



Business Message Standard (BMS) Audio Visual Photography Trade Item Extension

BMS Release: 2.7.0, BRG Name: GDSN

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Document Summary

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01-Nov-2009	0.0.1	Eric Kauz	Initial Version.		
18-Nov-2009	0.0.2	Eric Kauz	Public Review Comments	<ul style="list-style-type: none"> Fixed typos in code lists Changed HMDI to HDMI 	
15-Jan-2010	0.0.3	Eric Kauz	QA	<ul style="list-style-type: none"> Changed Analog to Analogue in Audio Visual Connector Code List. Updated definitions on Audio Visual Connector Code List. Corrected the definition for externalMemoryTypeCode 	



Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
12-Feb-2010	0.0.4	Eric Kauz	Public Review	<ul style="list-style-type: none">• Changed name of class TeletextInformation to TelevisionInformationServiceTypeInformation• Changed AvailableBrightnessValues data type to measurementValue.• Updated definition for code value of TELETEXT.	

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1. Business Domain View

1.1. Problem Statement / Business Need

The Hardlines and Consumer Electronics communities require a GDSN compliant method of sending marketing and other attributes through the network. This would lower the cost of doing business, eliminate the need for proprietary data communications links between trading partners, and more fully utilize the GDSN network. Successful implementation will also increase adoption of the GDSN within the Hardlines and Consumer Electronics verticals.

1.2. Objective

The objectives of this BMS is to provide a message standard that can cover industry needs for GPC bricks 10003692 and 10003693 required by the Consumer Electronics retailers. This extension will cover the entire GPC segment for Audio Visual Photography items since many attribute required for televisions are also pertinent to audio products and photography products.

1.3. Audience

The audience of the standards would be any participant in the global supply chain. This would include carriers, and their customers and partners.

1.4. References

Reference Name	Description
BRAD Television Attributes	Business Requirements Document for Television Attributes.

1.5. Acknowledgements

The following is a list of individuals (and their companies) who participated in the creation, review and approval of this BMS.

1.5.1. BRG Work Group

Function	Name	Company / organisation
BRG Work Group Chair	Donna Liotta	American Hardware Manufacturers Association
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Function	Name	Company / organisation
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1.5.2. Design Team Members

Function	Name	Organisation
Modeler	Eric Kauz	GS1
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2. Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	68000000 - Audio Visual/Photography
Process	Align Item
System Capabilities	EAN.UCC
Official Constraints	None

3. Additional Technical Requirements Analysis

This section documents the analysis of additional technical requirements.

3.1. Technical Requirements

Not Applicable

4. Business Transaction View

4.1. Business Transaction Use Case Diagram

Covered in Align Trade Item Use Cases.

4.2. Use Case Description

Covered in Align Trade Item Use Cases.

4.3. Business Transaction Activity Diagram(s)

Not Applicable

4.4. Business Transaction Sequence Diagram(s) (optional)

Not Applicable

5. Information Model (Including GDD Report)

5.1. GDD Report

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
AspectRatioInformation				Aspect Ratio Information. Details	Logical grouping of attributes related to aspect ratio.			
	aspectRatioDescriptionCode			Aspect Ratio Information. Aspect Ratio_ Description Code. Text	A code that indicates the aspect ratio dimension.	1..1		Min 1 Max 70
	aspectRatioDimensionCode			Aspect Ratio Information. Aspect Ratio_ Dimension Code. Text	A code that indicates the aspect ratio dimension.	1..1		Min 1 Max 70
AudioVisualPhotographyTradeItemExtension				Audio Visual Photography Trade Item Extension. Details	An extension to the trade item to support audio, visual and photography products.			
	AudioVisualPhotographyTradeItem			Audio Visual Photography Trade Item Extension. Associated. Audio Visual Photography Trade Item	Trade Item details for an Audio Visual or Photography Trade Item.	1..1		
AudioVisualPhotographyTradeItem				Audio Visual Photography Trade Item. Details	Trade Item details for an Audio Visual or Photography Trade Item.			
			AudioVideoConnectorInformation	Audio Visual Photography Trade Item. Associated. Audio Video Connector Group	Audio Video Connector Information for a Trade Item.	0..1		
			AudioVisualSignalProcessingInformation	Audio Visual Photography Trade Item. Associated. Audio Visual Signal Processing	Audio Visual Signal Control Processing information for a Trade Item.	0..1		
			TradeItemAudioInformation	Audio Visual Photography Trade	Audio Information for a Trade Item.	0..1		



