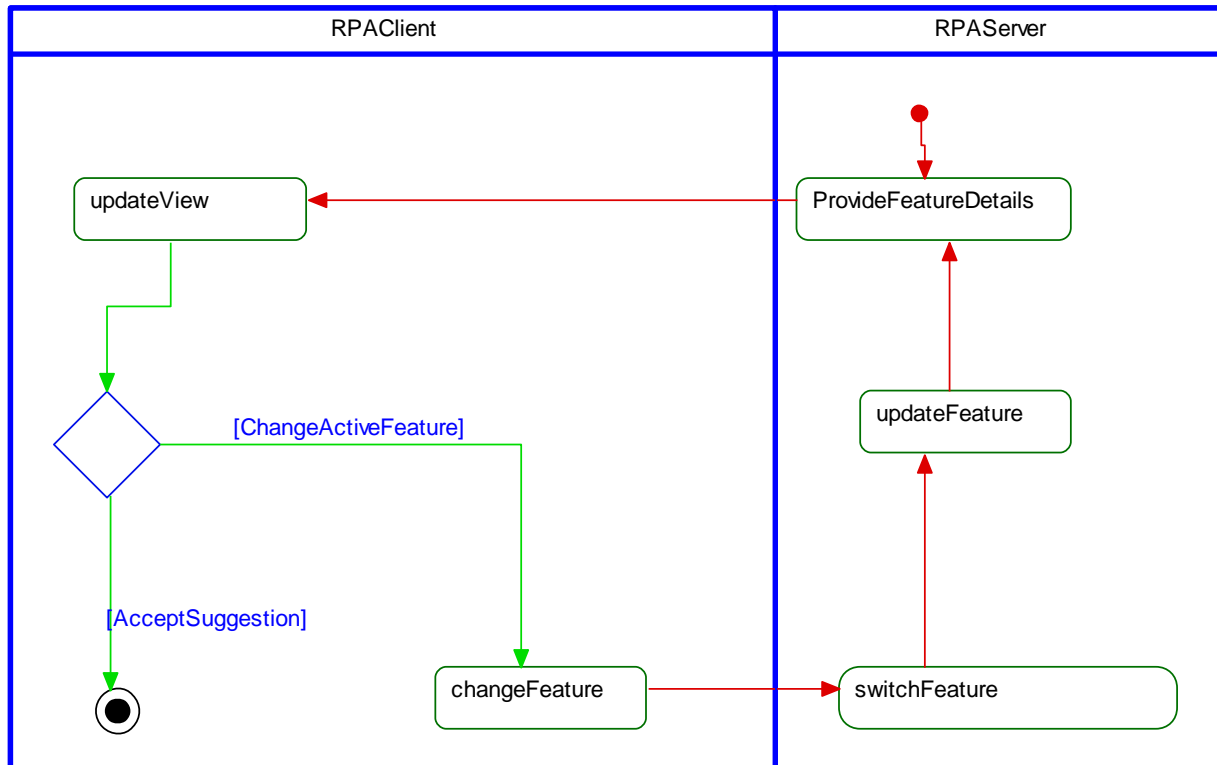
4.2.3.2 Sequence Diagrams

4.2.3.2.1 RPA-SD-REQ-360745/A-Feature Determination

sd [Package] RPA_ArchitecturalDesignPkg [360745 Feature Determination]

:RPAUser   :RPAClient   :RPAServer

provideFeatureDetails()
ApaParkInSelectable()
ApaParkOutSelectable()
RePaParkInSelectable()
SystemState4()
updateView()
UpdateView()
ChangeActiveFeature()
changeFeature()
DriverFeatureRequest()

not the same as the feature provided by SystemState4

updateFeature()
provideFeatureDetails()
SystemState4()
DriverFeatureRequest(None)
updateView()
updateView()

4.3   RPA-FUN-REQ-358986/A-Parking Map Drawing

4.3.1   Overview

Park Search Mode(PSM) slot indicator shall update the status of the slot information for all Four sides of Vehicle. Slot information shall be updated on the user screen with their respective sides (Left, Right, Rear & Front) with their availability as Ready or Found and parking type as Parallel or Perpendicular.

4.3.2 Requirements

4.3.2.1 *RPA-REQ-360853/A-PSM Scan- Left and Right*

Active Park Assist (APA) shall update the user screen with all possible and available slot information. The APA system shall update the user screen with three possible and available parking slots for the Left and Right side of vehicle respectively. The Parking slot type on Left and right side shall attributed as Parallel and Perpendicular.

Slot Type	Slot Attribute	Values
APaSlotL1	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready
APaSlotL2	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready
APaSlotL3	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready
APaSlotR1	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready
APaSlotR2	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready
APaSlotR3	Parallel	IPA Found
		IPA Ready
	Perpendicular	IPE Found
		IPE Ready

#### 4.3.2.2 *RPA-REQ-360855/A-PSM Scan- Front & Rear*

Active Park Assist (APA) shall update the user screen with all possible and available slot information. The APA system shall update the user screen with possible and available parking slots for Front and Rear side of vehicle respectively.

The Parking slot type on Front and Rear side shall attributed as Not Available and Available.

Slot Type	Slot Attribute	Values
ApaSlotFrontGtp	Not Available	FALSE
	Available	TRUE
ApaSlotRearGtp	Not Available	FALSE
	Available	TRUE

4.3.2.3 *RPA-REQ-360852/A-Slot Type Change*

Available slot Information shall be shown with a Parking icon at their respective slot position. If the targeted Parking slot is changeable to Parallel or perpendicular it shall be shown as type changeable on the User Screen.
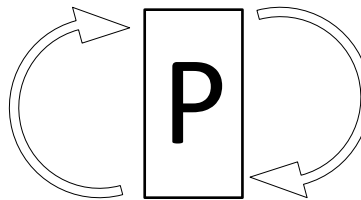
4.3.3 Use Cases

4.3.3.1 RPA-UC-REQ-360835/A-Slot Right & Left Find

Slot Type	Values
ApaSlotL1FeatureOptn	Not Available
	Available
ApaSlotL2FeatureOptn	Not Available
	Available
ApaSlotR1FeatureOptn	Not Available
	Available
ApaSlotR2FeatureOptn	Not Available
	Available

Actors	User
Pre-conditions	1. Vehicle is ON and APA session actively looking for Right and Left side parking Slot.
	2. Slot Indicator from RePA server is True.
Scenario Description	RePA Server notifies Client with Slot info as Ready or Found
Post-conditions	RePA Client shall update the Slot Information for User.
List of Exception Use Cases	
Interfaces	Client HMI Interface

4.3.3.2 RPA-UC-REQ-360836/A-Slot Front & Rear Find

Actors	User
Pre-conditions	1. Vehicle is ON and APA session actively looking for Front and Rear parking Slot.
	2. Slot Indicator from RePA server is True.
Scenario Description	RePA Server notifies Client with Slot info as Found or Not Found.
Post-conditions	RePA Client shall update the Slot Information for User.
List of Exception Use Cases	
Interfaces	Client HMI Interface

### 4.3.3.3 RPA-UC-REQ-360837/A-Slot Visual Update

Actors	User
Pre-conditions	1. Vehicle is ON and APA session actively looking for Right and Left side parking Slot. 2. Slot Indicator from RePA server is True. 3. Both Parallel and Perpendicular type parking slot available for target slot.
Scenario Description	RePA client updated as slot type can be changed as Parallel or Perpendicular.
Post-conditions	Respective slot information updated
List of Exception Use Cases	
Interfaces	Client HMI Interface

4.3.3.4 RPA-UC-REQ-360838/A-OverSpeed

Actors	User
Pre-conditions	1. Vehicle is ON and APA session actively looking for parking Slot. 2. Slot Indicator from RePA server is True.
Scenario Description	Vehicle speed exceeds the limit of APA session.
Post-conditions	RePA Client updated with overspeed information.
List of Exception Use Cases	
Interfaces	Client HMI Interface

4.3.4 White Box View

4.3.4.1 Activity Diagrams

4.3.4.1.1 RPA-ACT-REQ-360167/A-Slot Selector - Right&Left
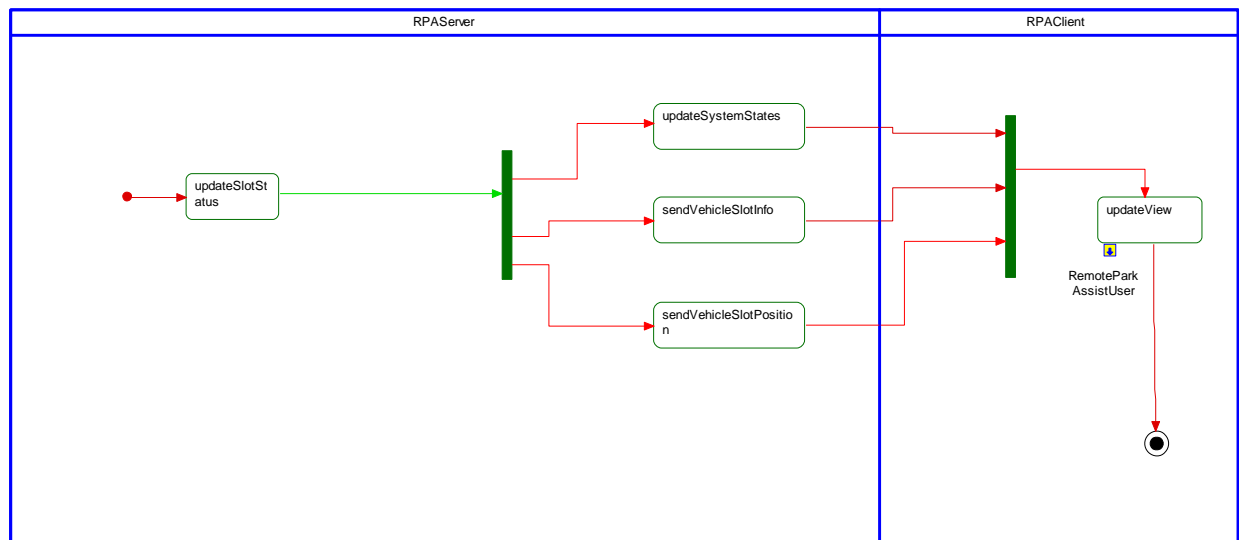
4.3.4.1.2 RPA-ACT-REQ-360220/A-Slot Selector - Front&Rear
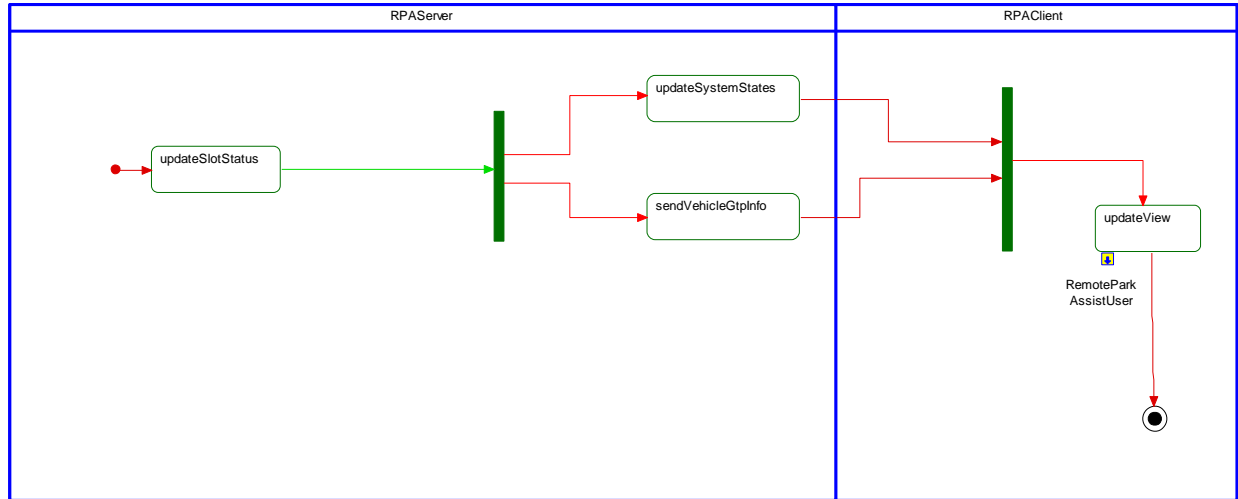
4.3.4.1.3 RPA-ACT-REQ-360385/A-Slot Selector - Slot Change
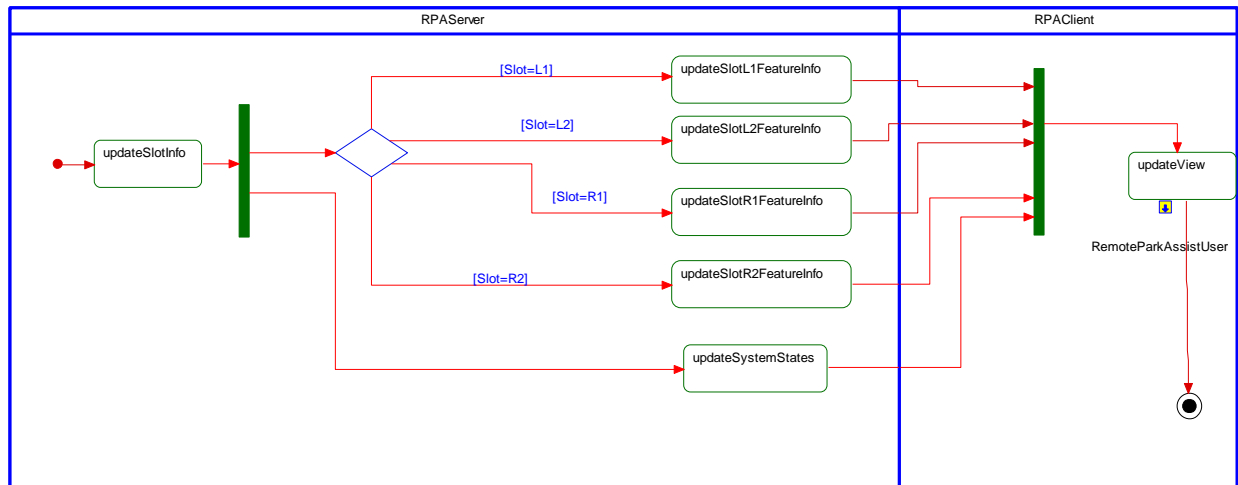
4.3.4.1.4 RPA-ACT-REQ-360440/A-Slot Selector - OverSpeed
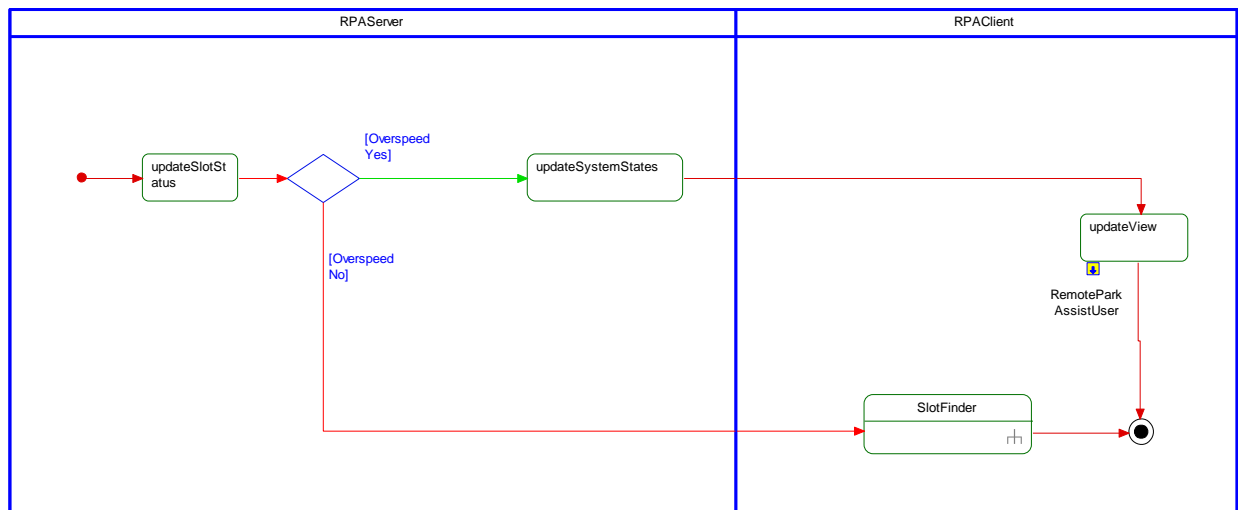
4.3.4.2   Sequence Diagrams

