



Research & Vehicle Technology
“Infotainment Systems Product Development”

**Feature – Personal Portable Profiles Setting
Server**

**Infotainment Subsystem Part Specific
Specification (SPSS)**

Version 1.0

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FORD CONFIDENTIAL



Revision History

Date	Ver	Notes	
October 1, 2021	1.0	Initial Release	



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1 Overview

Personal Portable Profiles is a cloud-based platform / ecosystem used to deliver a personalized in-vehicle experience that is seamlessly transferrable between Ford/Lincoln vehicles. This reduces the time and effort a customer needs to setup and customize their vehicle (a known pain point for subscription-based ownership). Creating a personalized experience will increase customer loyalty and provide a data platform for vehicle and cloud-based predictions, Digital Assistant, in-vehicle purchases and other monetization strategies. This in-vehicle profile will link with the centralized member profile for a common profile across all channels of the ecosystem.

Personal Portable Profiles also includes positional AutoSave, which is the automatic saving of seat and positional setting adjustments made within a specified threshold. When the adjustment is outside of the specified threshold, the user is prompted for feedback.

1.1 Terms and Definitions

Abbreviation	Description
CAN	Controller Area Network
CCS	Customer Connectivity Setting
DID	Data Identifier
FCI	Ford Cloud Interface
FNV2.0	Fully Networked Vehicle 2nd Generation
FTCP	Ford Telematics Communication Protocol
IPPT	IP pass-through
POI	Points of interest
PPP	Portable Personal Profile
RS	Rocket Setup
SDN	Service Delivery Network
SOA	Service Oriented Architecture
SPSS	Subsystem Part Specific Specification
WIR	Wireless Interface Router

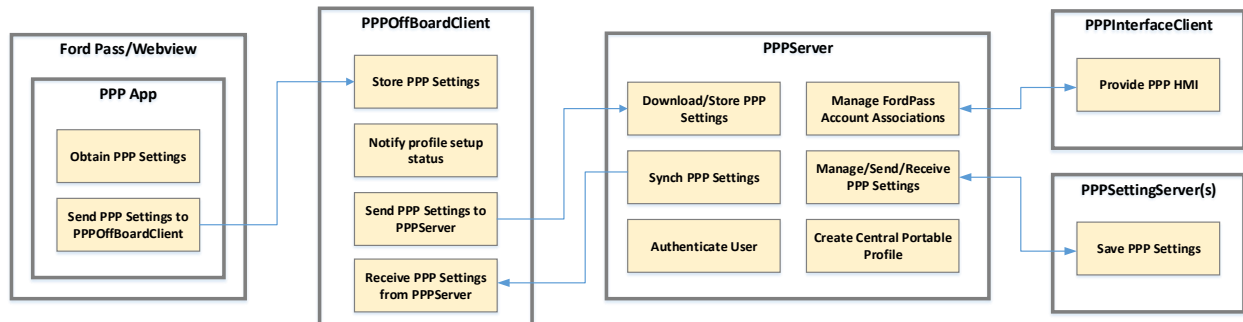
Term	Description
PPP Settings	The settings or preferences selected by the user via the PPPOffBoardClient to be loaded in-vehicle
PPP Settings payload	Specifically referring to the FTCP payload containing the PPP Settings
SyncP	A Ford standard mechanism for secure communication.



2 Architectural Design

2.1 Boundary Diagram

2.1.1 PPP-BD-REQ-406790/A-PPP Boundary Diagram



2.2 PPP-CLD-REQ-406791/A-Portable Profile Server

The Portable Profile Server (PPPServer) is responsible for the tasks listed below:

- Receive payload from PPPOffBoardClient
- Send acknowledgement to PPPOffBoardClient
- Parse payload and store to Central Portable Profile
- Send settings via relative interfaces to all PPPSettingServers
- Provide Profile Protection via Positive ID
- Synchronize Personal Profile settings with Central Portable Profile
- Send payload to PPPOffBoardClient for Synchronization
- Manage Profile to FordPass Account associations

Please review the implementation guide/ block diagram to locate the Portable Profile Server class.