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
				Item. Associated. Trade Item Audio Information				
			TradeItemVideoInformation	Audio Visual Photography Trade Item. Associated. Trade Item Video	Video Information for a Trade Item.	0..1		
			TradeItemInstallationInformation	Audio Visual Photography Trade Item. Associated. Trade Item Installation Information	Installation Information for a Trade Item.	0..1		
			RemoteControlInformation	Audio Visual Photography Trade Item. Associated. Remote Control Information	Remote Control Information for a Trade Item.	0..1		
			DataStorageDeviceInformation	Audio Visual Photography Trade Item. Associated. Data Storage Device Information	Data Storage Device Information for a Trade Item.	0..1		
AudioVideoConnectorInformation				Audio Video Connector Group. Details	Audio Video Connector Information for a Trade Item.			
	hDMITestingAgencyCode			Audio Video Connector Group. HDMI Testing Agency. Text	<p>The testing agency that has certified all of the product's HDMI inputs or outputs as a code.</p> <p>HDMI/HDCP interoperability is tested either by SimplayHD or another Authorized Testing Centre with the 1.2a specification.</p> <p>The High-Definition multimedia Interface (HDMI) is a compact audio/video connector interface for transmitting uncompressed digital streams. High-bandwidth</p>	0..*		Min 1 Max 35



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
					Digital Content Protection (HDCP) is a form of digital copy protection.			
	supportedHDMIFeature			Audio Video Connector Group. Supported HDMI Feature. Text	The type of features that are supported by the High-Definition multimedia Interface. The High-Definition Multimedia Interface (HDMI) is a compact audio/video connector interface for transmitting uncompressed digital streams.	0..*		Min 1 Max 35
			AudioVideoConnector	Audio Video Connector Group. Associated. Audio Video Connector	Audio Video Connector information for a trade item.	0..*		
AudioVideoConnector				Audio Video Connector. Details	Audio Video Connector information for a trade item.			
	audioVisualConnectionLocationCode			Audio Video Connector . Audio Visual Connection Location Code. Text	The location on the unit of any audio visual connector for example top.	0..1		Min 1 Max 35
	audioVisualConnectionQuantity			Audio Video Connector . Audio Visual Connection Quantity. NonNegativeInteger _ Numeric	The number of audio visual connections available on the unit expressed as a code.	0..1		
	audioVisualConnectionTypeCode			Audio Video Connector. Audio Visual Connection Type Code. Text	The types of Standard or Basic Connection Types that are available expressed as a code.	0..1		Min 1 Max 70
	audioVisualConnectionInputDirectionCode			Audio Video Connector. Audio Visual Connection Input Direction Code. Text	The directions of connections (input, output) that are available expressed as a code value.	0..1		Min 1 Max 35
AudioVisualSignalProcessing				Audio Visual Signal Processing. Detail	Information on signal processing for a trade			



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
					item. Signal processing is the ability to perform useful operations on signals.			
	availableChannelStationQuantity			Audio Visual Signal Processing. Available Channel Station Quantity. NonNegativeInteger _ Numeric	The number of channels available on the unit expressed as an integer.	0..1		
	electronicProgrammingGuideDaysAvailable			Audio Visual Signal Processing. Electronic Programming Guide Days Available. NonNegativeInteger _ Numeric	The number of days available in an electronic programming guide expressed as an integer. The electronic programming guide feature is the capability for the users to interact with an intelligent guide.	0..1		
	signalProcessingTypeCode			Audio Visual Signal Processing. Signal Processing Type Code. Text	The type of processing capability of the television to receive and process enhanced signal types expressed as a code for example Analogue.	0..1		Min 1 Max 35
	tunerTypeCode			Audio Visual Signal Processing. Tuner Type Code. Text	A tuner type is the technology used for the built-in receiver expressed as a code for example HD (high definition). A tuner receives broadcasts and converts them into signals.	0..*		Min 1 Max 35
DataStorageDeviceInformation				Data Storage Device. Details				
	externalMemoryTypeCode			Data Storage Device. External Memory Type Code. Text	The components, devices, and recording media that retain digital data that is external to the device expressed as a code.	0..*		Min 1 Max 35
	internalMemoryTypeCode			Data Storage Device. Internal Memory Type Code. Text	The components, devices, and recording media that retain digital data that is internal to the device expressed as a code.	0..1		Min 1 Max 35



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
DisplayScreenInformation				Display Screen.Detail	Information on the viewing screen available on the unit.			
	displayScreenTypeCode			Display Screen . Display Screen Type Code. Text	The type of output device for presentation of visual information.	0..*		Min 1 Max 35
	horizontalViewingAngle			Display Screen. Horizontal Viewing Angle. Measure	The maximum angle that a picture can be viewed without distortion in the horizontal orientation expressed in degrees.	0..1		
	verticalViewingAngle			Display Screen . Vertical Viewing Angle. Measure	The maximum angle that a picture can be viewed without distortion in the vertical orientation expressed in degrees.	0..1		
		displayScreenBezelSize	MultiMeasurement Value	Display Screen . Display Screen Bezel Size.	The measurement from the edge of physical screen to the frame.	0..1		
		displayScreenSize	MultiMeasurement Value	Display Screen . Display Screen Size.	The viewable display/screen size of the product expressed as a measurement (inches or centimetres).	0..1		
RemoteControlInformation				Remote Control. Details	The type of remote control functionality available with a unit.			
	remoteControlTypeCode			Remote Control. Remote Control Type Code. Text	The type of remote control functionality available with a unit expressed as a code.	0..1		Min 1 Max 35
TradeItemAudioInformation				Trade Item Audio. Details	Information on audio functionality of a Trade Item.			
	detachableSpeakerTypeCode			Trade Item Audio. Detachable Speaker Type Code. Text	The type of detachable speakers available on the unit for example wireless.	0..1		Min 1 Max 35
	fixedSpeakerLocationCode			Trade Item Audio. Fixed Speaker Location Code. Text	The location of speakers that cannot be detached available on the unit.	0..1		Min 1 Max 35
	surroundSoundDigitalDecoderTypeCode			Trade Item Audio. Surround Sound Digital Decoder Type	The type of feature capable of decoding and playback of particular	0..*		Min 1 Max 35