4.3.4.2.1   RPA-SD-REQ-360536/A-Slot Selector - Right&Left

| :RemotePark AssistUser | :RPAClient | | :RPAServer |

updateSlotStatus()

updateSystemStates()

SystemState1(HMIFullScreen)

SystemState2(NotInActiveControl)

sendVehicleSlotInfo()

ApaSlotL1Status(Found)

sendVehicleSlotPosition()

ApaSlotL1Pos(Position)

upadateView()

updateDisplay()
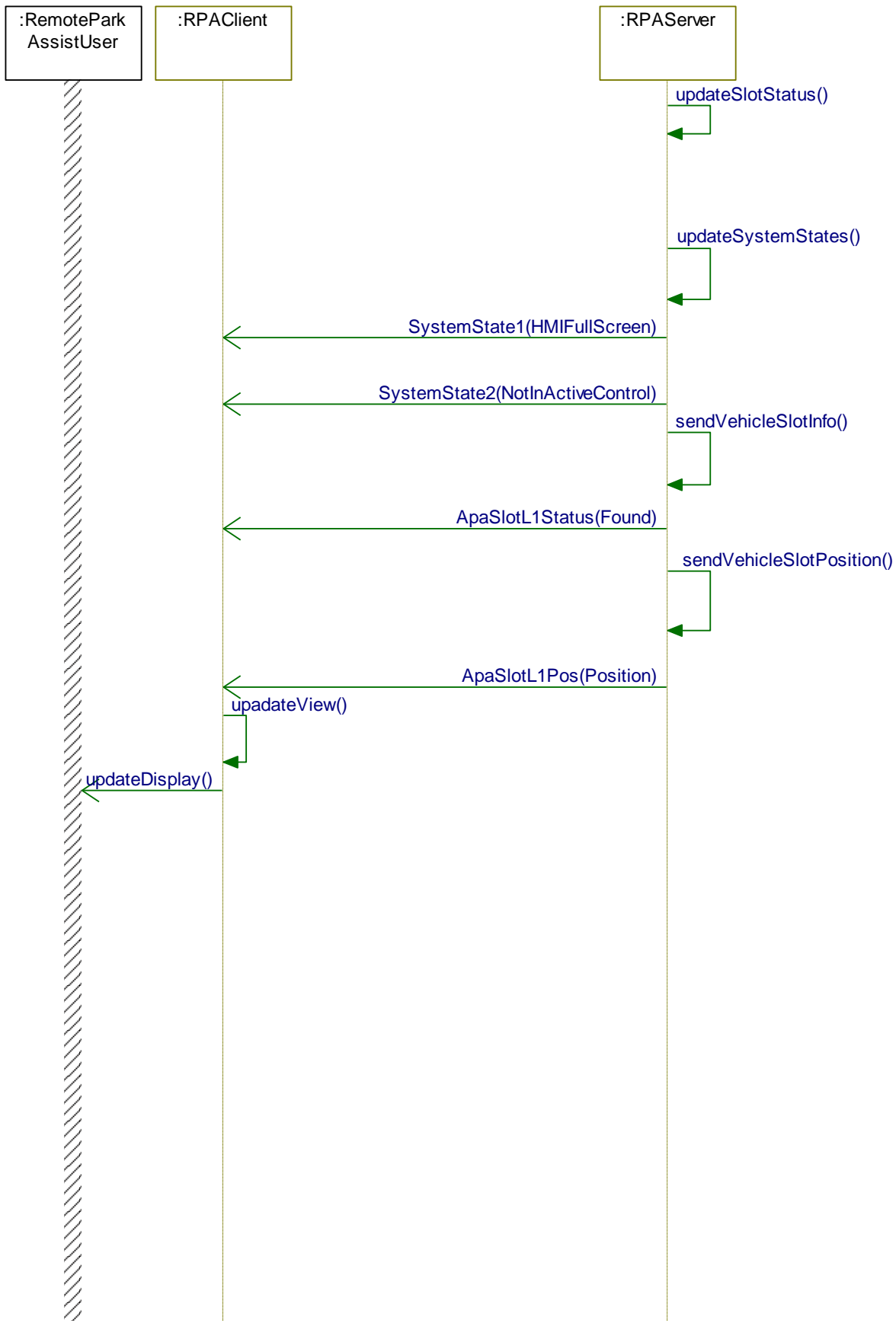
4.3.4.2.2 RPA-SD-REQ-360541/A-Slot Selector - Front&Rear

:RemotePark
AssistUser

:RPAClient

:RPAServer

updateSlotStatus()

updateSystemStates()

SystemState1(HMIFullScreen)

SystemState2(NotInActiveControl)

upadateView()

sendVehicleGtpInfo()

alt

[Gtp= Front]

ApaSlotFrontGtpStatus(True)

upadateView()

updateDisplay()

[Gtp=Rear]

ApaSlotRearGtpStatus(True)

upadateView()

updateDisplay()
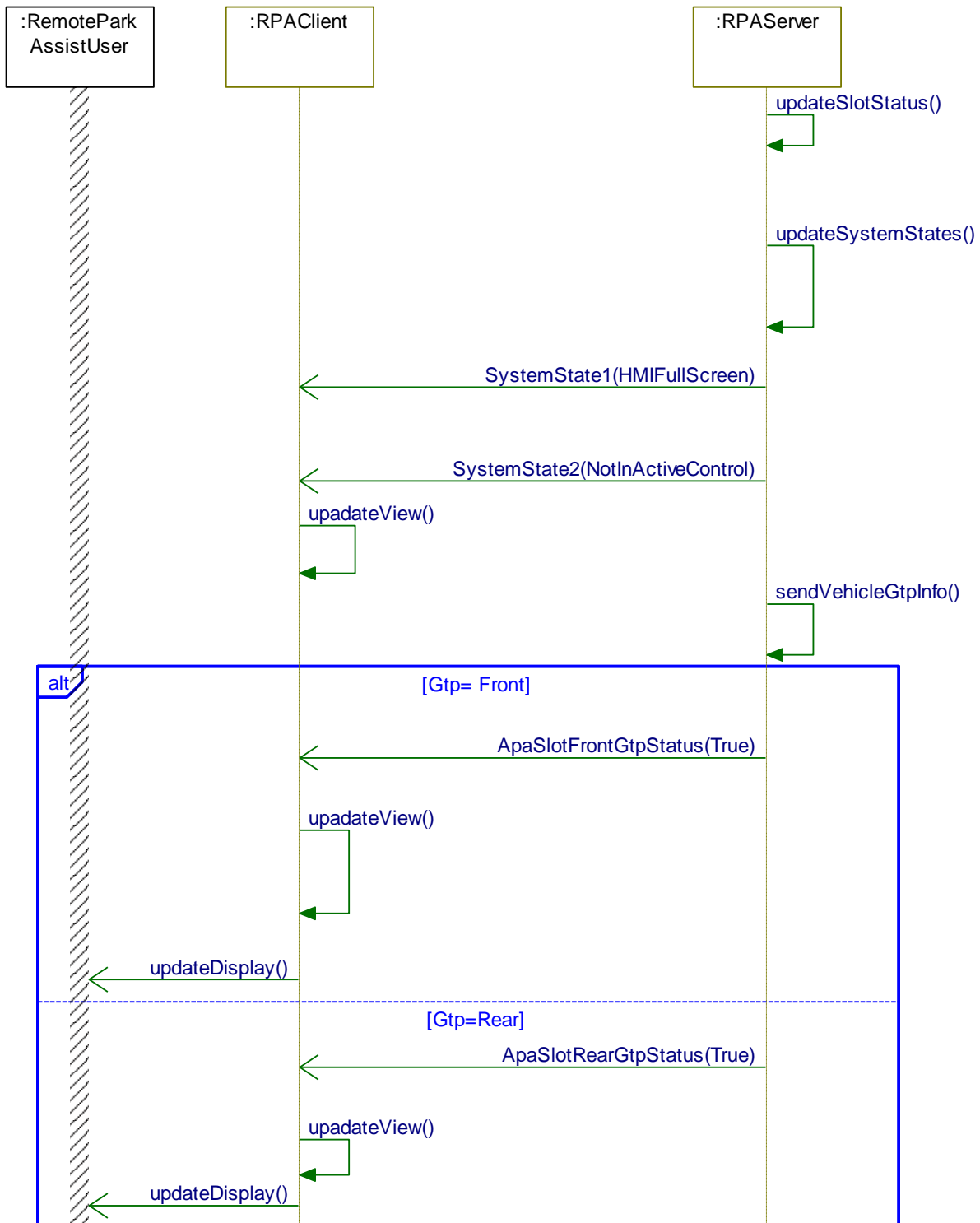
4.3.4.2.3   RPA-SD-REQ-360545/A-Slot Selector - Slot Change

