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# FSA RHMI INTERFACE DEFINITION

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**Module and Owner of the interface:**

Interface starting with module name will provide/define service

**RHMI:** Remote Human Machine Interface.

RHMI Agent of HMI control Logic will define the interface

Owner: RAMP

**FSA:** Functional Service Architecture

OWNER: GMTCI

**Renderer:**

Owner: Altia

## **PARAMETER DEFINITIONS**

Service ID	0	RemoteModuleHMI
	1	TBT State
	2	RouteGuidanceUserControl
	3	RouteGuidance
	4	RoutePlanning
	5	DestinationListManagement
	6	RoutePreview
	7	OnStarControl
	8	OnStarFunctions
	9	WifiSettings
	10	VehicleSettings
	11	RemoteReflash
	12	PromptPlay
	13	DataPort
	14	OnStarPhone
	15	Emergency
	16	RemoteConfig
	17	Remote Reflash

Function name:	RHMI_Ready	
Syntax:	unsigned char RHMI_Ready(void)	
Synch/Async	Synch	
Reentrancy	No	
Parameters in	void	
Return value	1	HMI Ready
	0	HMI Not Ready
Description	Before Subscribing for Events/properties FSA will make a check on RHMI Ready, if not ready then will wait, otherwise will continue.	

Function name:	RHMI_Notify_Events_Property_MethodResponse	
Syntax:	uint8 status RHMI_Notify_Events_Property_MethodResponse(uint32 u16ServiceId,uint32 u32FunctionId, void * pFrame)	
Synch/Async	Synch	
Reentrancy	No	
Parameters in	U32FunctionId	Event/Property/Method Response ID  701 - Overlay Request 702 - Screen Request 704 - Overlay Cancelled 707 - ImageWidgetDataUpdate 708 - ProgressBarDataUpdate 713 - ListContentChange 715 - LabelWidgetDataUpdate 720 - ActivityIndicator 721 - StopActivityIndicator 722 - GenericSWCEthernetFeedback 723 - ListRowUpdate 724 - MoveToTopOfList 705 - ServerAppList 711 - ListSliceResponse 712 - ClientFocusResponse
	pFrame	Structure pointer to the corresponding frame.
Return value	0	Success
	5	Buffer Full
Description	This function is a call from FSA to RHMI to Notify,Eventy,Methods	

Function name:	FSA_ImageAvailable	
Syntax:	unsigned char FSA_ImageAvailable (char* ImageID , char* URL)	
Synch/Async	synch	
Reentrancy	No	
Parameters in	ImageID	ID of Image Widget of the URL specified
	URL	String containing the file name and path
Return value	0	Available
	1	Not Available
Description	<p>Interface to check if an image is available in RAM. If the image is available in RAM, function returns a value 'available'.</p> <p>If file is not available in RAM but is an extended image stored in Flash, Asset manager initiates, copying the image to RAM in the background using a different task. Until the file is fully copied to RAM in the background process, this interface returns 'Image not available'.</p> <p>If the image is a Transient Image and not available in RAM, Asset manager requests RHMI service to download the image from the Server.</p> <p>If Image is a Core Image, it returns 'Image available'.</p> <p>RHMI module Loops through all the images defined in Screen/Overlay.</p> <p>RHMI Call this interface for all the Images who's Availability bit is NOT SET.FSA to return status as Available by default for core image request .This interface required for RHMI module to call Altia interface for screen update whenever the Image is available with FSA.</p>	

Function name:	FSA_DeletelImage	
Syntax:	unsigned char FSA_DeletelImage (char* imagelist[], uint16 numImages)	
Synch/Async	Asynch	
Reentrancy	No	
Parameters in	ImageList numImages	imageList : Array of URLs of images that can be removed from RAM number of images in the array passed
Return value	0 1	Success Not Success
Description	RHMI calls Delete interface for all Image with URL when there is a Screen change, Overlay Cancelled, Overlay Removed. FSA can delete Extended and Transient assets ,ignoring Core image deletion	

Function name:	ServiceNotAvailable	
Syntax:	void ServiceNotAvailable (uint16 u16ServiceId, uint8 u8Status)	
Synch/Async	Synch	
Reentrancy	No	
Parameters in	u16ServiceId	Service Id
	U8Status	0 – Active 1 - Inactive
Return value	void	
Description	This function shall Notify the HMI about service not available or if there is any service reset.	

Function name:	FSA_GetImage	
Syntax:	unsigned char FSA_GetImage (char* URL, char** buf, uint32* size)	
Synch/Async	synch	
Reentrancy	No	
Parameters in	URL	String containing the file name and path
	Buf	Pointer to Buffer from which image will be rendered
	Size	Size of the the image in the buffer
Return value	0	Available
	1	Not Available
Description	<p><b>Renderer</b> component shall use this function to request for extended/transient image. Renderer doesn't need to allocate buffer, will directly use the memory address provided by FSA to render.</p> <p>Note: Altia don't parse the image availability flag .FSA to return Null pointer for the Image URL requested if Image is not available in RAM.</p>	



Function name:	FSA_NotifyMethods	
Syntax:	Uint8 FSA_NotifyMethods (uint16 u16ServiceID,uint32 u32MethodId, void * pFrame)	
Synch/Async	Synch	
Reentrancy	No	
Parameters in	u32MethodId	Method ID  711 – List Slice 712 – Client Focus. 709 – Callback Method. 703 – Overlay Response.
Return value	0  5	Success  Buffer Full
Description	This function shall Notify useraction/Methods to FSA	

Version Number	Modifier	Interface Changed	Description
V1	Initial version		
V2	Jagadish Gowda Aravind S and Jagadish R	FSA_ImageAvailable	Updated Description
		ServiceNotAvailable	Added parameter u8Status for status update
		FSA_DeletelImage	Change the Image URL request to an array list for RHMI to call Delete one time
		FSA_GetImage	Update the buffer pointers and added the parameter size
		GetimageReadStatus ,DeleteTransientAsse ts , GetimageReadStatus, RHMI_VariantID,	Removed from the specification which was been highlighted has delete
V3	Jagadish Gowda	RHMI_Ready	Changed the return type from Bool to char .