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
				Code. Text	sound systems expressed as a code for example DTS HD.			
	totalAudioPowerOutput			Trade Item Audio. Total Audio Power Output. Measure	The total audio power output of the product expressed in Watts.	0..1		
TradeItemInstallationInformation				Trade Item Installation Group.				
	tradeItemInstallationOptionTypeCode			Trade Item Installation Group Trade Item Installation Option Type Code. Text	The way that the unit can be mounted or placed expressed as a code for example CEILING_MOUNT.	0..1		Min 1 Max 35
	vESAWallMountTypeCode			Trade Item Installation Group. VESA Wall Mount Type Code. Text	The type of VESA wall mount the television is compatible with. VESA is a standard bracket which is a universal mount measured by the Video Electronic Standard Association.	0..1		Min 1 Max 35
TradeItemVideoInformation				Trade Item Video Group. Detail				
	availableBrightnessValues			Trade Item Video Group. Available Brightness Values. Measure	The monitor brightness as a measurement. This is measured in candela per square meter (also known as Nits) or lumens per square meter, and Lux.	0..*		
	combFilterTechnologyTypeCode			Trade Item Video Group. Comb Filter Technology Type Code. Text	A code depiction the type of software allowing the screen to show fine picture detail from channel broadcast or DVD source for example DIGITAL.	0..1		Min 1 Max 35
	dynamicContrastRatio			Trade Item Video Group. Dynamic Contrast Ratio. NonNegativeInteger _ Numeric	This is the ratio of luminosity of the brightest and darkest colour the system is capable of producing simultaneously over time. In the attribute the integer given is the first number in the ratio	0..1		