:RemotePark AssistUser **:RPAClient** **:RPAServer**

updateSlotInfo()

SystemState1(HMIFullScreen)

slotFind()

alt

[Slot=L1]

updateSlotL1FeatureInfo()

ApaSlotL1FeatureOptn(Available)

updateView()

updateDisplay()

[Slot=L2]

updateSlotL2FeatureInfo()

ApaSlotL2FeatureOptn(Available)

updateView()

updateDisplay()

[Slot=R1]

updateSlotR1FeatureInfo()

ApaSlotR1FeatureOptn(Available)

updateView()

updateDisplay()

[Slot=R2]

updateSlotR2FeatureInfo()

ApaSlotR2FeatureOptn(Available)

4.3.4.2.4 RPA-SD-REQ-360552/A-Slot Selector - OverSpeed

:RemotePark
AssistUser

:RPAClient

:RPAServer

updateSlotStatus()

vehicleSpeedCheck()

alt [ScanningOvsp=Overspeed]

SystemState1(0x3 Overspeed)

SystemState2(NotInActiveControl)

SystemState3(Overspeed)

updateView()

updateDisplay()

[ScanningOvsp=Normal]
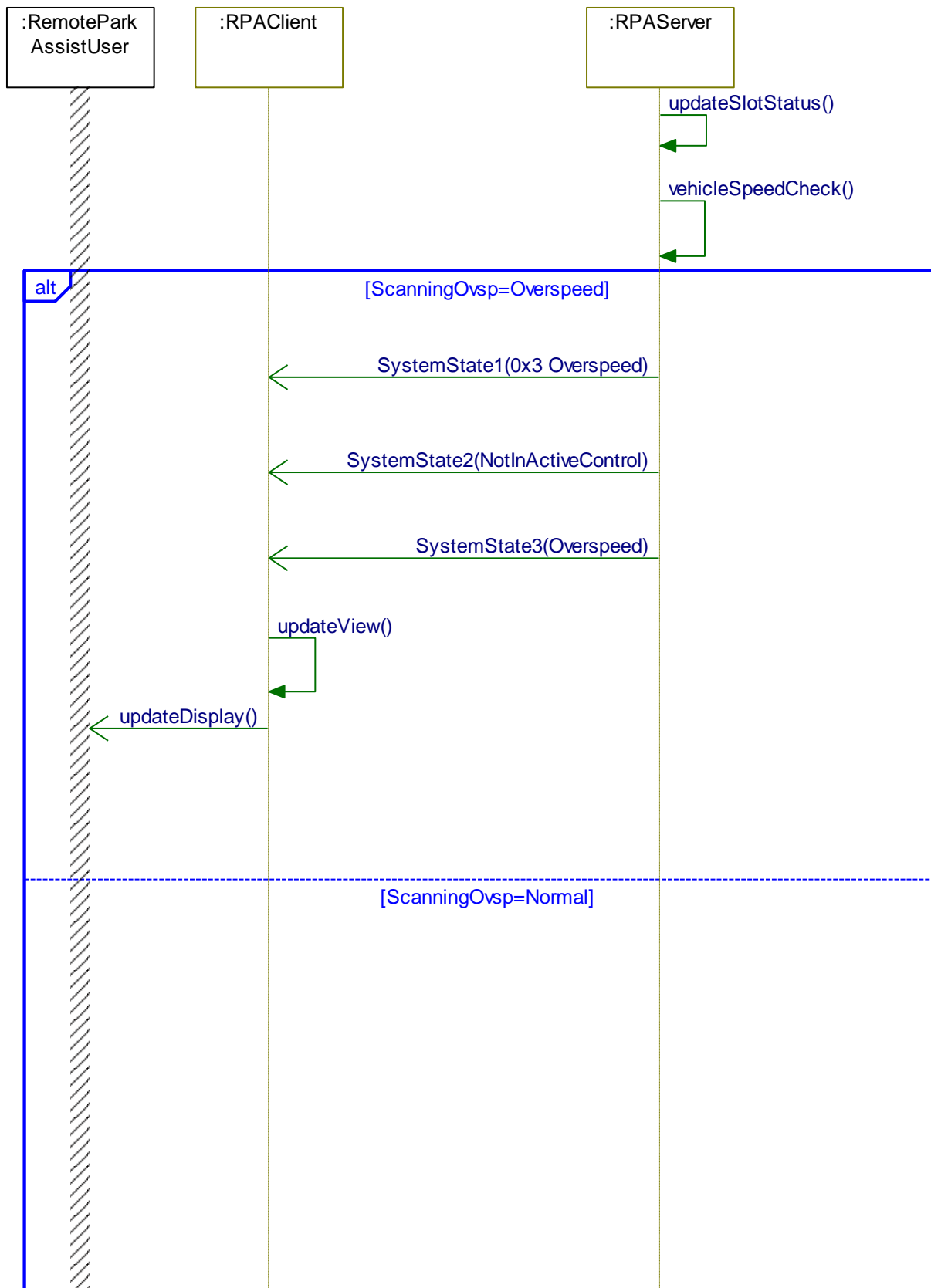
4.4 RPA-FUN-REQ-358987/A-Slot Interaction

4.4.1 Park Slot Interaction Overview

RePA feature provides the user with details of parking slot, such as the type, Parallel or Perpendicular. It also tells the user where the feature aims to park the vehicle. The feature also gives the user the ability to change the parking type, such as toggle between Parallel and Perpendicular and the ability to choose a different parking slot. The below details in this function describe the interaction between client and server in these situations, change parking type and change targeted parking location.

4.4.2 RPA-REQ-360742/A-Returning To Default Values

When sending DriverFeatureChangeRequest, upon getting confirmation that Server has change the parking type , the client shall send the state False .

When sending ApaDriverSlotSelection, upon getting confirmation that Server has changed the targeted parking slot, the client shall send the state None.

4.4.3 Use Cases

4.4.3.1 RPA-UC-REQ-359188/A-Change Slot Type

Actors	User
Pre-conditions	Server has selected a target parking slot and providing a parking type Ipe (or Ipa).
Scenario Description	User presses on parking slot to change the toggle the parking type.
Post-conditions	Server toggles the parking type. Client stops sending request to change the parking type.
List of Exception Use Cases	
Interfaces	Vehicle HMI

4.4.3.2 RPA-UC-REQ-359189/A-Change Targeted Slot

Actors	User
Pre-conditions	Server has located multiple parking slots. Parking Slots are ready.
Scenario Description	User presses on a parking slot available on HMI screen that is not currently the target.
Post-conditions	Server changes the targeted parking slot and guides the vehicle to park to that particular spot.
List of Exception Use Cases	
Interfaces	Vehicle HMI.

4.4.4   White Box View

4.4.4.1   Activity Diagrams

4.4.4.1.1   RPA-ACT-REQ-359619/A-Parking Slot Interaction
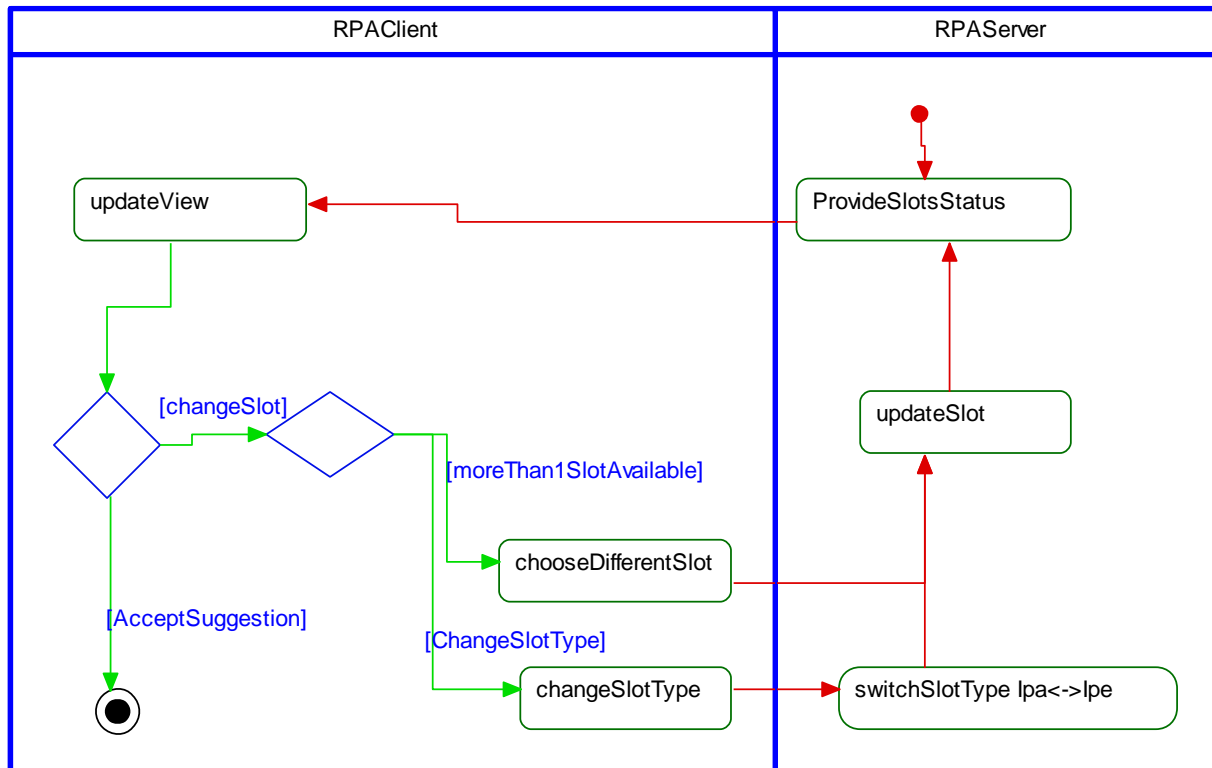
4.4.4.2   Sequence Diagrams

4.4.4.2.1   RPA-SD-REQ-359620/A-Parking Slot Interaction

sd [Package] RPA_ArchitecturalDesignPkg [359620 Parking Slot Interaction]
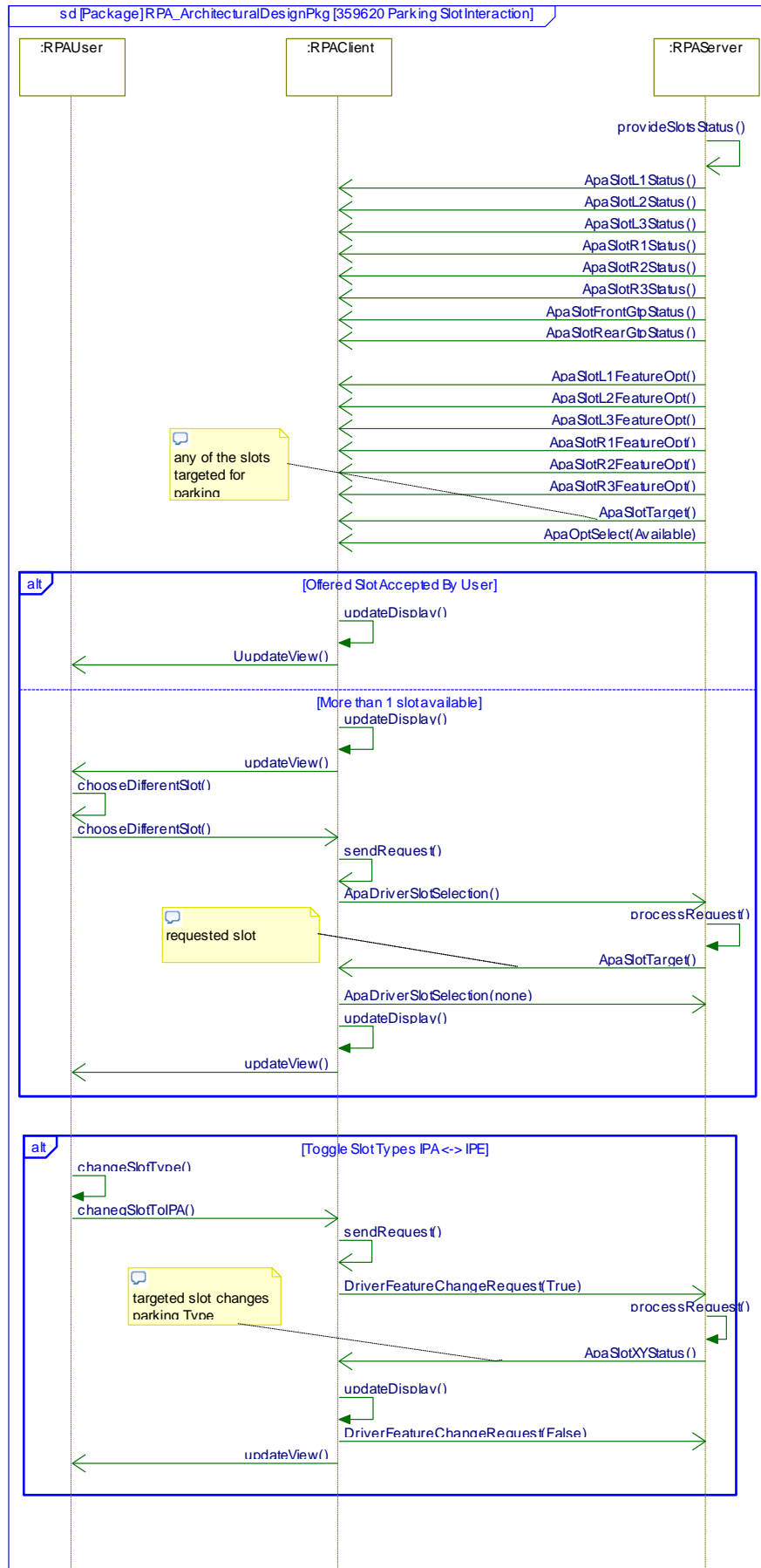
:RPAUser   :RPAClient   :RPAServer

provideSlotsStatus()