2.3 PPP-CLD-REQ-406792/A-Portable Profile OffBoard Client

The Portable Profile OffBoardClient (PPPOffBoardClient) is responsible for the tasks listed below:

- Receive/Manage user input via FordPass
- Compile user preferences into payload
- Send payload to PPPServer
- Receive acknowledgement from PPPServer
- Receive payload from PPPServer for Export/Synchronization

Please review the implementation guide/ block diagram to locate the Portable Profile OffBoardClient class.

2.4 PPP-CLD-REQ-406793/A-Portable Profile Interface Client

The Portable Profile InterfaceClient (PPPInterfaceClient) is responsible for the tasks listed below:

- Receive and save settings from PPPServer
- Provide HMI information/screens for the feature
- Provide a means to perform Authentication
- Provide a user interface to enable/disable Positive ID
- Provide a user interface to associate/disassociate FordPass Account

Please review the implementation guide/ block diagram to locate the Portable Profile InterfaceClient class.



2.5 PPP-CLD-REQ-406794/A-Portable Profile Setting Server

The Portable Profile Setting Server (PPPSettingServer) is responsible for the tasks listed below:

- Receive settings from PPPServer
- Apply settings to local memory for requested profile
- Send settings to PPPServer OnChange and on demand (upon Export)

Please review the implementation guide/ block diagram to locate the Portable Profile Setting Server class.

2.6 Physical Mapping of Classes

The table below shows an example of how the logical classes that make up the Portable Personal Profiles feature can be mapped into physical modules. This mapping is an example only and does not necessarily carryover to other carlines or vehicle architectures.

Logical Class	Physical Module (ECU)
PPPServer	ECG
PPPOffBoardClient	SDN/TMC (PPP-FI)
PPPInterfaceClient	PDC
PPPSettingServer(s)	PDC, PAC, DSP_Phoenix, etc.

2.7 PPPSettingServer Interface

2.7.1 PPP-IIR-REQ-406809/A-PPPSettingServer_Rx

2.7.1.1 MD-REQ-420759/A-PppFeature_Rq

Message Type: Request

Represents the request used for PPP to command a feature change (change feature settings, query feature settings, etc.).

Name	Literals	Value	Description
Operation	-	-	Type of operation being requested
	NULL	0x0	
	QUERY	0x1	
	SET	0x2	
	COPY	0x3	
	NotUsed	0x4 - 0x7	
TransID	-	-	Transaction ID of the request
	Unitless	0x0 – 0x7	
PersIndex	-	-	Indicates which personality profile is being accessed
	PROFILE_1	0x0	
	PROFILE_2	0x1	
	PROFILE_3	0x2	
	PROFILE_4	0x3	
	VEHICLE	0x4	
	NotUsed	0x5 - 0x7	
SettingsType	-	-	Type of setting being accessed
	NULL	0x0	Null
	PERSONALIZED	0x1	Personalized Vehicle settings
	REJUVENATE_R ELAX	0x2	Relax mode settings



	REJUVENATE_IN VIGORATE	0x3	Invigorate mode Settings
	SSW_WORK	0x4	Stowable Steering Wheel Column work mode
FeatureNumber	-	-	Feature number being requested
		0x0000 – 0xFFFF	
FeatureValue	-	-	Feature value being requested
		0x0000 – 0xFFFF	

2.7.1.2 MD-REQ-420762/A-pppFeatureOp

This API is used to request an operation of a PPP setting (change feature settings, query feature settings, etc.) from a PPPSettingServer. The PPPSettingServer also uses this API for its response.

Method Type		OneShot (asynchronous)			
QoS Level		Default			
Retained		Yes			
R/O	Name	Type	Literals	Value	Description
Request					
R	PersCommand	Enum	-	-	Command being requested
			QUERY_ONE	0x0	
			QUERY_ALL	0x1	
			SET	0x2	
R	PersID	Enum	-	-	Personality profile is being accessed
			PROFILE_1	0x0	
			PROFILE_2	0x1	
			PROFILE_3	0x2	
			PROFILE_4	0x3	
			VEHICLE	0x4	
R	SettingsType	Enum	-	-	Type of setting being accessed
			USER_PERSONALIZED	0x0	
			REJUVENATE_RELAX	0x1	
			REJUVENATE_INVIGORATE	0x2	
			SSW_WORK	0x3	
Rep	FeatureMap	FeatureCode	uint32	-	Feature code/number being requested
		FeatureValue	uint32	-	Feature value being requested
				0x0000 – 0xFFFF	
				0x0000 – 0xFFFF	
Response					
R	ResponseCode	Enum	-	-	Response to requested operation
			SUCCESS	0x0	
			FAILED	0x1	
			INVALID	0x2	
R	ParameterCount	uint32	-	0x0000 – 0xFFFF	Parameter Count of the response



