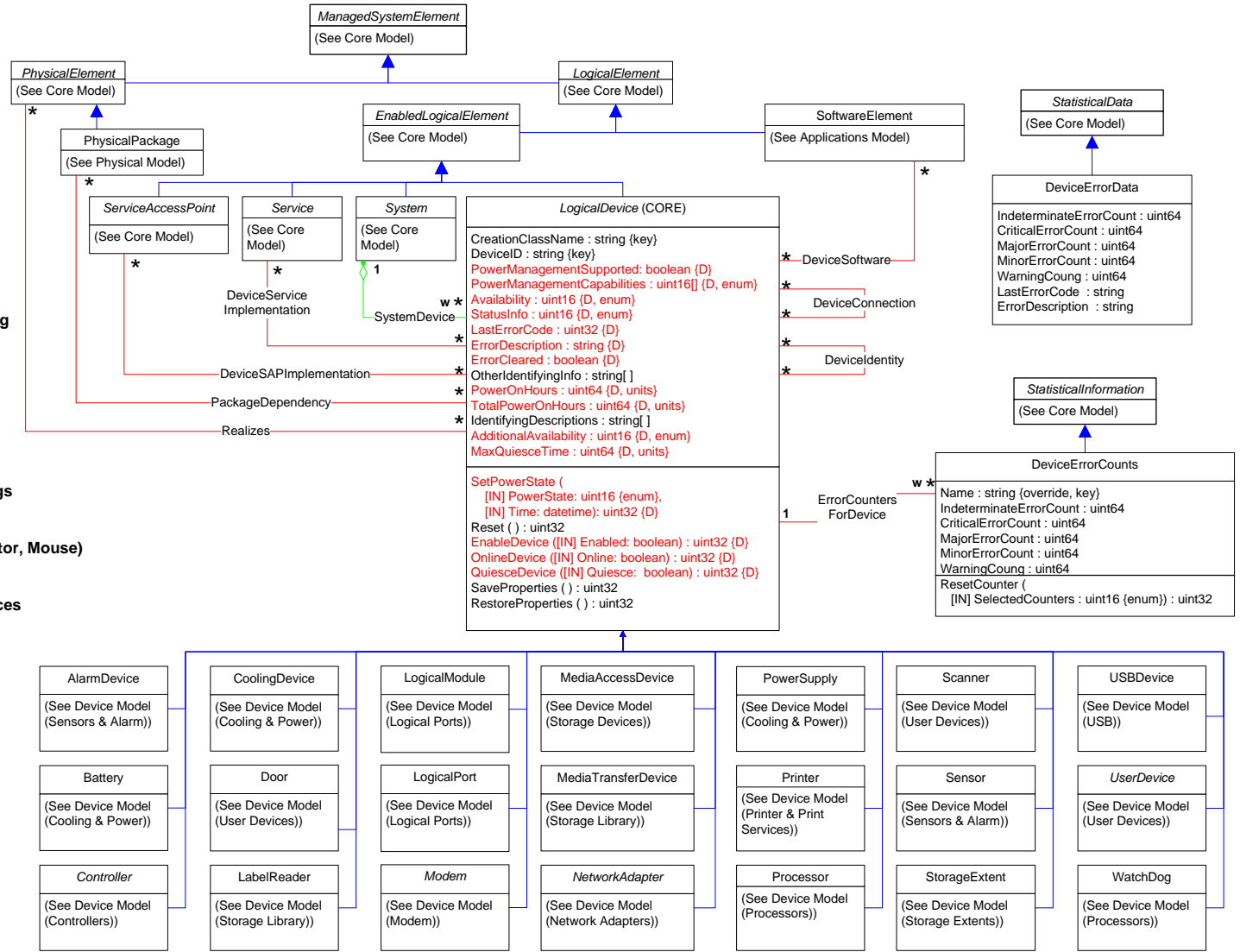











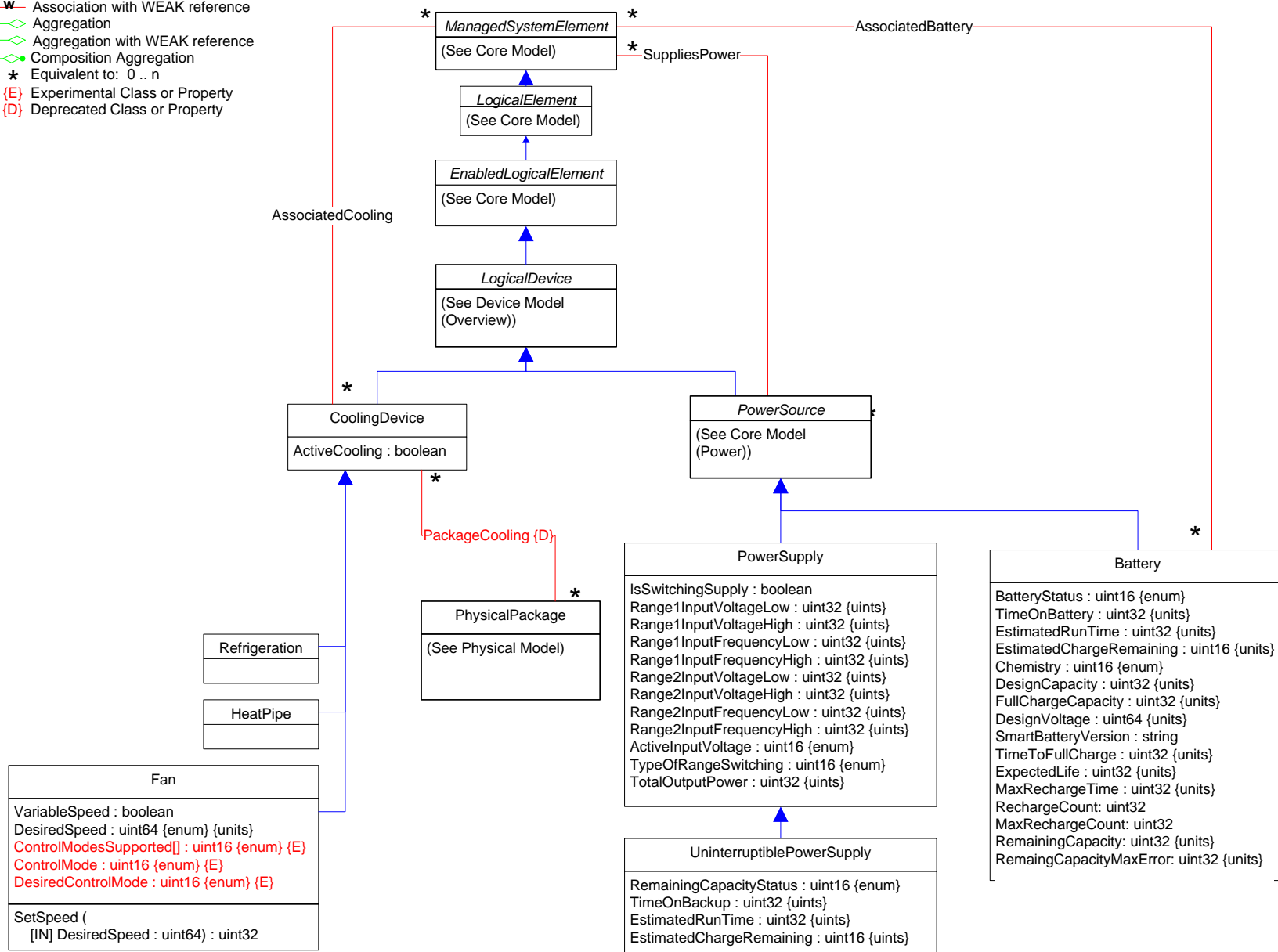
Title : Device Specification V2.16
 Filename : CIM_Device.vsd
 Author : DMTF Core Schema WG
 Date : 02 August 2007

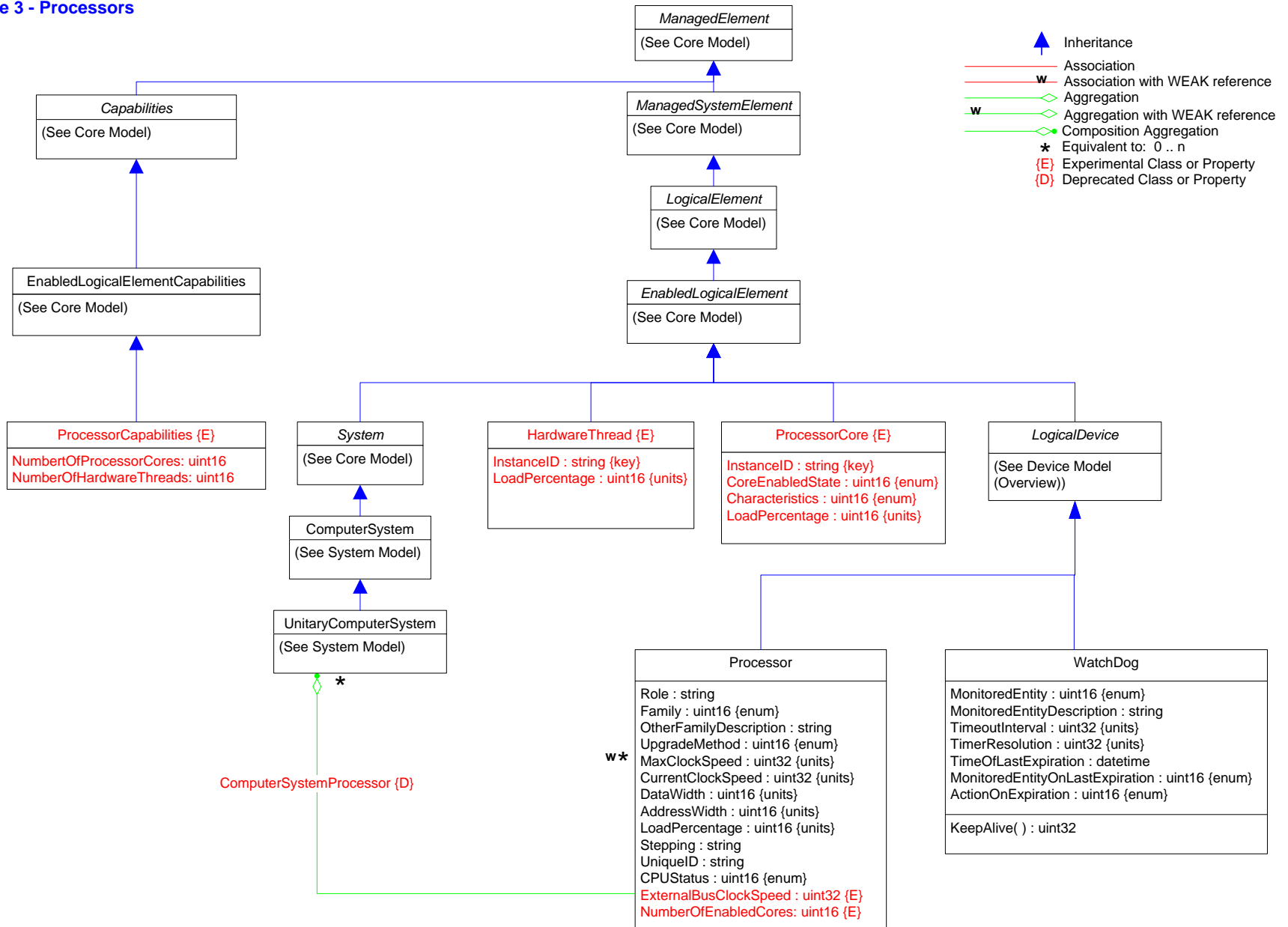
Page 1 - Overview
 Page 2 - Cooling & Power
 Page 3 - Processors
 Page 4 - Controllers
 Page 5 - Video Controllers