ApaSlotL1Status()
ApaSlotL2Status()
ApaSlotL3Status()
ApaSlotR1Status()
ApaSlotR2Status()
ApaSlotR3Status()
ApaSlotFrontGtpStatus()
ApaSlotRearGtpStatus()

ApaSlotL1FeatureOpt()
ApaSlotL2FeatureOpt()
ApaSlotL3FeatureOpt()
ApaSlotR1FeatureOpt()
ApaSlotR2FeatureOpt()
ApaSlotR3FeatureOpt()
ApaSlotTarget()
ApaOptSelect(Available)

any of the slots targeted for parking

alt   [Offered Slot Accepted By User]

updateDisplay()

UupdateView()

[More than 1 slot available]

updateDisplay()

updateView()

chooseDifferentSlot()

chooseDifferentSlot()

sendRequest()

ApaDriverSlotSelection()

processRequest()

requested slot

ApaSlotTarget()

ApaDriverSlotSelection(none)

updateDisplay()

updateView()

alt   [Toggle Slot Types IPA <-> IPE]

changeSlotType()

chanegSlotToIPA()

sendRequest()

DriverFeatureChangeRequest(True)

processRequest()

targeted slot changes parking Type

ApaSlotXYStatus()

updateDisplay()

DriverFeatureChangeRequest(False)

updateView()

4.5 RPA-FUN-REQ-358988/A-Driver Notification

4.5.1 Overview

Driver shall be notified with Text and Symbol updated on the HMI screen during an active APA or RePA session. In response to the Text and Symbol update, the Driver shall act to the information and shall aid the ongoing APA or RePA session.
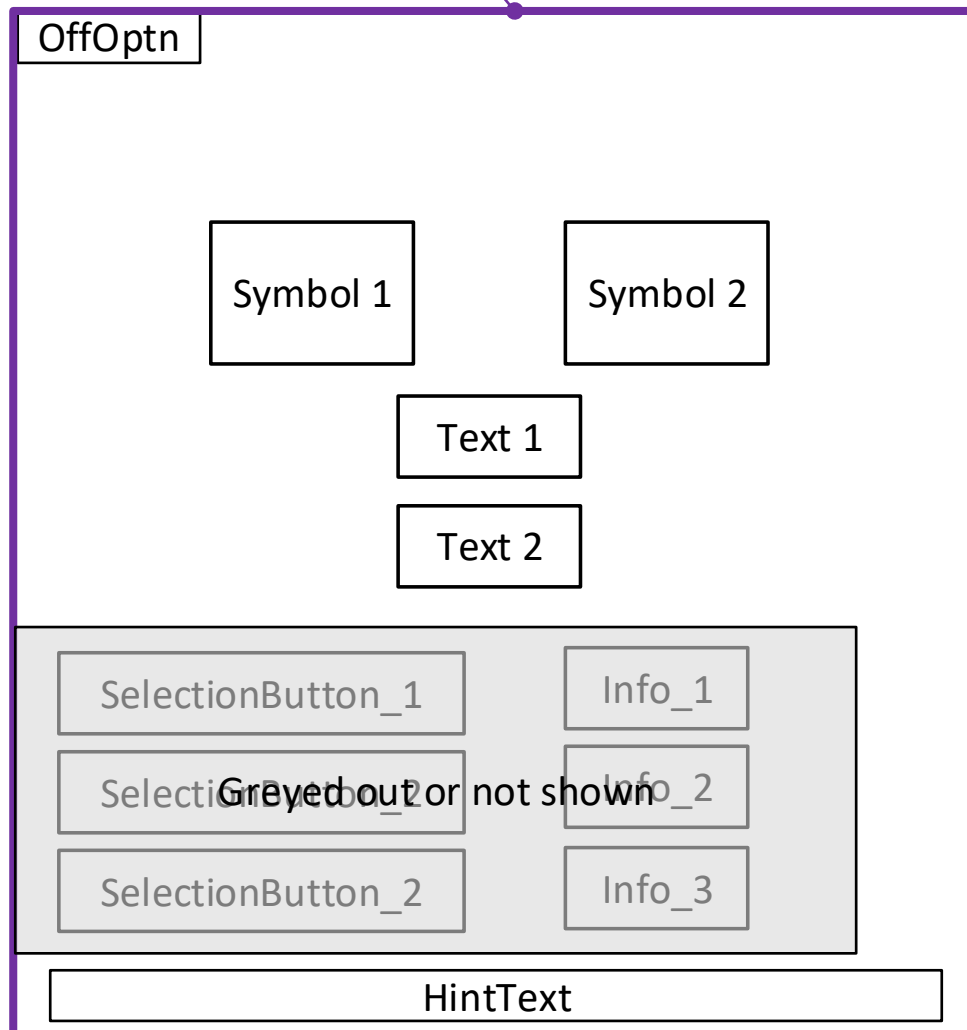
4.5.2 Requirements

4.5.2.1 *RPA-REQ-360841/A-Screen Layout*

The wordings as well as graphic elements shown in this document are only for reference. They simply define the baseline characteristics of screen elements referenced in the functional logic. HMI team will provide final graphic elements and wordings.
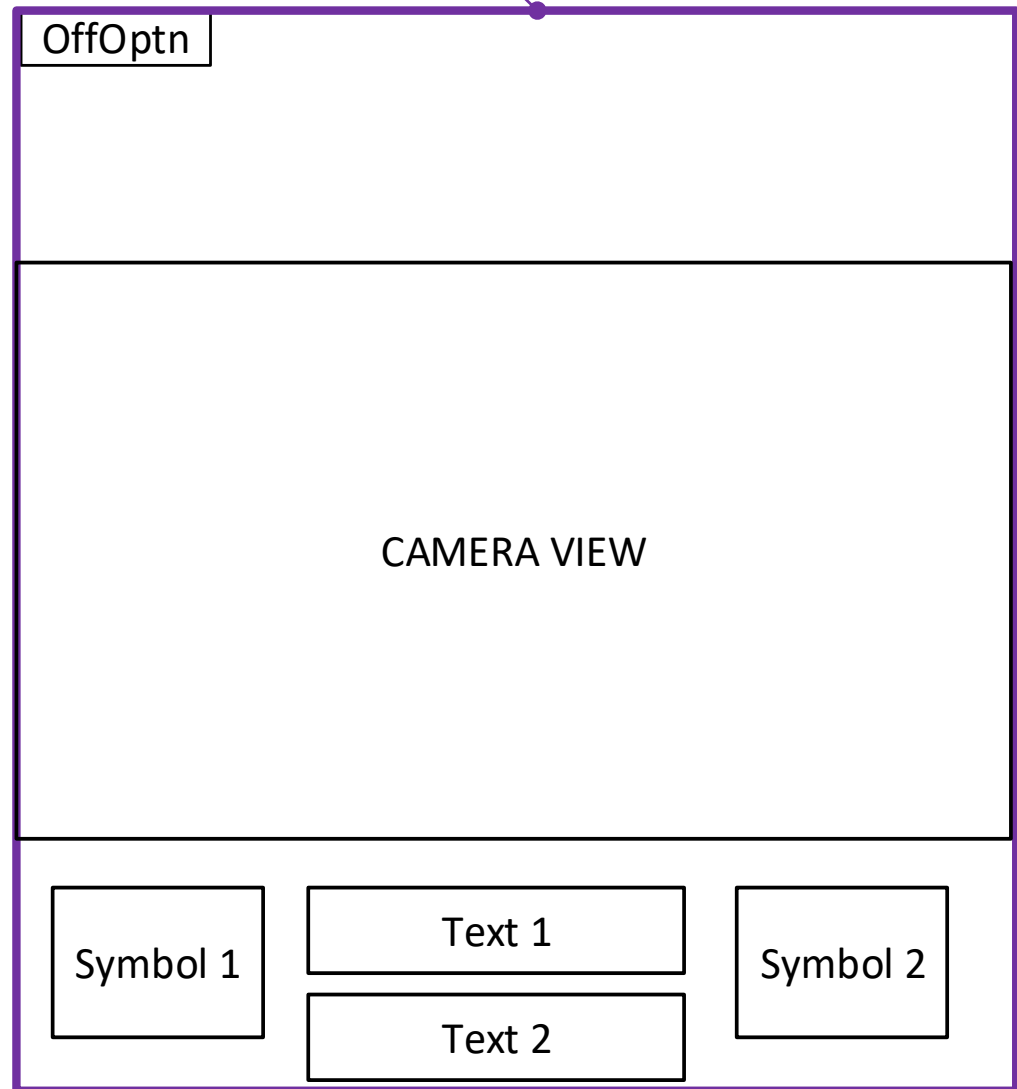
Scanning screen layout - Camera Off

Area1 == ApmNonCam

OffOptn

Symbol 1   Symbol 2

Text 1

Text 2

SelectionButton_1   Info_1

Selecti~~onButton_1~~   Greyed out or not shown   ~~Info~~_2

SelectionButton_2   Info_3

HintText

Active steering screen layout - Camera On

Area1 == Cam

OffOptn

CAMERA VIEW

Symbol 1

Text 1

Text 2

Symbol 2

4.5.2.2   RPA-REQ-360845/A-Available Text

Text1 / Text2		
ID	Developer Text	Background
ApaTextID001	Scanning	The APA system is actively showing on the in-vehicle HMI. It is operated within it's limits and scanning/ searching for park slots.
ApaTextID002	Select side - Use turn indicator	The driver needs to select the left or right side via the turn indicator. This text is only used for park out.

ApaTextID003	Right side selected	The driver has selected the right side to park out. The system has acknowledged the selection, but not calculated a trajectory yet. The text confirms side selection.
ApaTextID004	Left side selected	The driver has selected the left side to park out. The system has acknowledged the selection, but not calculated a trajectory yet. The text confirms side selection.
ApaTextID005	Release steering wheel	The system requests the driver to take her/his hand of the steering wheel. This can be triggered at the start of an APA maneuver or if the driver has interfaced with the steering wheel during an APA maneuver.
ApaTextID006	Space found	The system has found a park slot. It has not found a trajectory to park into the slot, yet.
ApaTextID007	Shift to Park	The system requests the driver to shift into park gear. This is only valid for AT vehicles.
ApaTextID008	Release brake to start	The system requests the driver to release the service brakes (take their foot of the brakes).
ApaTextID009	Stop	The systems requests the driver to stop the vehicle. This text is used during an active maneuver of the Semi Assisted Parking (SAP) feature, prompting the driver to stop the vehicle by applying the service brakes.
ApaTextID010	Drive forward	The systems requests the driver to drive forward. This can be set during normal scanning. It is also set during Semi Assisted Parking (SAP) to inform the driver about the requested drive direction.
ApaTextID011	Drive backward	The systems requests the driver to drive backward. This is set during Semi Assisted Parking (SAP) to inform the driver about the requested drive direction.
ApaTextID012	Finished	The system has reached the final position of the assisted parking maneuver. Text is requested at the end of the active maneuver.
ApaTextID013	Paused	The Fully Assisted Parking (FAP) is momentarily paused. The maneuver can be resumed.
ApaTextID014	Attention!	This text is set together with the "Check surroundings" text during an active FAP maneuver. It simply aims at alerting the driver to continuously monitor the active maneuver.
ApaTextID015	Obstacle in path	The system has detected an object in the driving path of the vehicle.
ApaTextID016	Accelerator pedal inactive	The system informs the driver that during an active FAP maneuver the accelerator pedal is not active. This text is triggered if the driver presses the accelerator pedal during an active FAP maneuver.
ApaTextID017	Both sides blocked	The system has detected objects on both sides (left and right) of the vehicle and cannot offer parallel park out.
ApaTextID018	Slow down	The driver has exceeded a threshold speed. This can be set during scanning for all park in features if the associated speed threshold is exceeded. It can also be set during the active phase of SAP.