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Rep	FeatureMap	FeatureCode	uint32	-	0x0000 – 0xFFFF	Feature code/number being requested
		FeatureValue	uint32	-	0x0000 – 0xFFFF	Feature value being requested



2.7.2 PPP-IIR-REQ-406810/A-PPPSettingServer_Tx

2.7.2.1 MD-REQ-420760/A-PppFeature_St

Message Type: Status

Represents the current status of a feature setting in regards to PPP.

Name	Literals	Value	Description
Response	-	-	Response to requested operation
	NULL	0x0	
	SUCCESS	0x1	
	PENDING	0x2	
	REJECTED	0x3	
	INTERRUPTED	0x4	
	FAILED	0x5	
	IN_PROG	0x6	
	INVALID	0x7	
	NotUsed	0x8 - 0xF	
TransID	-	-	Transaction ID of the request
	Unitless	0x0 – 0x7	
Counter	-	-	Indicates total number of feature settings to be sent in the response (if many are being sent)
	unitless	0x0 – 0x1F	
FeatureNumber	-	-	Active feature number
		0x0000 – 0xFFFF	
FeatureValue	-	-	Active feature value
		0x0000 – 0xFFFF	

2.7.2.2 MD-REQ-420761/A-PppSettingsChange_St

Message Type: Status

The signal is used to notify the PPPServer of a settings change.

Name	Literals	Value	Description
Response	-	-	Indicates a setting change
	NULL	0x0	
	PROFILE_UPDATED	0x1	
	DATA_LOST	0x2	
	NotUsed	0x3	
SettingsType	-	-	Type of setting being changed (not applicable to all PPPSettingServers)
	NULL	0x0	
	PERSONALIZED	0x1	
	REJUVENATE_RELAX	0x2	
	REJUVENATE_INVIGORATE	0x3	
	SSW_WORK	0x4	

**2.7.2.3 MD-REQ-420762/A-pppFeatureOp**

This API is used to request an operation of a PPP setting (change feature settings, query feature settings, etc.) from a PPPSettingServer. The PPPSettingServer also uses this API for its response.

Method Type		OneShot (asynchronous)			
QoS Level		Default			
Retained		Yes			
R/O	Name	Type	Literals	Value	Description
Request					
R	PersCommand	Enum	-	-	Command being requested
			QUERY_ONE	0x0	
			QUERY_ALL	0x1	
			SET	0x2	
R	PersID	Enum	-	-	Personality profile is being accessed
			PROFILE_1	0x0	
			PROFILE_2	0x1	
			PROFILE_3	0x2	
			PROFILE_4	0x3	
			VEHICLE	0x4	
R	SettingsType	Enum	-	-	Type of setting being accessed
			USER_PERSONALIZED	0x0	
			REJUVENATE_RELAX	0x1	
			REJUVENATE_INVIGORATE	0x2	
			SSW_WORK	0x3	
Rep	FeatureMap	FeatureCode	uint32	-	Feature code/number being requested
		FeatureValue	uint32	-	Feature value being requested
				0x0000 – 0xFFFF	
				0x0000 – 0xFFFF	
Response					
R	ResponseCode	Enum	-	-	Response to requested operation
			SUCCESS	0x0	
			FAILED	0x1	
			INVALID	0x2	
R	ParameterCount	uint32	-	0x0000 – 0xFFFF	Parameter Count of the response
Rep	FeatureMap	FeatureCode	uint32	-	Feature code/number being requested
		FeatureValue	uint32	-	Feature value being requested
				0x0000 – 0xFFFF	
				0x0000 – 0xFFFF	

2.7.2.4 MD-REQ-420763/A-pppSettingsChangeBroadcast

This API is used to notify the PPPServer of a settings change in the PPPInterfaceClient.