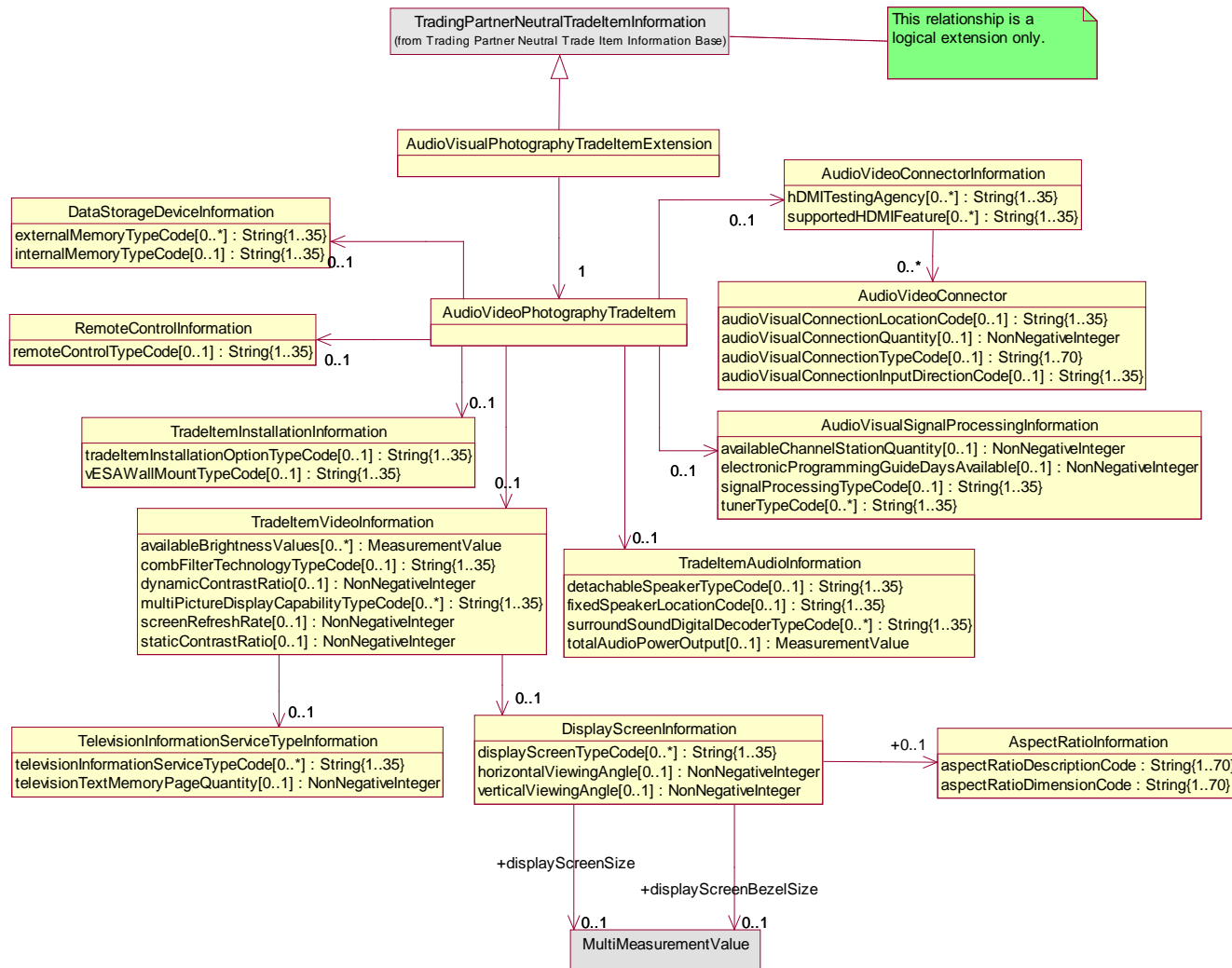


Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
					which is always to one, i.e. 550:1.			
	multiPictureDisplayCapabilityTypeCode			Trade Item Video Group. Multi Picture Display Capability Type Code. Text	The type of ability to simultaneously display multiple viewing windows on the same screen expressed as a code for example PICTURE_AND_TEXT.	0..*		Min 1 Max 35
	screenRefreshRate			Trade Item Video Group. Screen Refresh Rate. NonNegativeInteger _ Numeric	This is defined as the number of times a display's image is repainted or refreshed in per second measured in Hertz.	0..1		
	staticContrastRatio			Trade Item Video Group. Static Contrast Ratio. NonNegativeInteger _ Numeric	This is the ratio of luminosity of the brightest and darkest colour the system is capable of producing simultaneously at any instance of time. In the attribute the integer given is the first number in the ratio which is always to one, i.e. 550:1.	0..1		
			DisplayScreenInformation	Trade Item Video Group. Associated. Display Screen	Display screen information for a trade item.	0..1		
			TelevisionInformationServiceTypeInfoInformation	Trade Item Video Group. Associated. Television Information Service	Teletext Information for a trade item.	0..1		
TelevisionInformationServiceTypeInfoInformation				Television Information Service. Details	A capability of the television to process text information service (subtitled or captioned) for example Teletext, Telidon, Antiope, Fastext.			
	televisionInformationServiceTypeCode			Television Information Service . Television Information Service Type Code. Text	The type of text information services the unit can process expressed as a code for example ANTIOPE.	0..*		Min 1 Max 35
	televisionTextMemoryP			Television	This is the quantity of	0..1		Min 1



Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity	Related Requirements	Facets
	ageQuantity			Information Service. Television Text Memory Page Quantity. NonNegative Integer_Numeric.	pages expressed as an integer that the television memory maintains for previously viewed Teletext content.			Max 35

5.2. Class Diagrams



5.3. Code Lists

5.3.1. Internal Code Lists

None

5.3.2. External Code Lists

Class Name	Attribute Name	Code List
AudioVisualConnectorInformation	audioVisualConnectionInputDirectionCode	Audio Visual Connection Input Direction Code List
AudioVisualConnectorInformation	audioVisualConnectionLocationCode	Audio Visual Connection Location Code
AudioVisualConnectorInformation	audioVisualConnectionType	Audio Visual Connection Type Code
TradeItemVideoInformation	combFilterTechnologyType	Comb Filter Type Code List
TradeItemAudioInformation	detachableSpeakerTypeCode	Detachable Speaker Type Code List
DisplayScreenInformation	displayScreenTypeCode	Display Screen Type Code List
DataStorageDeviceInformation	externalMemoryTypeCode	External Memory Type Code List
TradeItemAudioInformation	fixedSpeakerLocationCode	Fixed Speaker Location Code List
AudioVisualConnectorInformation	hDMIFeatureCode	HDMI Feature Code List
AudioVisualConnectorInformation	hDMITestingAgencyCode	HDMI Testing Agency Code List
DataStorageDeviceInformation	internalMemoryTypeCode	Internal Memory Type Code List
TradeItemVideoInformation	multiPictureDisplayCapabilityTypeCode	Multi-Picture Display Capability Type Code List
RemoteControlInformation	remoteControlTypeCode	Remote Control Type Code List
TradeItemVideoInformation	signalProcessingTypeCode	Signal Processing Type Code List
TradeItemAudioInformation	surroundSoundDigitalDecoderTypeCode	Surround Sound Digital Decoder Type Code List
televisionInformationService	televisionInformationServiceTypeCode	Television Information Service Type
TradeItemInstallationInformation	vESAWallMountTypeCode	VESA Wall Mount Type Code List
TradeItemInstallationInformation	tradeItemInstallationOptionTypeCode	Trade Item Installation Option Code List
TradeItemVideoInformation	tunerTypeCode	Tuner Type Code List
MarketingInformation (in core trade item message)	TradeItemFeatureCode	Television Feature Code List