ApaTextID019	Cancelled	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators.
ApaTextID020	Cancelled - Wheel slip	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is detected wheel slip. This is an abort. The maneuver cannot be resumed.
ApaTextID021	Cancelled - Door open	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that a door has been opened. This is an abort. The maneuver cannot be resumed. Not used for SAP.
ApaTextID022	Cancelled - High inclination	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that the inclination of the road exceeds a permissible threshold. This is an abort. The maneuver cannot be resumed. Not used for SAP.
ApaTextID023	Cancelled - Obstacle in path	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that an obstacle has been detected in the intended path of the vehicle.
ApaTextID024	Cancelled - TCS deactivated	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that driver deactivated the traction control feature. This is an abort. The maneuver cannot be resumed.
ApaTextID025	Cancelled - Steering intervention	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that the driver interacted with the steering wheel. The maneuver can be resumed in some cases.
ApaTextID026	Cancelled - Moved too far in wrong direction	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that the driver ignored system instructions and drove too far into the direction opposite of the one requested by the system. The maneuver cannot be resumed. Only used for SAP.
ApaTextID027	Cancelled - Exceeded speed limit	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that the driver exceeded the speed limit for the active maneuver. The maneuver cannot be resumed. Only used for SAP.
ApaTextID028	Cancelled - Autobrake	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that the system initiated an automatic braking. The maneuver cannot be resumed. Only used for SAP.

ApaTextID029	Cancelled - Sensors blocked	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that sensors required for system operation are blocked (e.g. ultrasonic sensors blocked by ice or dirt). The maneuver cannot be resumed.
ApaTextID030	Cancelled - Trailer attached	The system has cancelled an active maneuver and stopped automatic control of vehicle actuators. The reason for the cancellation is that a trailer has been detected. The maneuver cannot be resumed.
ApaTextID031	Active Park Assist - System Fault	The system is faulted.
ApaTextID032	Active Park Assist - Not Available	The system is not available.
ApaTextID033	Please drive forward	The system requests the driver to driver into forward direction. This text can be triggered during normal scanning for all features or during an active SAP maneuver.
ApaTextID034	Shift to Drive	The system request the driver to shift into drive gear. Used only for AT vehicles.
ApaTextID035	Shift to first gear	The system request the driver to shift into first gear. Used only for MT vehicles. Used only for SAP.
ApaTextID036	Shift to Reverse	The system request the driver to shift into reverse gear. Used only for SAP.
ApaTextID037	Shift to Neutral	The system request the driver to shift into neutral gear. Used only for FAP.
ApaTextID038	Hold park button	The system request the driver to continuously press the APA button/ P-Hotkey. Only used for FAP during the active phase of the maneuver ("driver in the loop confirmation").
ApaTextID039	Prepare to stop	This text is used for SAP during the active phase of the maneuver to raise the driver's awareness that she/he needs to stop the car herself/himself.
ApaTextID040	Check surroundings	This text is used for FAP during the active phase of the maneuver to alert the driver to monitor the surroundings of the vehicle (while the system automatically controls longitudinal and lateral movement of the vehicle).
ApaTextID041	Close door	The system advises the driver a door is open and needs to be closed. Only used for FAP and RePA.
ApaTextID042	Hold button again to resume parking	This text is triggered if a FAP maneuver has been cancelled and a resume is available. The APA button/ P-Hotkey needs to be continuously pressed during an active FAP maneuver.
ApaTextID043	Wait for steering	This text can be set during an active SAP maneuver. It alerts the driver to give the steering some time to catch up before continuing to drive forward or backward.
ApaTextID044	Take control	The system requests the driver to take control of the vehicle. Set if an active FAP maneuver is aborted and the system stops controlling vehicle actuators.
ApaTextID045	Brake event	Can be set during an active SAP maneuver if the SAP system has triggered the vehicle's service brakes.

ApaTextID046	Press button to resume	This text is triggered if a SAP maneuver has been cancelled and a resume is available. The APA button/ P-Hotkey needs to be pressed/ released for resume.
ApaTextID047	Wheel slip	The system has detected wheel slip. Set together with a text for cancellation of an active maneuver.
ApaTextID048	TCS deactivated	The system has detected traction control system deactivation. Set together with a text for cancellation of an active maneuver or unavailability of the signal.
ApaTextID049	Take control of brakes	The SAP system requests the driver to take control of the service brakes. Set when the system aborts an active SAP maneuver by automatically applying the brakes. Creates awareness that the system does not permanently secure/ brake the vehicle.
ApaTextID050	Sensors blocked	The system has detected required sensors to be blocked. Set together with a text for cancellation of an active maneuver or unavailability of the signal.
ApaTextID051	Trailer attached	The system has detected a trailer. Set together with a text for cancellation of an active maneuver or unavailability of the signal.
ApaTextID052	Interaction with steering wheel	The system has detected interaction with the steering wheel. Set together with a text for cancellation of an active maneuver or unavailability of the signal.
ApaTextID053	High inclination	The system has detected road inclination above the allowed level. Set together with a text for cancellation of an active maneuver or unavailability of the signal.
ApaTextID054	Ensure park brake released	The system reminds the driver that the park brake needs to be released.
ApaTextID055	Trailer feature not available	This text is set if the driver attempts to activate the trailer feature while the FAP feature is in active control of the vehicle (FAP maneuver in progress).
ApaTextID056	To select and park into slots	This text is part of the instruction to shift to forward gear to use APA. The SAP and FAP systems are not available when in reverse gear.
ApaTextID057	Continue with phone from outside/Exit vehicle	This text is set for the RePA feature. It instructs the driver that in order to perform a RePA maneuver, they need to leave the vehicle. It alerts them to use their smart phone for RePA.
ApaTextID058	Take your key with you	This text is set for the RePA feature. It alerts them to take their key with them.
ApaTextID059	Vehicle controlled from outside	This text is set during the active phase of the RePA feature. When it is shown, the vehicle is supposed to be (must be) unoccupied.
ApaTextID060	Spot selected	The system has found a park slot and a trajectory into it.
ApaTextID061	Stop to park	The systems requests the driver to stop the vehicle. The system has found a slot and calculated a trajectory. In this case the meaning is "Stop if you want to park".
ApaTextID063	Keep driving	RePA is active, but hasn't found a slot. This is valid for both driving directions. It tells the driver that to scan for slots, the vehicle needs to be moving. This is different to APA. For APA, scanning reverse is not allowed, so that when the driver engages R during scanning, the system shows a text

prompting to drive forward/ disengage R. For RePA, we can go either direction, but need to be moving.		
Text3 ID	**DeveloperText**	**Background**
ApaTextID062	Shift to cancel	The APA FAP system is in active control of the vehicle. The driver can shift out of gear to cancel the maneuver. *This text element is only required for Fully Assist Park Assist (FAP) and for layouts with a "full screen camera". All other APA screens do show a "close option" (e.g. "X" in left upper corner) that allows the user to abort FAP.*

4.5.2.3   *RPA-REQ-360847/A-Text Notification - Scenarios*

Developer Text	System State1	SystemState2	SystemState3	Driver Request1	Driver Request2	DriverInfo	ApaSlotTarget	AnySlotReady	ApaSlotFoundButNotReady	Configuration	Transmission
Select side - use turn indicator	HMIFullScreen	NotInActiveControl	BothSidesSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Select side - Use turn indicator	HMIFullScreen	NotInActiveControl	LeftSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Select side - Use turn indicator	HMIFullScreen	NotInActiveControl	RightSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Right side selected	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	NoRequest	None	R1	Don't_care	Don't_care	Don't_care	Don't_care
Left side selected	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	NoRequest	None	L1	Don't_care	Don't_care	Don't_care	Don't_care
Release steering wheel	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	ReleaseSteering	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care

Release steering wheel	HMIFullScreen	NotInActiveControl	Pause	PressApaButton	ReleaseSteering	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Space found	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	DriveForward	Don't_care	Don't_care	False	True	Don't_care	Don't_care
Space selected	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	Stop	Don't_care	Don't_care	True	Don't_care	Don't_care	Don't_care
Shift to Park	HMIFullScreen	NotInActiveControl	NormalOps	Shift_to_P	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Release brake to start	HMIFullScreen	InActiveControl	NormalOps	PressApaButton	ReleaseBrake	Don't_care	Don't_care	Don't_care	False	Don't_care	Don't_care
Stop	HMIFullScreen	InActiveControl	NormalOps	Shift_to_D	Stop	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Stop	HMIFullScreen	InActiveControl	NormalOps	Shift_to_R	Stop	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Stop	HMIFullScreen	InActiveControl	NormalOps	NoRequest	Stop	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Drive forward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveForward	None	Don't_care	Don't_care	Don't_care	SAP	Don't_care
Drive backward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveBackward	None	Don't_care	Don't_care	Don't_care	SAP	Don't_care
Finished	HMIFullScreen	Don't_care	Finished	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Paused	HMIFullScreen	InActiveControl	Pause	NoRequest	CloseDoor	DoorOpen	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Paused	HMIFullScreen	InActiveControl	Pause	NoRequest	ReleaseSteering	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Paused	HMIFullScreen	InActiveControl	Pause	PressApaButton	NoRequest	None	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Attention!	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveForward	ObstacleInPath	Don't_care	Don't_care	Don't_care	FAP	Don't_care

Attention!	HMIFullScreen	InActiveControl	NormalOps	NoRequest	Don't_care	None	Don't_care	Don't_care	Don't_care	FAP	Don't_care
Obstacle in path	HMIFullScreen	InActiveControl	NormalOps	NoRequest	NoRequest	ObstacleInPath	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Accelerator pedal inactive	HMIFullScreen	InActiveControl	NormalOps	NoRequest	Don't_care	AccelPedalInactive	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Accelerator pedal inactive	HMIFullScreen	InActiveControl	Pause	PressApaButton	Don't_care	AccelPedalInactive	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Accelerator pedal inactive	HMIFullScreen	InActiveControl	Pause	NoRequest	CloseDoor	AccelPedalInactive	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Both sides blocked	HMIFullScreen	NotInActiveControl	NoSideSelectable	NoRequest	NoRequest	None	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Slow down	HMIFullScreen	Don't_care	Overspeed	NoRequest	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	None	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Wheelslip	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	WheelSlip	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Door open	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	DoorOpen	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - High inclination	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	HighInclination	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Obstacle in path	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	ObstacleInPath	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - TCS deactivated	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	TCSdeactivated	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Steering	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	SteeringInteraction	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care

intervention											
Cancelled - Moved too far in wrong direction	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	WrongDirection	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Exceeded speed limit	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	SpeedLimitExceeded	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Autobrake	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	BrakeEvent	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Sensors blocked	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	SensorsBlocked	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Cancelled - Trailer attached	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	TrailerAttached	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Active Park Assist - System Fault	HMIFullScreen	Don't_care	Faulty	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Active Park Assist - Not Available	HMIFullScreen	Don't_care	NotAvailable	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Shift to Drive	HMIFullScreen	Don't_care	NotAvailable	Shift_to_D	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Auto
Shift to Drive	HMIFullScreen	Don't_care	NotAvailable	Shift_to_D	DriveForward	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Auto
Shift to first gear	HMIFullScreen	Don't_care	NotAvailable	Shift_to_D	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Manual
Shift to first gear	HMIFullScreen	Don't_care	NotAvailable	Shift_to_D	DriveForward	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Manual

DeveloperText	SystemState1	SystemState2	SystemState3	SystemState4	DriverRequest1	DriverRequest2	DriverInfo	ApaSlotTarget	AnySlotReady	Configuration	Transmission
Trailer feature not available	HMIFullScreen	Don't_care	NormalOps	NoRequest	NoRequest	TrailerFeature_NotAvailable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Continue with phone from outside/ Exit vehicle	HMIFullScreen	Don't_care	NormalOps	ExitVehicle	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Vehicle controlled from outside	HMIFullScreen	InActiveControl	NormalOps	NoRequest	NoRequest	ControlledExternally	Don't_care	Don't_care	Don't_care	Don't_care	Auto
Ensure park brake released	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	ReleaseEPB	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Scanning	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	DriveForward	Don't_care	None	False	False	Don't_care	Don't_care
Scanning	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	DriveBackward	Don't_care	None	False	False	Don't_care	Don't_care