 Page 6 - PCI Controllers
 Page 7 - Logical Ports
 Page 8 - Ports 2
 Page 9 - Logical Port Group
 Page 10 - Protocol Controllers
 Page 11 - Network Adapters
 Page 12 - Fibre Channel
 Page 13 - Fibre Channel Services & Zoning
 Page 14 - InfiniBand
 Page 15 - Storage Devices
 Page 16 - StorageMultipath
 Page 17 - StorageExtents
 Page 18 - StorageExtents 2
 Page 19 - StorageNameBinding
 Page 20 - SCC Extent Model
 Page 21 - Storage Services
 Page 22 - Storage Capabilities and Settings
 Page 23 - StorageStatistics
 Page 24 - Storage Library
 Page 25 - User Devices (Keyboards, Monitor, Mouse)
 Page 26 - Memory
 Page 27 - Modems
 Page 28 - Printers, Print Jobs, Print Services
 Page 29 - Printer (2)
 Page 30 - Sensors & Alarm
 Page 31 - USB & Disk Group
 Page 32 - Device Sharing
 Page 33 - LED
 Page 33 - Dependency (1) [A - Ba]
 Page 34 - Dependency (2) [D - Pi]
 Page 35 - Dependency (3) [Po - S]
 Page 36 - Association Hierarchy
 Page 37 - Aggregation Hierarchy
 Page 38 - Association Deprecation
 Page 39 - Aggregation Deprecation

- ▲ Inheritance
- Association
- w Association with WEAK reference