Code List Name	Code List Description
Audio Visual Connection Input Direction Code List	The direction of a connection (input, output) available for audio or visual signals.
INPUT	Transmission into a device
OUTPUT	Transmission out of a device

Code List Name	Code List Description
Audio Visual Connection Location Code List	The location on the unit of any audio visual connector for example TOP.
BACK	Located on the back of the unit.
BOTTOM	Located on the bottom of the unit.
FRONT	Located on the front of the unit.
LEFT	Located on the left side of the unit.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
OTHER	
RIGHT	Located on the right side of the unit.
TOP	Located on the top of the unit.

Code List Name	Code List Description
Audio Visual Connection Type Code List	The types of Standard or Basic Connection Types that are available for a television
3_5_MM_STEREO_HEADPHONE_PROJECTED_JACK	A headphone jack with a diameter of 3.5 millimetres.
1_5_MM_MINI_STEREO_JACK	A wired stereo headphone jack with an approximate diameter of 1.5 millimetres.
3_5_MM_STEREO_HEADPHONE_JACK	A wired stereo headphone jack with an approximate diameter of 3.5 millimetres.
4_PIN_4_PIN	A connector that allows for 4 pins on both sides of the connecting wire.
6_PIN_4_PIN	A connector that allows for 6 pins on one side and 4 pins of the connecting wire.
6_PIN_6_PIN	A connector that allows for 6 pins on both sides of the connecting wire.
A_A	
A_B	
ANALOGUE	A connector that communicates analogue signals.
BLUETOOTH	A wireless protocol for exchanging data over short distances.
AV	Any kind of electrical connectors for carrying audio signal and video signal of either analogue or digital format.
COAXIAL	An electrical cable with an inner conductor surrounded by a tubular insulating layer.
COMPONENT_BNC	A connector is used for radio frequency signal connections, for analogue and Serial Digital Interface video signals, amateur radio antenna connections, aviation electronics (avionics) and many other types of electronic test equipment.

COMPONENT_RCA	A type of electrical connector commonly used to carry audio and video signals.
DV_INPUT	A digital video input.
FIREWIRE	A serial bus interface
HDMI	A compact audio/video interface for transmitting uncompressed digital data.
HUSHIDEN_YC	
INFRARED_HEADPHONE	A connection for head phones using electromagnetic radiation.
LAN	Local area network connector.
MINI_HDMI	A form of compact audio/video interface for transmitting uncompressed digital data.
MINI_USB	A form of Universal Serial Bus connector.
MONITOR	A connector used to connect systems with display monitors.
NETWORK	A connector used to connect network applications.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
OTHER	
PERITEL_CGBS	
PERITEL_RGB	A form of red, green, blue analogue component video.
PERITEL_YC	
PHONE	A connector used to connect to a telephone.
PHONE_NETWORK	A connector used to connect to a telephone network
QXGA	Quad eXtended Graphics Array
RADIO_FREQUENCY_HEADPHONE	A headphone connection using radio frequencies as a means to communicate with the headphones.
RCA_CINCH	A type of electrical connector used in the audio/video market.
RGB_ENABLED_SCART	A SCART connector for red, green, blue analogue component video.
SCART	21-pin connector for connecting audio-visual (AV) equipment together.
SVGA	Super Video Graphics Array
SVHS	Super VHS
SXGA	Super eXtended Graphics Array
SXGA_PLUS	Super eXtended Graphics Array Plus
USB_1_0	Version 1.0 of Universal Serial Bus connector standard.
USB_2_0	Version 2.0 of Universal Serial Bus connector standard.
UXGA	Ultra eXtended Graphics Array
VGA	Video Graphics Array
WIRELESS_LAN	A Local Area Network connection that communicates without the use of wired connections.
WIRELESS_USB	A Universal Serial Bus connector that communicates without the use of wired connections.
WXGA	Wide Extended Graphics Array
XGA	Extended Graphics Array
XGA_PLUS	eXtended Graphics Array Plus
YUV	

Comb Filter Type Code List	
Code List Name	Code List Description
2_LINE DIGITAL	
3_LINE DIGITAL	A comb filter that averages the signal from the line before and after it to obtain a more accurate cancellation.
3D_DIGITAL	
DIGITAL	A comb filter separates the luminance and chrominance parts of a video signal in the digital domain.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.