Method Type	Fire&Forget
QoS Level	Default
Retained	Yes



R/O	Name	Type	Literals	Value	Description
Request					
-	-	-	-	-	N/A
Response					
R	SettingsChange	Enum	-	-	Profile updated indicator
			NULL	0x0	
			PROFILE_UPDATED	0x1	



3 General Requirements

3.1 PPP-REQ-406669/A-Profile Attribute Specification Reference

The list of personalized settings that are to be supported by PPP shall be defined in the Profile Attribute Specification.

3.2 PPP-REQ-435140/A-Powermode Conditions

The PPPSettingServer shall only perform the PPP functionality defined in this SPSS when the following preconditions are met:

- IgnitionStatus_St = Run, Start, or Acc, OR
- IgnitionStatus_St = Off and Delay_Accy = On

3.3 PPP-REQ-435379/A-Module Reset & TransID – CAN Interface

If the PPPSettingServer receives PppFeature_Rq with TransID=0, this shall indicate that the PPPServer has undergone a reset, and the PPPSettingServer shall discard any previous active requests.

3.4 PPP-REQ-435380/A-Response Time

The PPPSettingServer shall respond to a PPPServer request with a Success, Fail, or Invalid response within 3s of receiving the request.

3.5 PPP-REQ-435381/A-Revert to Default Values – CAN Interface

After responding to a PPPServer request via PppFeature_St, the PPPSettingServer shall revert PppFeature_St to its default values (see CAN DBC for defaults).

3.6 PPP-REQ-434448/A-Operation Invalid Response – CAN Interface

If the requested Operation in PppFeature_Rq is not supported by the PPPSettingServer, the PPPSettingServer shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x7) Invalid"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 0
- FeatureNumber = 0x0000
- FeatureValue = 0x0000

The following Operations are not supported/used for PPP:

- COPY

3.7 PPP-REQ-434458/A-Operation Invalid Response – SoA Interface

If the requested PersCommand in pppFeatureOp is not supported by the PPPSettingServer, the PPPSettingServer shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x3) Invalid"
- ParameterCount = 0
- FeatureCode = 0x0000
- FeatureValue = 0x0000

The following PersCommands are not supported/used for PPP:

- COPY



4 Functional Definition

4.1 PPP-FUN-REQ-434481/A-Query All

4.1.1 Use Cases

4.1.1.1 PPP-UC-REQ-435134/A-PPPServer requests a Query All from PPPSettingServer

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	The PPPServer needs to gather all PPP setting information from all PPPSettingServers and sends a Query All request to all.
Post-conditions	Each PPPSettingServer receives the request, gathers all of their applicable personalized settings, and responds to the PPPServer.
List of Exception Use Cases	
Interfaces	CAN, SoA

4.1.2 Requirements

4.1.2.1 PPP-REQ-434440/A-Query All Success Response – CAN Interface

Upon receiving PppFeature_Rq(Operation=Query,TransID, PersIndex, SettingsType = Personalized, FeatureNumber = 0xFFFF) which indicates a 'Query All' operation, the PPPSettingServer shall collect all of the personalized settings/feature numbers it is responsible for and send a PppFeature_St to the PPPServer for each, with the following:

- Response =
 - "(0x1) Success" if only one feature number is being sent, OR
 - "(0x6) In_Prog" for all feature numbers but the last, when multiple feature numbers must be sent, followed by "(0x1) Success" for the final feature number
- TransID = the TransID provided in PppFeature_Rq
- Counter = the number of settings associated with the requested PersIndex
- FeatureNumber = the feature number of the personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex

The above shall be sent sequentially for each FeatureNumber the PPPSettingServer is responsible for. For each subsequent transmission, the Counter shall decrement by 1, so as to convey the total remaining number of responses that will follow (including current response). If a PPPSettingServer only personalizes one setting, Counter shall be set to 1.

4.1.2.2 PPP-REQ-435382/A-Query All Response Time – CAN Interface

When responding to a Query All operation per REQ-434440, if the PPPSettingServer must send multiple responses, each response/feature number shall be sent for a minimum of 100ms, with a 50ms separation time.