- ◇ Aggregation
- w Aggregation with WEAK reference
- ◇ Composition Aggregation
- * Equivalent to: 0..n
- (E) Experimental Class or Property
- (D) Deprecated Class or Property



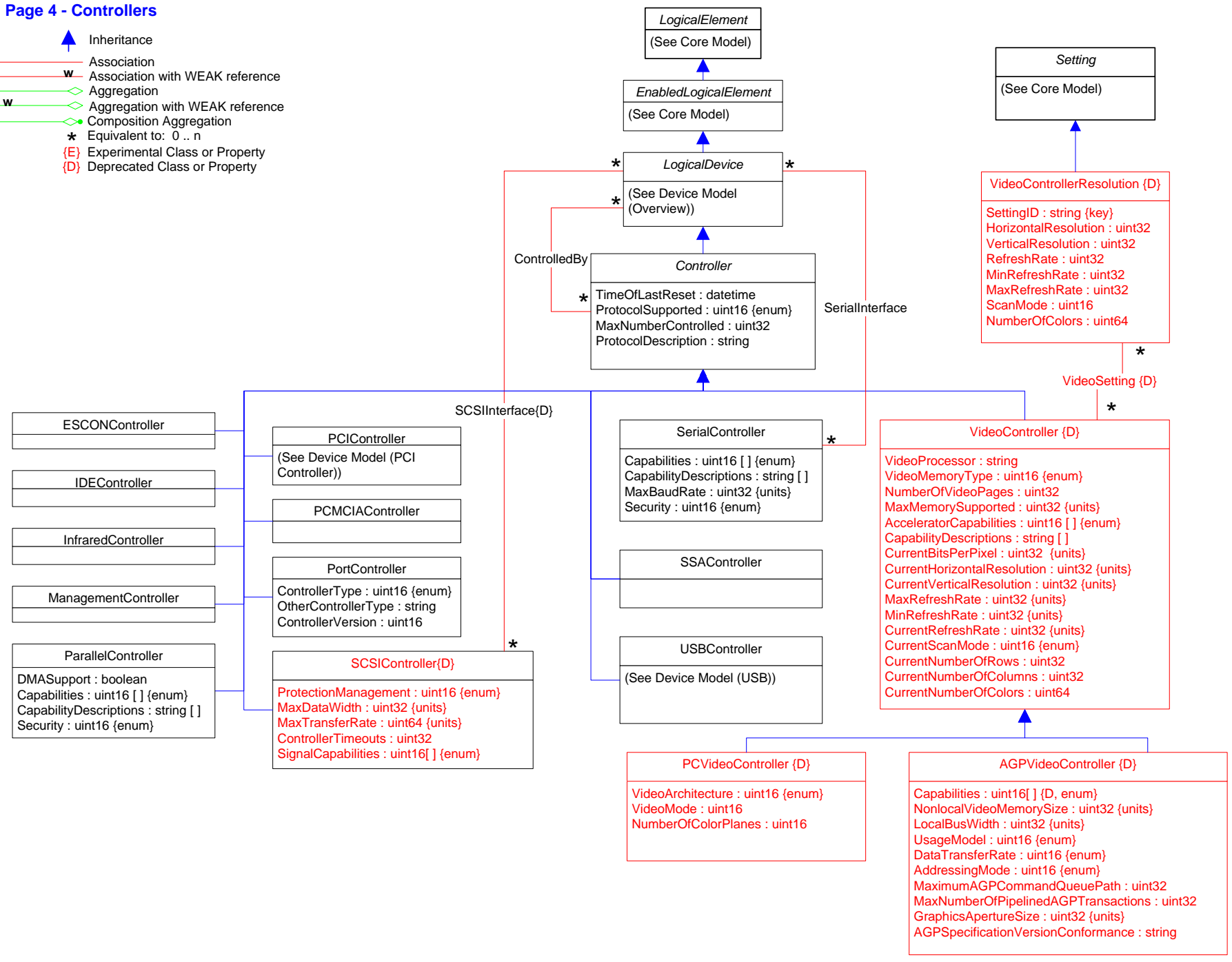
-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  Experimental Class or Property
-  Deprecated Class or Property