Detachable Speaker Type Code List	
Code List Name	Code List Description
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
WIRED	Speakers are connected to the unit via wires.
WIRELESS	The communication is the transfer of sound over a distance without the use wires.

Display Screen Type Code List	
Code List Name	Code List Description
CRT_FLAT	CRT Flat: a type of tube television with a non-curved screen surface.
CRT_ROUND	CRT Round: a type of tube television with a curved screen surface.
EL	Electroluminescence (EL) LED; the result of radiative recombination of electrons and holes in a material
FLUORESCENT	Fluorescent: a vacuum tube containing an electron gun (a source of electrons) and a fluorescent screen.
LCD	LCD: an electro-optical amplitude modulator realized as a thin, flat display device made up of any number of colour or monochrome pixels arrayed in front of a light source or reflector.
LCOS	Liquid Crystal on Silicone (LCoS); a "micro-projection" or "micro-display" technology typically applied in projection televisions.
LEP	Light emitting polymer (LEP): any Light Emitting Diode whose emissive electroluminescent layer is composed of a film of organic compounds.
NOT_APPLICABLE	Not Applicable
OEL	Organic electroluminescent (OEL): any Light

	Emitting Diode (LED) whose emissive electroluminescent layer is composed of a film of organic compounds.
OLED	Organic Light Emitting Diode (OLED): any Light Emitting Diode (LED) whose emissive electroluminescent layer is composed of a film of organic compounds.
OTHER	Other
PLASMA	Plasma: a type of flat panel display now commonly used for large TV displays.
REAR_PROJECTION	Type of large-screen television display technology.
SED	SED Surface Conduction Electronic Emitter Display: a flat panel display technology that uses surface conduction electron emitters for every individual display pixel.
TDEL	Thick-film dielectric electroluminescent (TDEL): phosphor-based flat panel display technology.
VFD	Vacuum fluorescent display (VFD)

External Memory Type Code List	
External Memory Type Code List	The components, devices, and recording media that retain digital data that is external to the device.
COMPACT_FLASH	A mass storage device format used in portable electronic devices.
HC_MMC_PLUS	A flash memory card standard.
IMPACT_FLASH	Impact Flash
MEMORY_STICK	A removable flash memory card format.
MEMORY_STICK_DUO	A smaller flash memory card for pocket-sized digital cameras and cell phones.
MEMORY_STICK_PRO	A removable flash memory card format.
MEMORY_STICK_PRO_DUO	A removable flash memory card format.
MICRODRIVE	A miniature, 1-inch hard disk designed to fit in a CompactFlash (CF) Type II slot.
MINI_SD	A small form factor removable and portable memory device intended for use in cell phones/mobile phones, digital cameras, MP3 players and many other gadgets.
NOT_APPLICABLE	Not Applicable
SDHC	Secure Digital High-Capacity, a type of flash memory card.
SD_MMC	A format of memory card.
TRANSFLASH_MICRO_SD	A format for removable flash memory cards.
XD_MMC_PLUS	A type of flash memory card, used mainly in digital cameras.

Television Feature Code	Features that are applicable to television products. Note: This code list is used to populate the TradeltemFeatureCode in the core Trade Item.
Code List Name	Code List Description
AC_DC_ADAPTER	A power supply that is built into a plug and is not built into the unit it is powering.
ASPECT_RATIO_CONTROL	A feature providing the means to set different viewing window sizes for a television.
AUTO_CHANNEL_SETUP	A feature which automatically sets up all channels available and tunes the television channels at the touch of a button.
BUILT_IN_ALARM_CLOCK	A clock that is designed to make a loud sound at a specific time and is built into the unit.
CENTRE_CHANNEL_CAPABLE	A fifth speaker output for replication of crisp and clear sound.
CHILD_LOCK_SOFTWARE	Software security used to prevent unwanted tampering with feature settings.
COMMON_INTERFACE_MODULE	An extensible digital interconnect found in digital Televisions. This feature enables the viewing of pay channels without the need for cable box or set top boxes.
DIGITAL_CABLE_READY	The ability to project digital cable with the use of a separate tuner.
DVBC_CABLE_READY	The ability to project DVB-C cable with the use of a separate tuner. DVB-C stands for Digital Video Broadcasting.
FLICKER_FREE	A feature that increases the frequency of which the picture refreshes measured in hertz (50 to 200Hz) Flicker-free technology noticeably improves viewing quality.
HIGH_DEFINITION_COPY_PROTECTION	High Definition Copy Protection (HDCP) is a chip that descrambles a High Definition (HD) broadcast to allow one to watch HD broadcasts.
HIGH_DEFINITION_READY	The ability to receive a High Definition signal. The Television can show the required screen resolution and have the necessary connections to be able to show High Definition content.
MEMORY_CARD_READER	A computer peripheral that is used to transfer the content of a memory card without the use of another device.
ON_SCREEN_MENU	Interactive menus that come up when changing television set-up options such as brightness and contrast.
ON_SCREEN_CLOCK	A clock visible on the screen.
PARENTAL_CONTROLS	Options that allow parents to monitor or limit what a child can see or do and/or time-limit these activities.
PICTURE_ENHANCEMENT	A brand owner enhancement to the picture quality which may be created by hardware, or software, or both.
PICTURE_VIEWING_CAPABILITY	The ability to view digital photographs via a digital card reader.
QUADRATURE_AMPLITUDE_MODULATION	Quadrature amplitude modulation (QAM) enables direct reception of digital cable channels without the use of a set top box.
SIMULTANEOUS_PICTURE_TELETEXT	The ability to view teletext while still watching the picture (subtitled or captioned). Teletext is a