DeveloperText	SystemState1	SystemState2	SystemState3	SystemState4	DriverRequest1	DriverRequest2	DriverInfo	ApaSlotTarget	AnySlotReady	Configuration	Transmission
Stop to park	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	NoRequest	Stop	None	Don't_care	True	Don't_care	Don't_care
Shift to Drive	HMIFullScreen	InActiveControl	NormalOps	Don't_care	Shift_to_D	Stop	None	Don't_care	Don't_care	Don't_care	Auto

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Action											
Shift to Drive	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	Shift_to_D	Release Steering	Don't_care	Don't_care	Don't_care	Don't_care	Auto
Shift to first gear	HMIFullScreen	InActiveControl	NormalOps	Don't_care	Shift_to_D	Stop	None	Don't_care	Don't_care	Don't_care	Manual
Please drive forward	HMIFullScreen	NotInActiveControl	NormalOps	ApaParkIn	NoRequest	DriveForward	None	None	False	Don't_care	Don't_care
Shift to Reverse	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	Shift_to_R	Release Steering	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Shift to Reverse	HMIFullScreen	InActiveControl	NormalOps	Don't_care	Shift_to_R	Stop	None	Don't_care	Don't_care	Don't_care	Don't_care
Shift to Neutral	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	Shift_to_N	Release Steering	None	Don't_care	True	Don't_care	Don't_care
Hold park button	HMIFullScreen	InActiveControl	NormalOps	Don't_care	PressApaButton	Release Brake	None	Don't_care	Don't_care	Don't_care	Don't_care
Prepare to stop	HMIFullScreen	InActiveControl	NormalOps	Don't_care	NoRequest	Don't_care	None	Don't_care	Don't_care	SAP	Don't_care
Check surroundings	HMIFullScreen	InActiveControl	NormalOps	Don't_care	NoRequest	Don't_care	None	Don't_care	Don't_care	FAP	Don't_care
Close door	HMIFullScreen	InActiveControl	Pause	Don't_care	NoRequest	CloseDoor	DoorOpen	Don't_care	Don't_care	Don't_care	Don't_care
Close door	HMIFullScreen	Don't_care	NotAvailable	Don't_care	NoRequest	CloseDoor	DoorOpen	Don't_care	Don't_care	Don't_care	Don't_care
Hold button again to resum	HMIFullScreen	InActiveControl	Pause	Don't_care	PressApaButton	NoRequest	None	Don't_care	Don't_care	Don't_care	Don't_care

e parking											
Wait for steering	HMIFullScreen	InActiveControl	NormalOps	Don't_care	NoRequest	Stop	WaitForSteering	Don't_care	Don't_care	Don't_care	Don't_care
Take control	HMIFullScreen	NotInActiveControl	Finished	Don't_care	NoRequest	TakeControl	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Take control	HMIFullScreen	Don't_care	Cancelled	Don't_care	Don't_care	TakeControl	Don't_care	Don't_care	Don't_care	FAP	Don't_care
Take control	HMIFullScreen	Don't_care	Faulty	Don't_care	Don't_care	TakeControl	Don't_care	Don't_care	Don't_care	FAP	Don't_care
Brake event	HMIFullScreen	InActiveControl	Overspeed	Don't_care	NoRequest	NoRequest	BrakeEvent	Don't_care	Don't_care	Don't_care	Don't_care
Press button to resume	HMIFullScreen	NotInActiveControl	Pause	Don't_care	PressApaButton	Release Steering	None	Don't_care	Don't_care	Don't_care	Don't_care
TCS deactivated	HMIFullScreen	NotInActiveControl	NotAvailable	Don't_care	NoRequest	NoRequest	TCSdeactivated	Don't_care	Don't_care	Don't_care	Don't_care
Take control of brakes	HMIFullScreen	NotInActiveControl	Cancelled	Don't_care	NoRequest	TakeControl	BrakeEvent	Don't_care	Don't_care	SAP	Don't_care
Sensors blocked	HMIFullScreen	NotInActiveControl	NotAvailable	Don't_care	NoRequest	NoRequest	SensorsBlocked	Don't_care	Don't_care	Don't_care	Don't_care
Trailer attached	HMIFullScreen	NotInActiveControl	NotAvailable	Don't_care	NoRequest	NoRequest	TrailerAttached	Don't_care	Don't_care	Don't_care	Don't_care
Interaction with steering wheel	HMIFullScreen	InActiveControl	Pause	Don't_care	NoRequest	Release Steering	SteeringInteraction	Don't_care	Don't_care	Don't_care	Don't_care
High inclination	HMIFullScreen	NotInActiveControl	NotAvailable	Don't_care	NoRequest	NoRequest	HighInclination	Don't_care	Don't_care	Don't_care	Don't_care

Ensure park brake released	HMIFull Screen	NotInActi veControl	BothSidesS electable	Don't_ care	NoRequ est	NoRequ est	None	Don't_c are	Don't_c are	Don't_ care	Don't_ care
Ensure park brake released	HMIFull Screen	NotInActi veControl	LeftSideSel ectable	Don't_ care	NoRequ est	NoRequ est	None	Don't_c are	Don't_c are	Don't_ care	Don't_ care
Ensure park brake released	HMIFull Screen	NotInActi veControl	RightSideS electable	Don't_ care	NoRequ est	NoRequ est	None	Don't_c are	Don't_c are	Don't_ care	Don't_ care
Take your key with you	HMIFull Screen	Don't_car e	NormalOp s	Don't_ care	ExitVehi cle	NoRequ est	Don't_car e	Don't_c are	Don't_c are	Don't_ care	Don't_ care
To select and park into slots	HMIFull Screen	NotInActi veControl	NotAvailab le	Don't_ care	Shift_to _D	DriveFor ward	Don't_car e	Don't_c are	Don't_c are	Don't_ care	Don't_ care
Obstac le in path	HMIFull Screen	InActiveC ontrol	NormalOp s	Don't_ care	NoRequ est	Stop	ObstacleI nPath	Don't_c are	Don't_c are	Don't_ care	Don't_ care
Wheel slip	HMIFull Screen	Don't_car e	NotAvailab le	Don't_ care	NoRequ est	NoRequ est	WheelSlip	Don't_c are	Don't_c are	Don't_ care	Don't_ care
"Keep driving "	HMIFull Screen	NotInActi veControl	NormalOp s	RePA	NoRequ est	DriveBa ckward	None	Don't_c are	Don't_c are	Don't_ care	Don't_ care
"Keep driving "	HMIFull Screen	NotInActi veControl	NormalOp s	RePA	NoRequ est	DriveFor ward	None	Don't_c are	Don't_c are	Don't_ care	Don't_ care

4.5.2.4 RPA-REQ-360848/A-Hint Text Notification - Scenarios
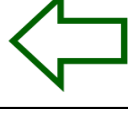
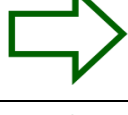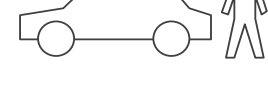| Content	SystemState1	SystemState2	SystemState3	SystemState4	DriverRequest1	DriverRequest2	DriverInfo	ApaSlotFoundButNotReady	AnySlotReady	MultipleSlots	SlotChangeOption
Touch any slot to select	HMIFullScreen	NotInActiveControl	NormalOps	ApaParkIn	Shift_to_R	ReleaseSteering	Don't_care	Don't_care	Don't_care	True	False
Touch any slot to select	HMIFullScreen	NotInActiveControl	NormalOps	ApaParkIn	Shift_to_N	ReleaseSteering	Don't_care	Don't_care	Don't_care	True	False
Touch any slot to select	HMIFullScreen	NotInActiveControl	NormalOps	RePA	Shift_to_P	NoRequest	Don't_care	Don't_care	Don't_care	True	False
Touch marked slots to change orientation	HMIFullScreen	NotInActiveControl	Don't_care	ApaParkIn	Shift_to_R	ReleaseSteering	Don't_care	Don't_care	Don't_care	False	True
Touch marked slots to change orientation	HMIFullScreen	NotInActiveControl	Don't_care	ApaParkIn	Shift_to_N	ReleaseSteering	Don't_care	Don't_care	Don't_care	False	True
Disengage P to cancel	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	ExitVehicle	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
Select "Via Ford Pass App" for tight slots	HMIFullScreen	NotInActiveControl	NormalOps	ApaParkIn	NoRequest	DriveForward	Don't_care	False	False	Don't_care	Don't_care
For parking into parallel slots select "From within the car"	HMIFullScreen	NotInActiveControl	NormalOps	RePA	NoRequest	DriveForward	Don't_care	False	False	Don't_care	Don't_care
The APA speed limit is 30 kph.	HMIFullScreen	NotInActiveControl	Overspeed	Don't_care	Don't_care	NoRequest	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
You can continue driving to find more spots.	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	Don't_care	Stop	Don't_care	Don't_care	True	Don't_care	Don't_care
Touch any slot to select. Change orientation of selected slots by touching them again.	HMIFullScreen	NotInActiveControl	Don't_care	ApaParkIn	Shift_to_R	ReleaseSteering	Don't_care	Don't_care	Don't_care	True	True
Touch any slot to select. Change orientation of selected slots by touching them again.	HMIFullScreen	NotInActiveControl	Don't_care	ApaParkIn	Shift_to_N	ReleaseSteering	Don't_care	Don't_care	Don't_care	True	True
For support select info buttons											

Content	SystemState1	ApaSlotL1FeatureOptn	ApaSlotL2FeatureOptn	ApaSlotR1FeatureOptn	ApaSlotR2FeatureOptn
SlotChangeOption = True	HMIFullScreen	Available	Don't_care	Don't_care	Don't_care
SlotChangeOption = True	HMIFullScreen	Don't_care	Available	Don't_care	Don't_care
SlotChangeOption = True	HMIFullScreen	Don't_care	Don't_care	Available	Don't_care
SlotChangeOption = True	HMIFullScreen	Don't_care	Don't_care	Don't_care	Available
SlotChangeOption = False	HMIFullScreen	NotAvailable	NotAvailable	NotAvailable	NotAvailable

4.5.2.5 *RPA-REQ-360842/A-Available Symbols*

Symbol1 / Symbol2		
1	SYMBOL_RemoveHands	
2	SYMBOL_Park	
3	SYMBOL_Stop	
4	SYMBOL_ApaButton	
5	SYMBOL_ArrowBackward	
6	SYMBOL_FinishFlag	
7	SYMBOL_CloseDoor	
8	SYMBOL_ArrowForward	
9	SYMBOL_Information	
10	SYMBOL_Cancelled	

11	SYMBOL_FirstGear	
12	SYMBOL_Attention	
13	SYMBOL_Reverse	
14	SYMBOL_Neutral	
15	SYMBOL_Drive	
16	SYMBOL_PoaLeftSelectable	
17	SYMBOL_PoaLeftBlocked	
18	SYMBOL_PoaRightSelectable	
19	SYMBOL_PoaRightBlocked	
20	SYMBOL_ExitCar	

ScanApa		
	SYMBOL_ScanApaActive	
ScanRePA		
	SYMBOL_ScanRePAActive	
ParkOutArrow		
tbd - animated trajectory?	SYMBOL_PoaRightSelectedArrow	
tbd - animated trajectory?	SYMBOL_PoaLeftSelectedArrow	

4.5.2.6   RPA-REQ-360846/A-Symbol Notification - Scenarios

Content	SystemState1	SystemState2	SystemState3	DriverRequest1	DriverRequest2	DriverInfo	Transmission	AnySlotReady
SYMBOL_PoaLeftSelectable	HMIFullScreen	NotInActiveControl	BothSidesSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaLeftSelectable	HMIFullScreen	NotInActiveControl	LeftSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaLeftBlocked	HMIFullScreen	NotInActiveControl	RightSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaLeftBlocked	HMIFullScreen	NotInActiveControl	NoSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_Park	HMIFullScreen	Don't_care	NormalOps	Shift_to_P	NoRequest	Don't_care	Don't_care	Don't_care
SYMBOL_RemoveHands	HMIFullScreen	NotInActiveControl	NormalOps	Shift_to_R	ReleaseSteering	Don't_care	Don't_care	Don't_care
SYMBOL_RemoveHands	HMIFullScreen	NotInActiveControl	NormalOps	Shift_to_D	ReleaseSteering	Don't_care	Don't_care	Don't_care
SYMBOL_RemoveHands	HMIFullScreen	NotInActiveControl	NormalOps	Shift_to_N	ReleaseSteering	Don't_care	Don't_care	True
SYMBOL_RemoveHands	HMIFullScreen	InActiveControl	Pause	NoRequest	ReleaseSteering	Don't_care	Don't_care	Don't_care
SYMBOL_RemoveHands	HMIFullScreen	NotInActiveControl	Pause	PressApaButton	ReleaseSteering	Don't_care	Don't_care	Don't_care
SYMBOL_RemoveHands	HMIFullScreen	InActiveControl	NormalOps	NoRequest	ReleaseSteering	AccelPedalInactive	Don't_care	Don't_care

