BICEPS Features

# General

GEN-1 & GEN-4 are broken references, GEN-2 and GEN-3 are satisfied by Glue, GEN-4 should be mandatory as extensions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Index | Feature |  | Reference | Text |
| GEN-1 | pm:ComponentActivation state |  | Clause 5.3.4 | A pm:MdDescription MAY possess zero or more pm:MdsDescriptor objects. The pm:MdsDescriptor  object is depicted in Figure 3 as MDS. |
| GEN-2 | Authorization capabilities |  | R0083 | A BICEPS BINDING SHOULD provide means to enable authorization capabilities between PARTICIPANTs. |
| GEN-3 | Quality-of-Service metrics |  | R0092 | A BICEPS BINDING SHOULD provide means to define Quality-of-Service metrics for  communication between two PARTICIPANTs. |
| GEN-4 | Wrapped extension elements |  | ext:Extension | Optional element definition for extensions. |

# Service Provider

Optional requirements for the service provider side excluding contexts and external control.

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Feature | Reference | Text |
| ~~PROV-1~~ | Same handle on same object | R0099 | If a SERVICE PROVIDER removes and reinserts the same CONTAINMENT TREE ENTRY of an element in the CONTAINMENT TREE beyond one MDIB sequence, it SHOULD use the same HANDLE for that CONTAINMENT TREE ENTRY. |
| PROV-2 | Only standardized CODED VALUES used | R0008 | A SERVICE PROVIDER SHOULD use standardized values for CODE and CODING SYSTEM in order to specialize a CONTAINMENT TREE ENTRY if available. |
| PROV-3 | ISO/IEEE 11073-10101 nomenclature | R0128 | A SERVICE PROVIDER SHOULD use the ISO/IEEE 11073-10101 and IEEE 11073-10101a-  2015 nomenclature whenever there is an appropriate CODE available. |
| PROV-4 | Provide remote capabilities | R0011 | A SERVICE PROVIDER SHOULD describe all offered remote invocation capabilities using  the pm:ScoDescriptor structure in pm:MdsDescriptor/pm:Sco. |
| ~~PROV-5~~ | Reject remote control if reports are not subscribed | R0057 | A SERVICE PROVIDER SHOULD reject an incoming request-response SERVICE  OPERATION call on the SET SERVICE if the SERVICE CONSUMER has not subscribed to  msg:OperationInvokedReport MESSAGEs in advance. |
| ~~PROV-6~~ | Announce absence, i.e., SERVICE PROVIDER does not send MESSAGES for a certain time | R0074 | A SERVICE PROVIDER SHOULD announce its upcoming absence if it is switching to a  mode where it is not ready to exchange MESSAGEs with a SERVICE CONSUMER temporarily.  *[will be resolved in Base PKP]* |
| PROV-7 | Non-functional requirements | R0082 | An MDIB SHOULD include nonfunctional requirements in its descriptive part. |
| PROV-8 | Include parent MDS descriptor in result | msg:GetMdDescriptionResponse/ msg:MdDescription | *[important if multiple MDSs per MDIB exist; but: multiple MDSs per MDIB should be forbidden and realized by multiple device instead]* |
| ~~PROV-9~~ | Include METRIC retrievability as extension | msg:Retrievability | *[was made mandatory in Glue]* |
| PROV-10 | Increase of instance identifier | pm:MdibVersionGroup/ pm:InstanceId | *[if demanded; no significant effect on interoperability]* |
| PROV-11 | Slot usage | pm:AlertSignalState/ pm:Slot | *[if demanded; no significant effect on interoperability]* |
| PROV-12 | Body site states | pm:AbstractMetricState/ pm:BodySite | *[if demanded; no significant effect on interoperability]* |

# Service Consumer

CONS-1 is broken; R0115 isn’t optional in the released document.

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Feature | Reference | Text |
| CONS-1 | Interpretation of pm:AlertSignalState/ @Presence | R0115 | While pm:AlertSignalState/@ActivationState is “Off,” a SERVICE CONSUMER SHALL  NOT interpret pm:AlertSignalState/@Presence. |

# Remote Control

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Feature | Reference | Text |
| SCO-1 | Provide remote capabilities | R0011 | *[Same as PROV-4 – if remote control is supported, R0011 should be mandatory]* |
| SCO-2 | Context state create and update. | msg:SetContextState/ msg:ProposedContextState | ProposedContextState comprises the context states that have to be inserted or updated:  — If ProposedContextState/@Handle is equal ProposedContextState/@DescriptorHandle, the proposed  object SHOULD be created as a new context state.  — If ProposedContextState/@Handle is not equal ProposedContextState/@DescriptorHandle, the  proposed object SHOULD be modified.  *[if demanded; significant effect on interoperability]* |

# Context Processing

Context processing pertains to effective utilization of context information like workflow (e.g., orders) info, patient demographics and locations. A general concept should be described how to cope with contexts in terms of SDPi, i.e. device coupling mechanisms should be described informally in TF-1 and formally in TF-2 (as transaction?).

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Feature | Reference | Text |
| CTXT-1 | Patient context | R0014 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining to which patient the POC MEDICAL DEVICE is currently connected to, this capability SHOULD be expressed in the MDS context with a pm:PatientContextDescriptor. |
| CTXT-2 | Location context | R0015 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining in which location the POC MEDICAL DEVICE is currently operated, this capability SHOULD be expressed in the MDS context with a pm:LocationContextDescriptor. |
| CTXT-3 | Workflow context | R0016 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining in which clinical workflow the POC MEDICAL DEVICE is currently participating, this capability SHOULD be expressed in the MDS context with a pm:WorkflowContextDescriptor. |
| CTXT-4 | Operator context | R0017 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining who is currently operating the POC MEDICAL DEVICE, this capability SHOULD be expressed in the MDS context with a pm:OperatorContextDescriptor. |
| CTXT-5 | Means context | R0018 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining which virtual or physical means the POC MEDICAL DEVICE is using, this capability SHOULD be expressed in the MDS context with a pm:MeansContextDescriptor. |
| CTXT-6 | Ensemble context | R0019 | If a SERVICE PROVIDER or POC MEDICAL DEVICE is, e.g., capable of determining in which logical group the POC MEDICAL DEVICE is currently operated, this capability SHOULD be expressed in the MDS context with a pm:EnsembleContextDescriptor. |
| CTXT-7 | Context state create and update. | msg:SetContextState/ msg:ProposedContextState | *[See SCO-2]* |
| CTXT-8 | Express quality of measurements regarding patient context related information | R5012 | If the POC MEDICAL DEVICE itself has patient-related observations (e.g., weight, height) as in- or output, these SHOULD be modelled as METRICs.  *[is validated patient context data good enough from the quality perspective or not?]* |