Examples of Different Schema Detail Table Formats

Introduction

The Imaging System Semantics and Model V2 will include and update information from MFD Common Semantics and Model and several of the previous Service specifications. Much of the contents of these documents consists of showing hierarchical Schema graphics followed by detailed descriptions of the elements in the diagram. The earlier documents used three different approaches for these descriptions, as indicated below; each approach had its proponents and detractors. The most common format was the single row per entry table used in the MFD Common Semantics and model.

The Imaging System document should use a consistent approach for this explanation of schema elements. Although difficulty in implementing the format should be considered, it is also important that the approach be useful and effective in describing the schema. The three formats are briefly described here to allow a working group consideration and decision.

Multirow per Entry Table

The Model 1.0 Print Schema and several of the Service Specifications used a multi row table like the following. Some modification have been made and more may be necessary in front size and text placement since the table does not fit within the current PWG template page design.

Element Name	**Multivalued**	**Syntax**	**Constraint**	**Group**	**Reference**
	Description (values)				
ConfiguredResources	Yes	List of ResourceSummary		Status	
	The list of summary information for the available resources of the system. *(Contains ResourceSummary)*				
ResourceSummary	No	Complex		Status	[PWG5108.03] § 8.1.5.2, §7.4.2 (See also ResourceSourceUri below)
	The summary information for the available resource. (Contains DateTimeAtLastUpdate, ElementsNaturalLanguage, ResourceCategory, ResourceFormat, ResourceId, ResourceName, ResourceSourceUri, ResourceType)				
ResourceSourceUri	No	URI		Status	

Element Name	Multivalued	Syntax	Constraint	Group	Reference
	Description (values)				
	An identifier for the resource assigned by the creator/supplier of the resource. The value SHOULD be a URN.				
ConfiguredServices	Yes	List of ServiceSummary		Status	
	The list of Service that have been administratively configured to run on this system instance. *(Contains* ServiceSummary*)*				
ServiceSumary	Yes	Complex		Status	
	Information about the services that have been administratively configured to run on this system instance. *(Contains ServiceType, Id, ServiceXriSupported) (Included in ConfiguredServices)*				
ServiceType	No	Keyword	Type 3	Status	
	The keyword for the type of configured service. Values: ServiceTypeWKV, KeywordNsExtensionPattern (e.g., Copy, EmailIn, EmailOut, FaxIn, FaxOut, Print, Resource, Scan, SystemControl, Transform, Vendor) (Included in ServiceSummary)				
SystemConfigChangeNumber	No	Integer		Status	[RFC3805] §6
	Counts configuration changes within the System. A configuration change is defined to be an action that results in a change to any element other than those that reflect status or level, or those that act as counters. (*Maps to Printer MIB's prtGeneralConfigChanges*)				
SystemTotals	No	Complex		Status	[PWG5106.1] §6.1
	The SystemTotals counters aggregates counters from all the services offered by the System.				

Comments:

- Table provides details on elements in diagram, Diagram indicates whether elements are multivalued, so it may not be needed in table
- Constraint appears to reflect whether value set is fixed or can be added to. This may also indicated by KeywordNsExtensionPattern entry in values
- Group field entry would normally be implicit since a table would usually only deal with one high order group. Could be used to indicate subgroup, but typically wasn't.
- First row is in 12 point font; second row was in 11 point
- Table sizes typically will be twice that of alternate table design
- There will still be breaks in long names
- Field widths will often not align within a table
- Most current tables are not in this format and it will be time consuming to convert

Paragraph Format

Early MFD Service specifications gave details of elements in Schema diagrams by assigning a separate paragraph level to each, starting with level 4 and going to lower levels for subgroups. Comments:

- All text is same size as rest of document text.
- Since there are no fields, there is minimal splitting of terms on multiple lines
- Text is freeform, so unusual element attributes can be presented without resorting to notes. On the other hand, format does not encourage consistent presentation.
- Format is wordy and takes perhaps 5 times the space of simple table entry

Format used in MFD Common Semantics and Model (basis for Imaging System Model)

MFD Common Semantics tables discussing Schema diagrams followed format below. Font sizes have been modified somewhat.

Element	Data Type	Description or *Keyword Group*	Reference (all [RFC3805])
MarkerColorant	complex		
MarkerColorantStatus	complex		
Id	int		prtMarkerColorantIndex
Any	various	*MarkerColorantRoleWKV*	
MarkerColorantDescription	complex		
MarkerColorantRole	keyword		prtMarkerColorantRole
MarkerColorantInfo	string	marker colorant vendor-supplied description (in locale specified by SystemNaturalLanguage)	
MarkerColorantName	string	marker colorant standard name - see marker colorant vendor-supplied description (in locale specified by SystemNaturalLanguage)	prtMarkerColorantValue
MarkerColorantTonality	counter	marker colorant distinct levels of tonality (levels of tonal difference available for rendering)	prtMarkerColorantTonality
Any	various	Extension point for MarkerColorantDescription	
Any	various	Extension point for MarkerColorant	

Comments:

- A “narrow” font at 10 Pt is used to minimize entry line breaks; although less severe than in MFD Model, some may still find this hard to read.
- Notes need to be used for exceptions or when reasonable description does not fit in table.
- Indentation of Element used to show subgroup structure for complex elements.

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