4.1.2.3 PPP-REQ-434441/A-Query All Failed Response – CAN Interface

If the PPPSettingServer fails to perform the Query All operation per REQ-434440, it shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x5) Failed"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 0
- FeatureNumber = 0x0000
- FeatureValue = 0x0000



4.1.2.4 PPP-REQ-434450/A-Query All Success Response – SoA Interface

Upon receiving pppFeatureOp(PersCommand=Query_All, ParameterCount, PersID, SettingsType = Personalized) which indicates a 'Query All' operation, the PPPSettingServer shall collect all of the personalized settings/feature numbers it is responsible for and send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x0) Success"
- ParameterCount = the number of settings associated with the requested PersIndex
- FeatureCode = the feature number of the personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex

The above shall be sent one time, including all FeatureNumbers the PPPSettingServer is responsible for. If a PPPSettingServer only personalizes one setting, ParameterCount shall be set to 1.

4.1.2.5 PPP-REQ-434451/A-Query All Failed Response – SoA Interface

If the PPPSettingServer fails to perform the Query All operation per REQ-434450, it shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x1) Failed"
- ParameterCount = 0
- FeatureCode = 0x0000
- FeatureValue = 0x0000

4.1.3 White Box View

4.1.3.1 Activity Diagrams

4.1.3.2 Sequence Diagrams



4.2 PPP-FUN-REQ-434483/A-Query

4.2.1 Use Cases

4.2.1.1 PPP-UC-REQ-435135/A-PPPServer requests a Query from PPPSettingServer

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	The PPPServer needs to gather a single PPP setting from a PPPSettingServer and sends it a Query request.
Post-conditions	The requested PPPSettingServer receives the request and responds to the PPPServer with the personalized setting.
List of Exception Use Cases	REQ-435136-PPPServer Queries a setting not personalized by PPPSettingServer
Interfaces	CAN, SoA

4.2.1.2 PPP-UC-REQ-435136/A-PPPServer Queries a setting not personalized by PPPSettingServer

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	The PPPServer needs to gather a single PPP setting from a PPPSettingServer and sends it a Query request. The PPPSettingServer does not personalize the requested PPP setting.
Post-conditions	The requested PPPSettingServer receives the request and sends an Invalid response to the PPPServer.
List of Exception Use Cases	
Interfaces	CAN, SoA

4.2.2 Requirements

4.2.2.1 PPP-REQ-434444/A-Query Success Response – CAN Interface

Upon receiving PppFeature_Rq(Operation=Query,TransID, PersIndex, SettingsType = Personalized, FeatureNumber) which indicates a 'Query' operation, the PPPSettingServer shall send the personalized setting/feature number indicated in the request to the PPPServer via PppFeature_St with the following:

- Response = "(0x1) Success"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 1
- FeatureNumber = the feature number of the requested personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex



Note: 'SettingsType' is not applicable to all PPPSettingServers, and therefore may not be received by all PPPSettingServers. This is used to denote requests for different types of saved settings that also use this interface. If not received, the PPPSettingServer shall treat PppFeature_Rq as a request in relation to PPP/Personalized settings.

4.2.2.2 PPP-REQ-434445/A-Query Failed Response – CAN Interface

If the PPPSettingServer fails to perform the Query operation per REQ-434444, it shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x5) Failed"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 0
- FeatureNumber = 0x0000
- FeatureValue = 0x0000

4.2.2.3 PPP-REQ-434446/A-Query Invalid Response – CAN Interface

If a feature number queried per REQ-434444 is not personalized by/applicable to the PPPSettingServer, the PPPSettingServer shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x7) Invalid"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 0
- FeatureNumber = the FeatureNumber provided in PppFeature_Rq
- FeatureValue = 0x0000

4.2.2.4 PPP-REQ-434454/A-Query Success Response – SoA Interface

Upon receiving pppFeatureOp(PersCommand=Query, ParameterCount, PersID, SettingsType = Personalized, FeatureMap) which indicates a 'Query' operation, the PPPSettingServer shall send the personalized setting/feature number indicated in the request to the PPPServer via pppFeatureOp with the following:

- ResponseCode = "(0x0) Success"
- ParameterCount = 1
- FeatureCode = the feature number of the requested personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex

Note: 'SettingsType' is not applicable to all PPPSettingServers, and therefore may not be received by all PPPSettingServers. This is used to denote requests for different types of saved settings that also use this interface. If not received, the PPPSettingServer shall treat pppFeatureOp as a request in relation to PPP/Personalized settings.