	television information retrieval service.
SOUND_LEVELLING_CAPABILITY	Sound levelling reduces the spikes in sound levels during programming typically from commercials.
XVYCC_COLOR_GAMUT_TECHNOLOGY	An expanded version of the YCC color gamut, with 1.8-times more reds, greens, and blues of sRGB color. It is often made synonymous with Deep Color, which is an increased bit depth.

Fixed Speaker Location Code List	
Code List Name	Code List Description
BOTTOM	At the bottom of the unit.
FRONT	In the front of the unit.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
SIDE	On the sides of the unit.

HDMI Feature Code List	
Code List Name	Code List Description
DEEP_COLOR	A term used to describe a method of representing graphical image data using an extremely large number of shades, hues and luminosities, capable of displaying billions of possible colors.
DOLBY_TRUE_HD	an advanced lossless multi-channel audio codec developed by Dolby Laboratories which is intended primarily for high-definition home-entertainment equipment
DTS_HD_MASTER_AUDIO	A lossless audio codec created by Digital Theater System.
HIGH_SPEED_CABLE	For use with high definition content.
HDMI_CEC	Consumer Electronics Control
LIP_SYNC_CORRECTION	The relative timing of audio (sound) and video (image) portions during creation, post-production (mixing), transmission, reception and play-back processing.
MINI_CONNECTOR	For use in linking two units together for a digital connection.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
X_V_COLOR	x.v.Color;

HDMI Testing Agency Code List	
Code List Name	Code List Description
1	Not Certified
2	No HDMI ports
3	SimplayHD
4	Silicon Image Inc - Sunnyvale CA

5	Silicon Image Inc - Shenzhen China
6	Silicon Image Inc - Shanghai China
7	Philips Semiconductors – Europe
8	Matsushita Electrical Industrial Co Ltd - Osaka Japan
9	Sony Corporation - Tokyo Japan

Internal Memory Type Code List	
Code List Name	Code List Description
Internal Memory Type Code List	The components, devices, and recording media that retain digital data that is internal to the device.
DDR3	A random access memory technology used for high speed storage of the working data of a computer or other digital electronic device.
HARD_DRIVE	A storage device that stores digitally encoded data on rotating platters with magnetic surfaces.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.

Multi-Picture Display Capability Type Code List	
Code List Name	Code List Description
Multi-Picture Display Capability Type Code List	The type of ability to simultaneously display multiple viewing windows on the same screen.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
PICTURE_AND_TEXT	Picture and Text: used in the UK. Teletext services with second source in the corner.
PICTURE_AND_PICTURE	Picture and Picture: split screen of the same size picture, would be the same as picture-in-picture
PICTURE_IN_PICTURE	Picture in Picture: full screen with second source in the corner.

Remote Control Type Code List	
Code List Name	Code List Description
Remote Control Type Code List	The type of remote control functionality a television comes with expressed as a code.
EARPHONE	A source of sound output that controls the unit by means of an in-line remote control.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.
OTHER	
STANDARD_SINGLE_DEVICE	A remote control that operate a single device, usually the one it came with.
UNIVERSAL_REMOTE	A remote control that can be programmed to operate various brands of one or more types of consumer electronics devices.

Signal Processing Type Code List	
Code List Name	Code List Description
	The type of processing capability of the television to receive and process enhanced signal types.
ANALOGUE	Encodes television picture and sound information and transmits it as an analogue signal.
EDTV_INTEGRATED	Formats that deliver a picture that is superior to that of standard-definition television (SDTV), but not as detailed as high-definition television (HDTV).
EDTV_READY	Formats that deliver a picture that is superior to that of standard-definition television (SDTV), but not as detailed as high-definition television (HDTV). . Ready means ready to use with EDTV sources.
HDTV_INTEGRATED	A digital television broadcasting system with higher resolution than traditional television systems.
HDTV_READY	A digital television broadcasting system with higher resolution than traditional television systems. . Ready means ready to use with high definition sources.
SDTV_INTEGRATED	Television systems that have a resolution that meets standards but not considered either enhanced definition or high definition.
SDTV_READY	Television systems that have a resolution that meets standards but not considered either enhanced definition or high definition. Ready means ready to use with SDTV sources.
NOT_APPLICABLE	A statement that an affirmative or negative response is not required for the attribute.