SYMBOL_Information	HMIFullScreen	Don't_care	NormalOps	Don't_care	ReleaseEPB	Don't_care	Don't_care	Don't_care
SYMBOL_Information	HMIFullScreen	Don't_care	NormalOps	NoRequest	NoRequest	Don't_care	Don't_care	Don't_care
SYMBOL_Information	HMIFullScreen	Don't_care	Overspeed	Don't_care	NoRequest	Don't_care	Don't_care	Don't_care
SYMBOL_Information	HMIFullScreen	Don't_care	NotAvailable	Don't_care	NoRequest	Don't_care	Don't_care	Don't_care
SYMBOL_Information	HMIFullScreen	Don't_care	NotAvailable	Don't_care	CloseDoor	Don't_care	Don't_care	Don't_care
SYMBOL_ApaButton	HMIFullScreen	InActiveControl	NormalOps	PressApaButton	ReleaseBrake	None	Don't_care	Don't_care
SYMBOL_ApaButton	HMIFullScreen	InActiveControl	Pause	PressApaButton	NoRequest	None	Don't_care	Don't_care
SYMBOL_ApaButton	HMIFullScreen	InActiveControl	Pause	PressApaButton	NoRequest	AccelPedalInactive	Don't_care	Don't_care
SYMBOL_ArrowForward	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	DriveForward	None	Don't_care	Don't_care
SYMBOL_ArrowForward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveForward	None	Don't_care	Don't_care
SYMBOL_ArrowForward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveForward	AccelPedalInactive	Don't_care	Don't_care
SYMBOL_Stop	HMIFullScreen	NotInActiveControl	NormalOps	Don't_care	Stop	Don't_care	Don't_care	Don't_care
SYMBOL_ArrowBackward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveBackward	None	Don't_care	Don't_care
SYMBOL_ArrowBackward	HMIFullScreen	InActiveControl	NormalOps	NoRequest	DriveBackward	AccelPedalInactive	Don't_care	Don't_care
SYMBOL_FinishFlag	HMIFullScreen	NotInActiveControl	Finished	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_Cancelled	HMIFullScreen	NotInActiveControl	Cancelled	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_CloseDoor	HMIFullScreen	InActiveControl	Pause	Don't_care	CloseDoor	Don't_care	Don't_care	Don't_care
SYMBOL_Attention	HMIFullScreen	NotInActiveControl	Faulty	Don't_care	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_Drive	HMIFullScreen	NotInActiveControl	NotAvailable	Shift_to_D	DriveForward	None	Auto	Don't_care
SYMBOL_FirstGear	HMIFullScreen	NotInActiveControl	NotAvailable	Shift_to_D	Don't_care	Don't_care	Manual	Don't_care
SYMBOL_ExitCar	HMIFullScreen	NotInActiveControl	NormalOps	ExitVehicle	NoRequest	None	Don't_care	Don't_care
SYMBOL_Stop	HMIFullScreen	InActiveControl	NormalOps	Don't_care	Stop	Don't_care	Don't_care	Don't_care
SYMBOL_ArrowBackward	HMIFullScreen	NotInActiveControl	NormalOps	NoRequest	DriveBackward	None	Don't_care	Don't_care

4.5.2.7   *RPA-REQ-374117/A-Symbol 2*

Content	SystemState1	SystemState2	SystemState3	DriverRequest1	DriverRequest2	DriverInfo	Transmission
SYMBOL_RemoveHands	HMIFullScreen	InActiveControl	NormalOps	NoRequest	Stop	WaitForSteering	Don't_care
SYMBOL_ApaButton	HMIFullScreen	NotInActive Control	Pause	PressApaButton	ReleaseSteering	None	Don't_care
SYMBOL_Drive	HMIFullScreen	NotInActive Control	NormalOps	Shift_to_D	Don't_care	Don't_care	Don't_care
SYMBOL_FirstGear	HMIFullScreen	InActiveControl	NormalOps	Shift_to_D	Don't_care	Don't_care	Manual
SYMBOL_Reverse	HMIFullScreen	NotInActive Control	NormalOps	Shift_to_R	Don't_care	Don't_care	Don't_care
SYMBOL_Reverse	HMIFullScreen	InActiveControl	NormalOps	Shift_to_R	Stop	Don't_care	Don't_care
SYMBOL_Neutral	HMIFullScreen	NotInActive Control	NormalOps	Shift_to_N	Don't_care	Don't_care	Don't_care
SYMBOL_PoaRightSelectable	HMIFullScreen	NotInActive Control	BothSidesSelectable	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaRightSelectable	HMIFullScreen	NotInActive Control	RightSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaRightBlocked	HMIFullScreen	NotInActive Control	LeftSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_PoaRightBlocked	HMIFullScreen	NotInActive Control	NoSideSelectable	Don't_care	Don't_care	Don't_care	Don't_care
SYMBOL_Drive	HMIFullScreen	InActiveControl	NormalOps	Shift_to_D	Don't_care	Don't_care	Auto

4.5.3   Use Cases

4.5.3.1   *RPA-UC-REQ-360831/A-Show Text Notification*

| Actors	User
Pre-conditions	Vehicle is On. RePA Session active
Scenario Description	User request and response for the RePA Server activities.
Post-conditions	Text update shown on RePA Client.
List of Exception Use Cases	
Interfaces	Client HMI Interface.

4.5.3.2   *RPA-UC-REQ-360832/A-Show Hint Text Notification*

Actors	User

Pre-conditions	Vehicle is On. RePA Session active
Scenario Description	User request and response for the RePA Server activities.
Post-conditions	Hint Text update shown on RePA Client.
List of Exception Use Cases	
Interfaces	Client HMI Interface.

4.5.3.3   RPA-UC-REQ-360833/A-Show Symbol Notification

Actors	User
Pre-conditions	Vehicle is On. RePA Session active
Scenario Description	User request and response for the RePA Server activities.
Post-conditions	Symbol update shown on RePA Client.
List of Exception Use Cases	
Interfaces	Client HMI Interface.