4.2.2.5 PPP-REQ-434455/A-Query Failed Response – SoA Interface

If the PPPSettingServer fails to perform the Query operation per REQ-434454, it shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x1) Failed"
- ParameterCount = 0
- FeatureCode = 0x0000
- FeatureValue = 0x0000

4.2.2.6 PPP-REQ-434456/A-Query Invalid Response – SoA Interface

If a feature number queried per REQ-434454 is not personalized by/applicable to the PPPSettingServer, the PPPSettingServer shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x3) Invalid"
- ParameterCount = 0
- FeatureCode = the FeatureCode provided in pppFeatureOp
- FeatureValue = 0x0000

**4.2.3 White Box View****4.2.3.1 Activity Diagrams****4.2.3.2 Sequence Diagrams**



4.3 PPP-FUN-REQ-434482/A-Set

4.3.1 Use Cases

4.3.1.1 PPP-UC-REQ-435137/A-PPPServer requests to Set a setting on a PPPSettingServer

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	The PPPServer needs to change a PPP setting on a PPPSettingServer and sends it a Set request.
Post-conditions	The requested PPPSettingServer receives the request, updates the setting, and responds to the PPPServer.
List of Exception Use Cases	REQ-435138-PPPServer Sets a setting not personalized by PPPSettingServer
Interfaces	CAN, SoA

4.3.1.2 PPP-UC-REQ-435138/A-PPPServer Sets a setting not personalized by PPPSettingServer

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	The PPPServer needs to change a PPP setting on a PPPSettingServer and sends it a Set request. The PPPSettingServer does not personalize the requested PPP setting.
Post-conditions	The requested PPPSettingServer receives the request and sends an Invalid response to the PPPServer.
List of Exception Use Cases	
Interfaces	CAN, SoA

4.3.2 Requirements

4.3.2.1 PPP-REQ-435383/A-Set Success Response – CAN Interface

Upon receiving PppFeature_Rq(Operation=Set,TransID, PersIndex, SettingsType = Personalized, FeatureNumber, FeatureValue) which indicates a 'Set' operation, the PPPSettingServer shall save the requested Feature Number and FeatureValue to memory for the requested PersIndex and respond to the PPPServer via PppFeature_St with the following:

- Response = "(0x1) Success"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 1
- FeatureNumber = the feature number of the requested personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex



After saving the requested value, the PPPSettingServer shall also update any existing feature-specific interfaces related to the personalized setting (see relative feature SPSS's).

Note: 'SettingsType' is not applicable to all PPPSettingServers, and therefore may not be received by all PPPSettingServers. This is used to denote requests for different types of saved settings that also use this interface. If not received, the PPPSettingServer shall treat PppFeature_Rq as a request in relation to PPP/Personalized settings.

4.3.2.2 PPP-REQ-435384/A-Set Failed Response – CAN Interface

If the PPPSettingServer fails to perform the Set operation per REQ-435383, it shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x5) Failed"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 1
- FeatureNumber = the feature number of the requested personalized setting
- FeatureValue = the PPPSettingServer's saved value of the feature number for the requested PersIndex (the value saved prior to the Set request)

4.3.2.3 PPP-REQ-435385/A-Set Invalid Response – CAN Interface

If a feature number being set per REQ-435383 is not personalized by/applicable to the PPPSettingServer, the PPPSettingServer shall send PppFeature_St to the PPPServer with the following:

- Response = "(0x7) Invalid"
- TransID = the TransID provided in PppFeature_Rq
- Counter = 0
- FeatureNumber = the FeatureNumber provided in PppFeature_Rq
- FeatureValue = 0x0000

4.3.2.4 PPP-REQ-435386/A-Set Success Response – SoA Interface

Upon receiving pppFeatureOp(PersCommand=Set, ParameterCount, PersID, SettingsType = Personalized, FeatureMap) which indicates a 'Set' operation, the PPPSettingServer shall save the requested Feature Number and FeatureValue to memory for the requested PersIndex and respond to the PPPServer via pppFeatureOp with the following:

- ResponseCode = "(0x0) Success"
- ParameterCount = 1
- FeatureCode = the feature number of the requested personalized setting
- FeatureValue = the saved value of the feature number for the requested PersIndex

After saving the requested value, the PPPSettingServer shall also update any existing feature-specific interfaces related to the personalized setting (see relative feature SPSS's).