Surround Sound Digital Decoder Type Code List	
Code List Name	Code List Description
	A feature capable of decoding and playback of particular sound systems.
DOLBY_DIGITAL_5_1	A data/audio compression technology.
DOLBY_DIGITAL_EX	A data/audio compression technology.
DOLBY_DIGITAL_PRO_LOGIC_II	A data/audio compression technology.
DOLBY_DIGITAL	A data/audio compression technology.
DOLBY_DIGITAL_PLUS	A data/audio compression technology.
DOLBY_TRUE_HD	A data/audio compression technology.
DTS_5_1	A digital sound format.
DTS_96_KHZ_24_BIT	A digital sound format.
DTS_ES	A digital sound format.
DTS_ES_DISCRETE_6_1	A digital sound format.
DTS_ES_MATRIX_6_1	A digital sound format.
DTS_HD	A digital sound format.
NEO_6	A digital sound format.
THX	A high-fidelity sound reproduction standard

Television Information Service Type Code List	
Code List Name	Code List Description
ANTIOPE	Television information retrieval services used in France.
FASTEXT	A feature of televisions used in addition to teletext with red, green, yellow buttons to go to sports, weather etc.
TELETEXT	A television information retrieval services used in parts of Europe.
TELIDON	Television information retrieval services used in Canada.

Trade Item Installation Option Type Code	
Code List Name	Code List Description
CABINET_STAND	Mounted in a cabinet.
CEILING_MOUNT	Mounted on the ceiling.
DESKTOP_TV_STAND	Placed on the top of a desk.
WALL_BRACKET	Attached to a wall.

Tuner Type Code	
Code List Name	Code List Description
ANALOGUE	Encodes television picture and sound information and transmits it as an analogue signal.
ATSC	A digital television format.
DIGITAL	The sending and receiving of moving images and sound by discrete (digital) signals.
EPSC	
HD	Symbol stating TV is high definition ready.
HIGH_DEFINITION	A digital television broadcasting system with higher resolution than traditional television systems.
INTEGRATED	Built into the unit.(Digital).
NOT_APPLICABLE	TV is ready for high definition (HD Ready).
NTSC	An analogue television system.
PAL	Phase Alternating Line is a colour-encoding system used in broadcast television systems.
READY	
SCAM	SCam
UNSPECIFIED	Tuner available but type not specified.



VESA Wall Mount Type Code	The Type of VESA wall mount by type and measurement.
Code List Name	Code List Description
MIS_D_75_75_MM_BY_75_MM	75 millimetres By 75 millimetres
MIS_D_100_100_MM_BY_100_MM	100 millimetres By 100 millimetres
MIS_E_200_MM_BY_100_MM	200 millimetres By 100 millimetres
MIS_F_200_MM_BY_300_MM	200 millimetres By 300 millimetres
MIS_F_300_MM_BY_300_MM	300 millimetres By 300 millimetres
MIS_F_200_MM_BY_200_MM	200 millimetres By 200 millimetres
MIS_F_400_MM_BY_200_MM	400 millimetres By 200 millimetres
MIS_F_400_MM_BY_400_MM	400 millimetres By 400 millimetres
MIS_F_600_MM_BY_200_MM	600 millimetres By 200 millimetres
MIS_F_600_MM_BY_400_MM	600 millimetres By 400 millimetres
MIS_F_800_MMBY_400_MM	800 millimetres By 400 millimetres
MIS_F_280_MM_BY_150_MM	280 millimetres By 150 millimetres

6. Business Document Example

Not Applicable

7. Implementation Considerations

Not Applicable

8. Testing

This section describes the testing criteria for business solutions.

8.1. Pass / Fail Criteria

Not Applicable

8.2. Test Data

Attribute	Value
aspectRatioDescription	WIDESCREEN
aspectRatioDimensionCode	1_33
hDMITestingAgencyCode	3
supportedHDMIFeature	DEEP_COLOR
audioVisualConnectionLocationCode	BACK
audioVisualConnectionQuantity	4
audioVisualConnectionTypeCode	AV
audioVisualConnectionInputDirectionCode	INPUT
availableChannelStationQuantity	60
electronicProgrammingGuideDaysAvailable	30
tunerTypeCode	PAL
displayScreenTypeCode	EL
horizontalViewingAngle	20
verticalViewingAngle	20
availableBrightnessValues	5
combFilterTechnologyTypeCode	DIGITAL
dynamicContrastRatio	4
multiPictureDisplayCapabilityTypeCode	PICTURE_AND_TEXT
screenRefreshRate	3
staticContrastRatio	3



Attribute	Value
tradeltemInstallationOptionTypeCode	WALL_BRACKET
vESAWallMountTypeCode	MIS_D_75_75_MM_BY_75_MM

9. Appendices

Not Applicable

10. Summary of Changes

Change	BSD Version	Associated CR Number
Initial Version	0.0.4	08-000014