4.5.4   White Box View

4.5.4.1   Activity Diagrams

4.5.4.1.1   RPA-ACT-REQ-359969/A-Driver Notification - Text
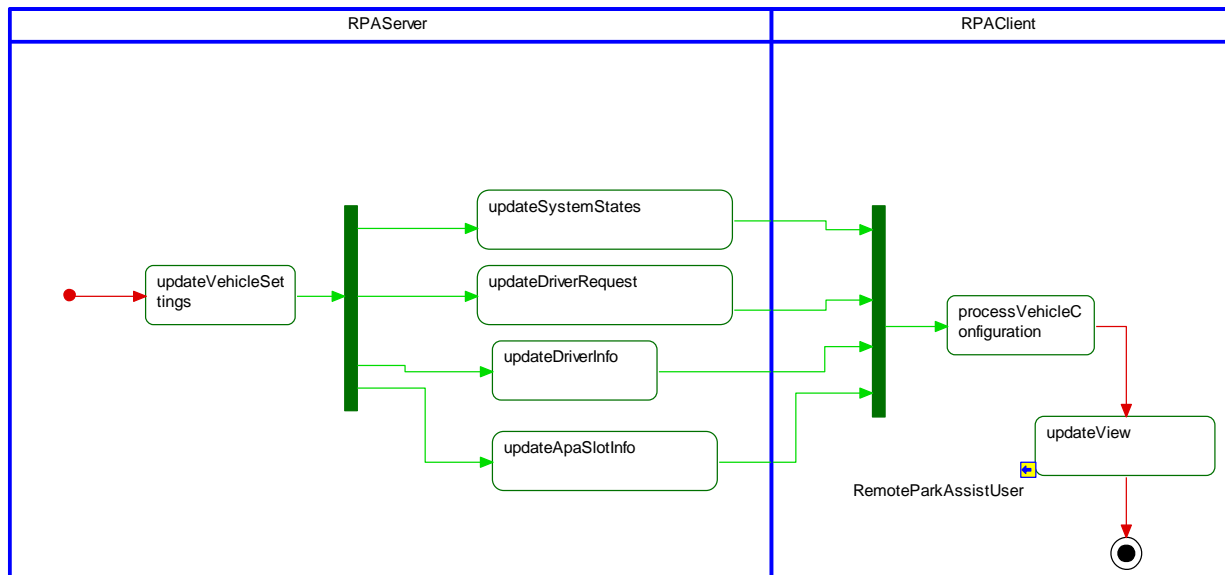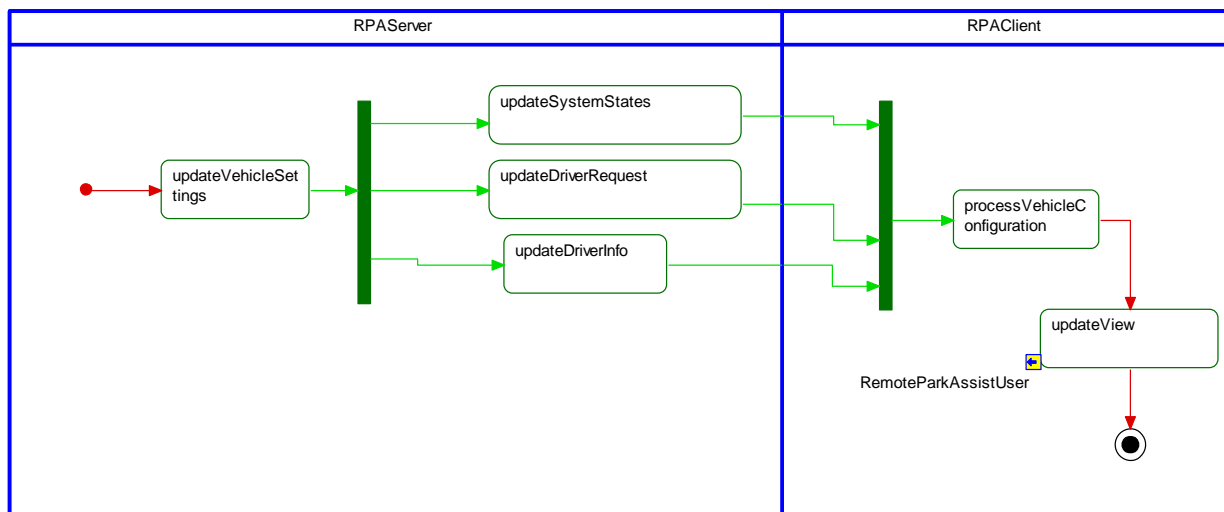
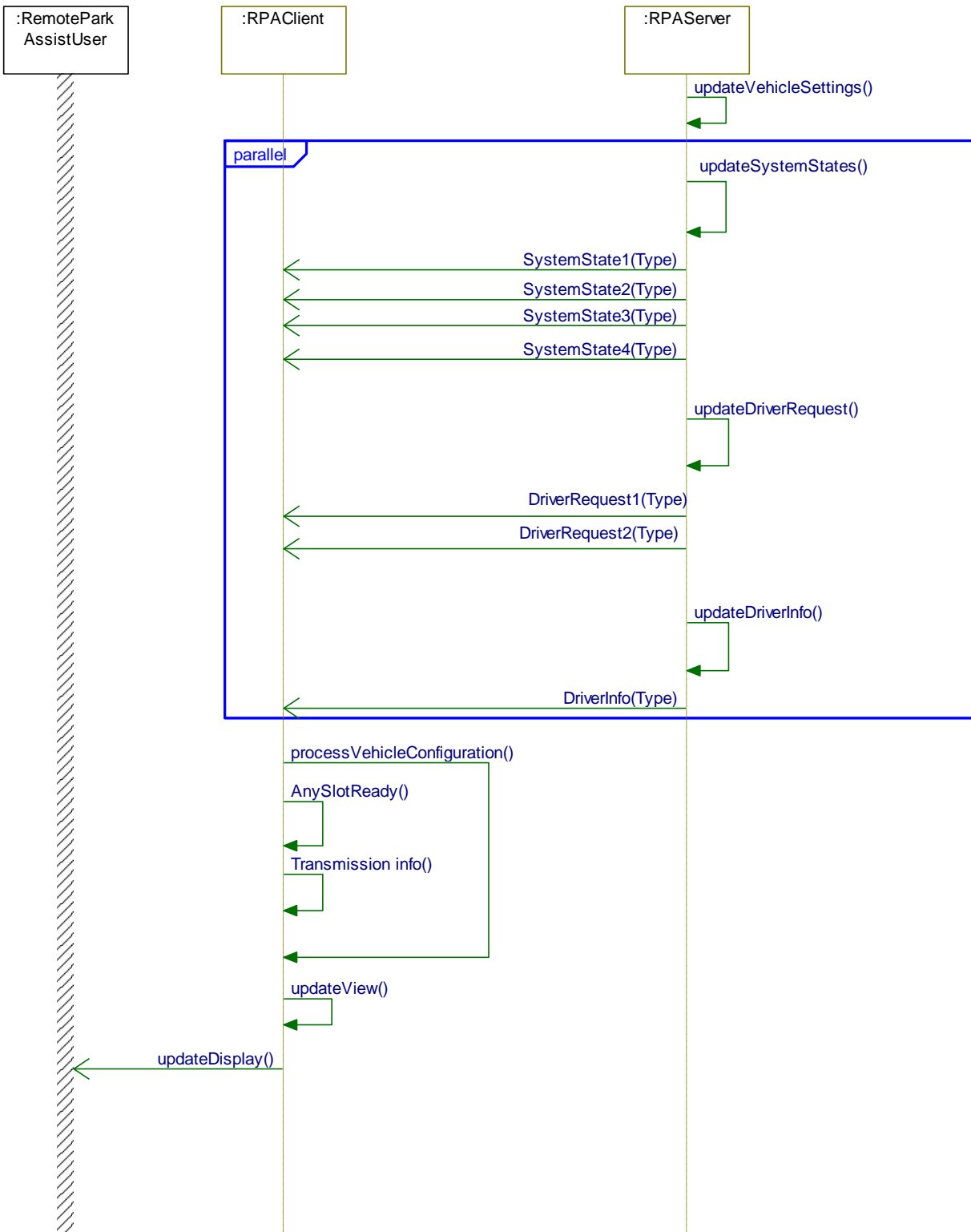#### 4.5.4.1.2 RPA-ACT-REQ-360029/A-Driver Notification - HintText
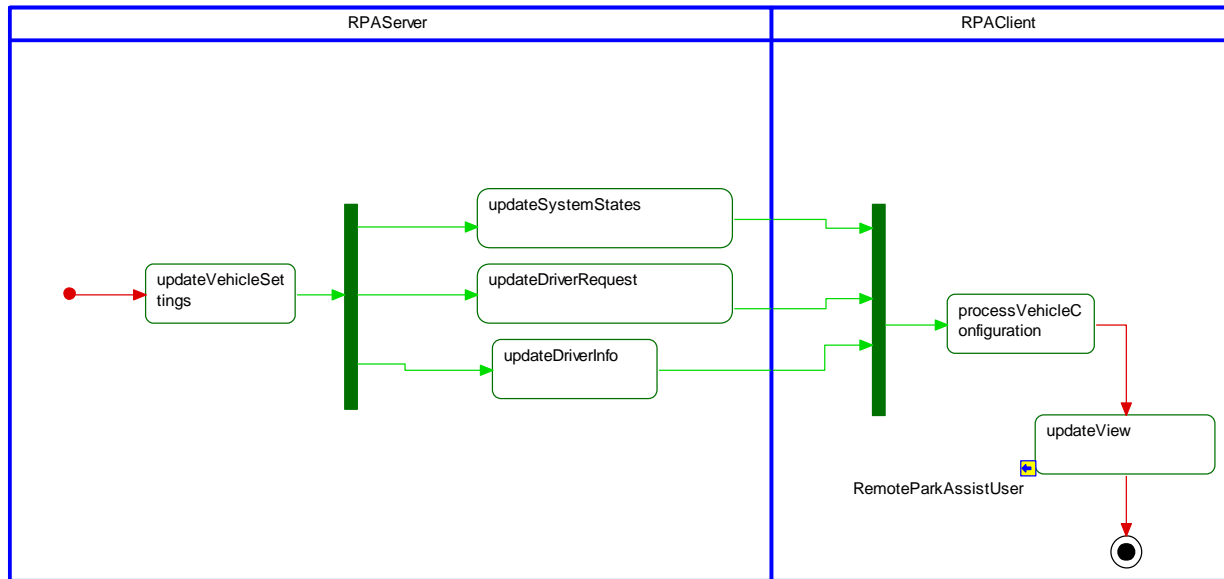
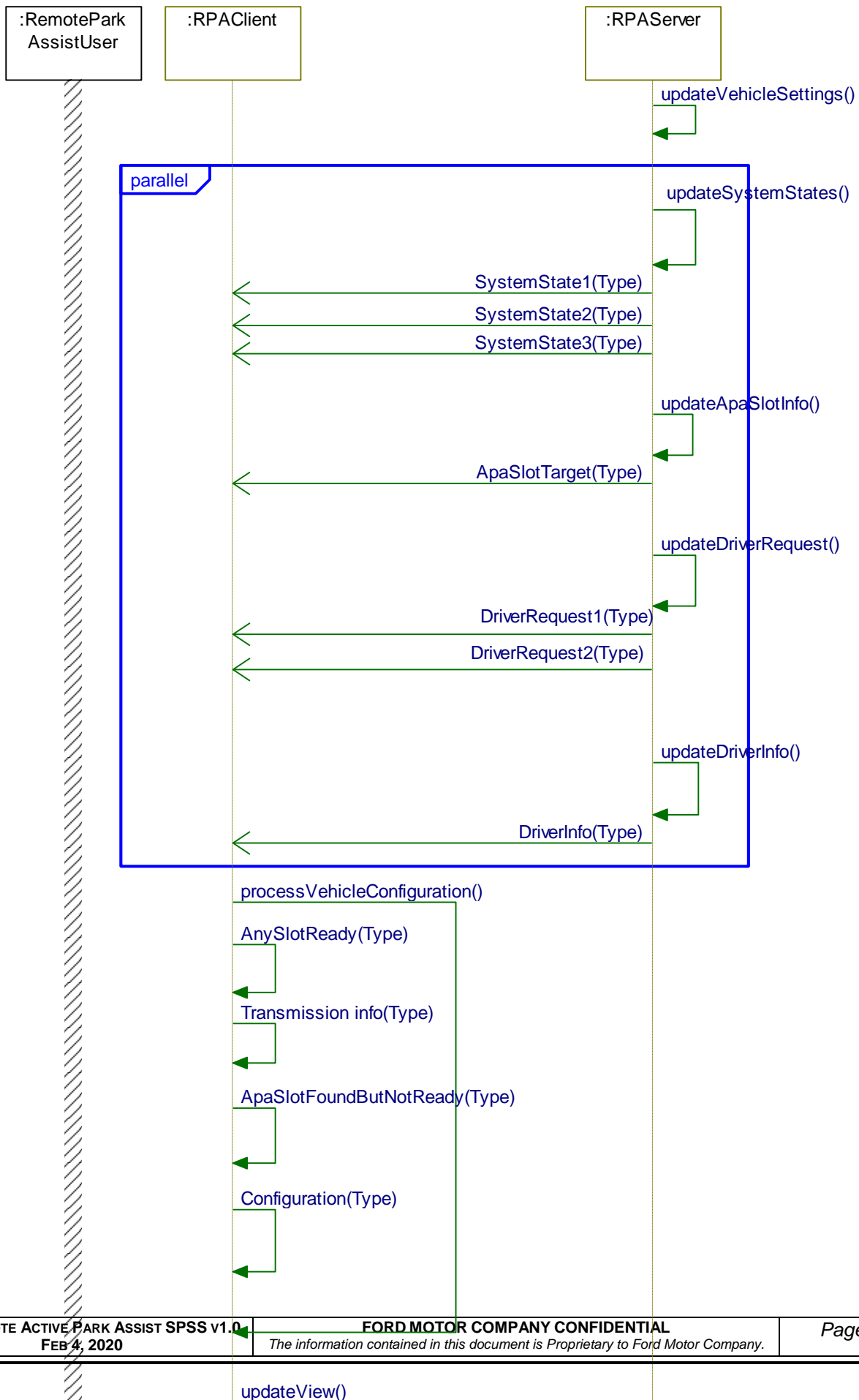#### 4.5.4.1.3 RPA-ACT-REQ-360114/A-Driver Notification - Symbol

4.5.4.2   Sequence Diagrams

4.5.4.2.1   RPA-SD-REQ-360521/A-Driver Notification - Text
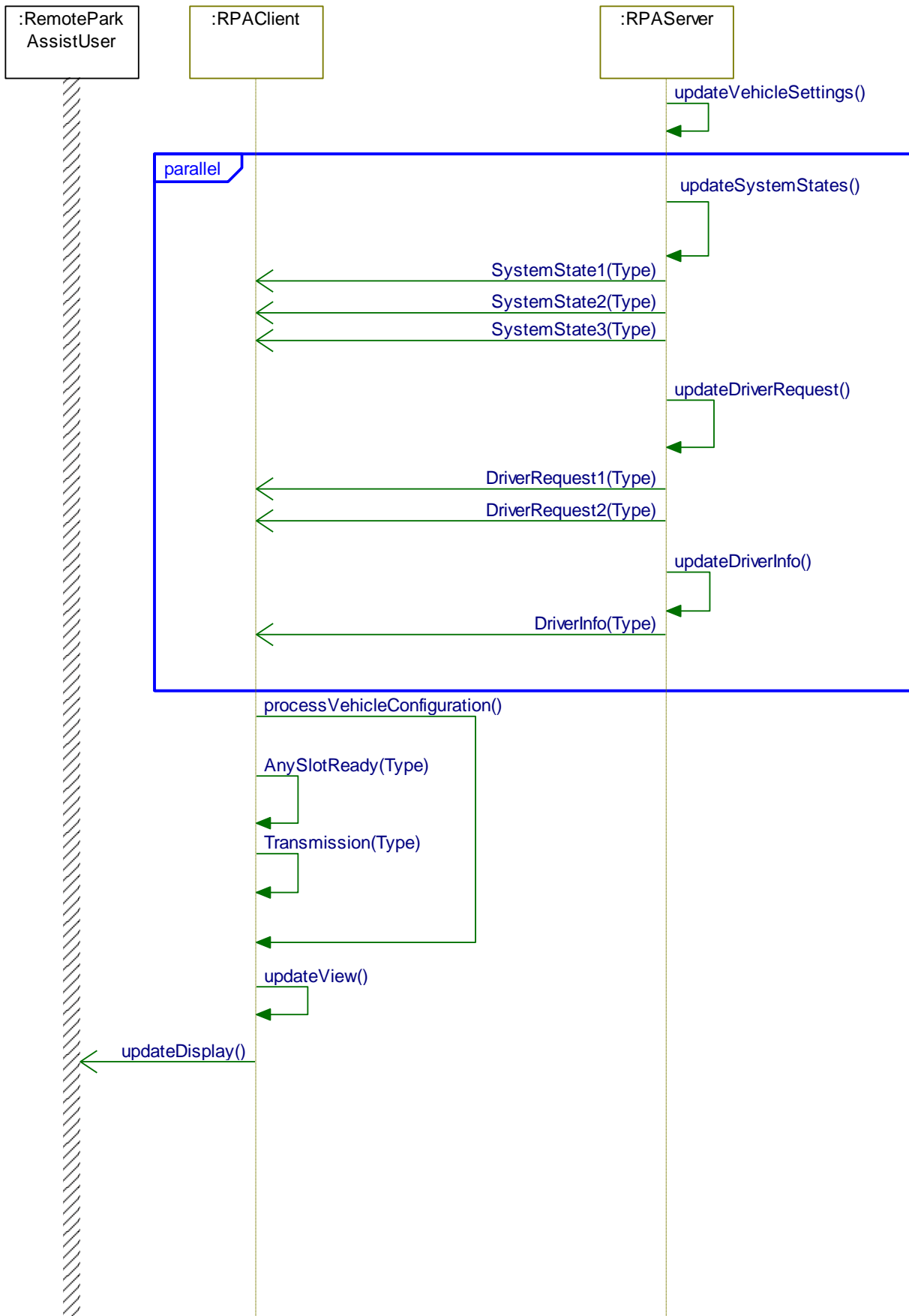
4.5.4.2.2 RPA-SD-REQ-360526/A-Driver Notification - HintText

4.5.4.2.3   RPA-SD-REQ-360532/A-Driver Notification - Symbol

5   Appendix: Reference Documents

Reference #	Document Title
1	"Apa_delUXe_SignalTranslationLogicalToCAN_10July2019.xls"
2	
3	
4	
5	
6	
7	
8	
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12	
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