Note: 'SettingsType' is not applicable to all PPPSettingServers, and therefore may not be received by all PPPSettingServers. This is used to denote requests for different types of saved settings that also use this interface. If not received, the PPPSettingServer shall treat pppFeatureOp as a request in relation to PPP/Personalized settings.

4.3.2.5 PPP-REQ-435387/A-Set Failed Response – SoA Interface

If the PPPSettingServer fails to perform the Set operation per REQ-435386, it shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x1) Failed"
- ParameterCount = 1
- FeatureCode = the feature number of the requested personalized setting
- FeatureValue = the PPPSettingServer's saved value of the feature number for the requested PersIndex (the value saved prior to the Set request)



4.3.2.6 PPP-REQ-435388/A-Set Invalid Response – SoA Interface

If a feature number being set per REQ-435386 is not personalized by/applicable to the PPPSettingServer, the PPPSettingServer shall send pppFeatureOp to the PPPServer with the following:

- ResponseCode = "(0x3) Invalid"
- ParameterCount = 0
- FeatureCode = the FeatureCode provided in pppFeatureOp
- FeatureValue = 0x0000

4.3.3 White Box View

4.3.3.1 Activity Diagrams

4.3.3.2 Sequence Diagrams



4.4 PPP-FUN-REQ-435130/A-Settings Update

4.4.1 Use Cases

4.4.1.1 PPP-UC-REQ-435139/A-PPPSettingServer notifies PPPServer of a settings change

Actors	PPPServer, PPPSettingServer
Pre-conditions	Powermode conditions are met Enhanced Memory is supported Personal Portable Profiles is supported
Scenario Description	A PPP setting on the PPPSettingServer is updated (via some means other than PPP). The PPPSettingServer notifies the PPPServer that a setting change has occurred.
Post-conditions	The PPPServer receives the notification and requests a Query All from the respective PPPSettingServer.
List of Exception Use Cases	
Interfaces	CAN, SoA

4.4.2 Requirements

4.4.2.1 PPP-REQ-434462/A-Settings Change Status – CAN Interface

The PPPSettingServer shall locally monitor changes to all of the personalized settings it is responsible for. If any personalized setting value changes, the PPPSettingServer shall send PppSettingsChange_St to the PPPServer with the following:

- Response = "(0x1) Profile_Updated"
- SettingsType = "(0x1) Personalized"
 - SettingsType is not required/applicable to all PPPSettingServers (see DBC for signal presence/applicability)

In response, the PPPServer shall request a Query All operation. The PPPSettingServer shall set PppSettingsChange_St(Response = "(0x0) Null", SettingsType = "(0x0) Null") after receiving the Query All request.

4.4.2.2 PPP-REQ-434464/A-Settings Change Status – SoA Interface

The PPPSettingServer shall locally monitor changes to all of the personalized settings it is responsible for. If any personalized setting value changes, the PPPSettingServer shall send pppSettingsChangeBroadcast(SettingUpdate = 1).

In response, the PPPServer shall request a Query All operation. The PPPSettingServer shall set pppSettingsChangeBroadcast(SettingUpdate = 0) after receiving the Query All request.

4.4.2.3 PPP-REQ-435389/A-Settings Change Status – Set Operation

If the personalized setting is updated/changed as a result of a Set operation (see FUN-REQ- 434482), the PPPSettingServer shall not send PppSettingsChange_St or pppSettingsChangeBroadcast to the PPPServer indicating a change.

4.4.3 White Box View

4.4.3.1 Activity Diagrams

4.4.3.2 Sequence Diagrams



5 Appendix: Reference Documents

Reference #	Document Title
1	Profile Attribute Specification
2	Personalization_Service_Spec
3	
4	
5	
6	
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