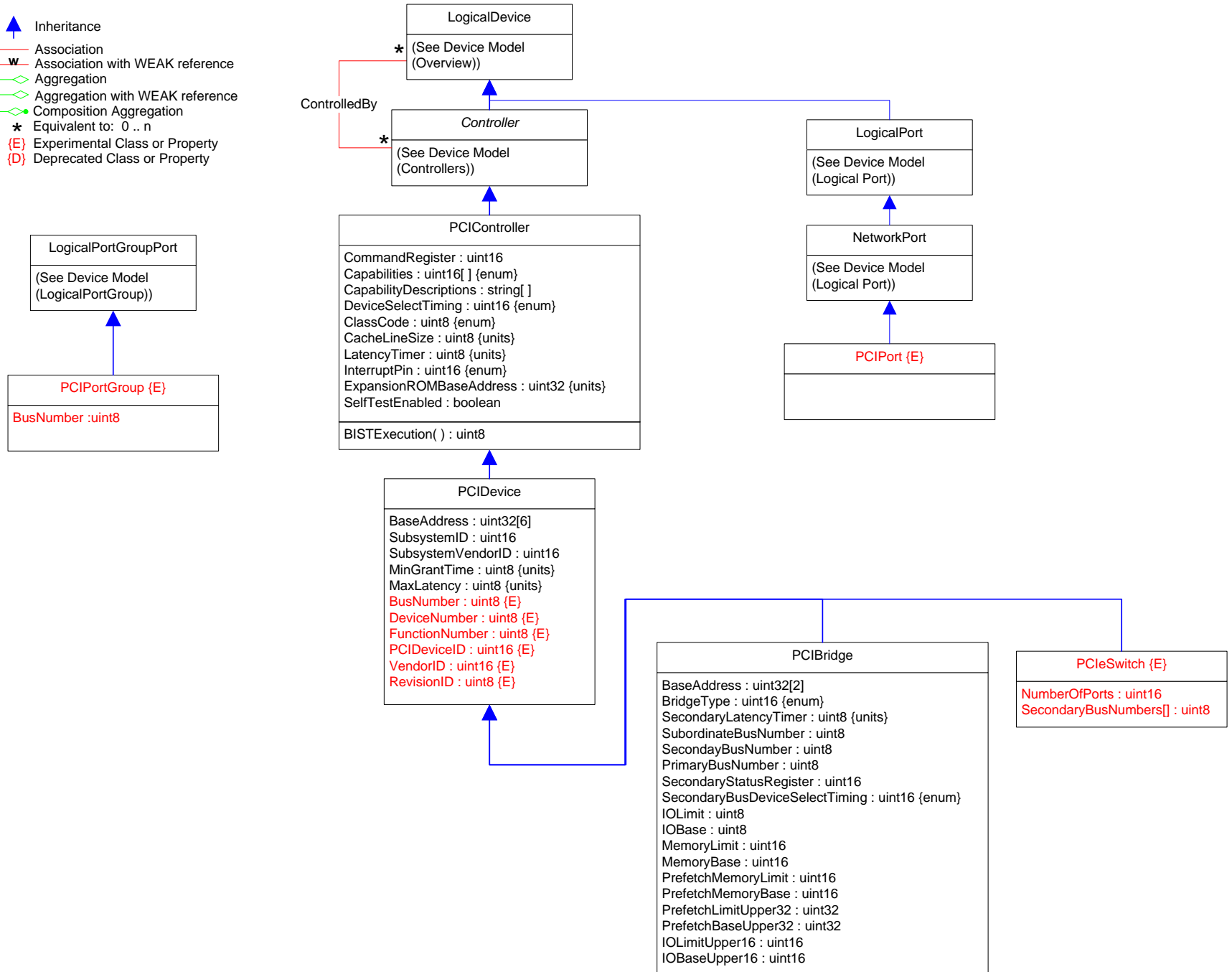
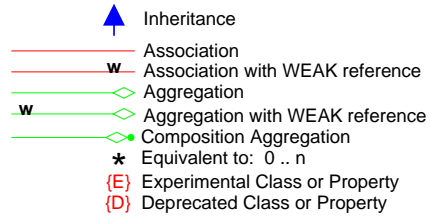


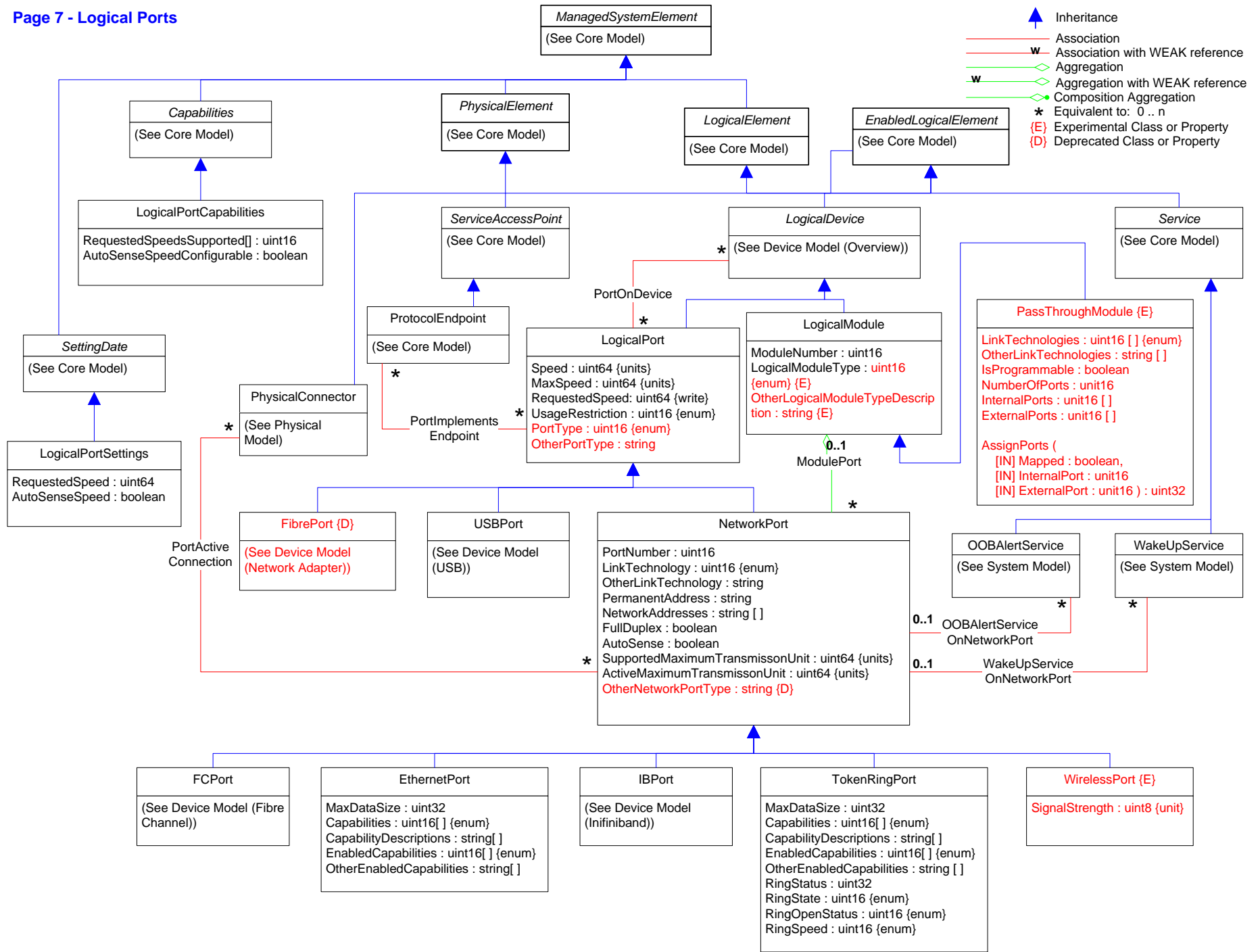
Page 4 - Controllers

- Inheritance
- Association
- Association with WEAK reference
- Aggregation
- Aggregation with WEAK reference
- Composition Aggregation
- Equivalent to: 0..n
- Experimental Class or Property
- Deprecated Class or Property












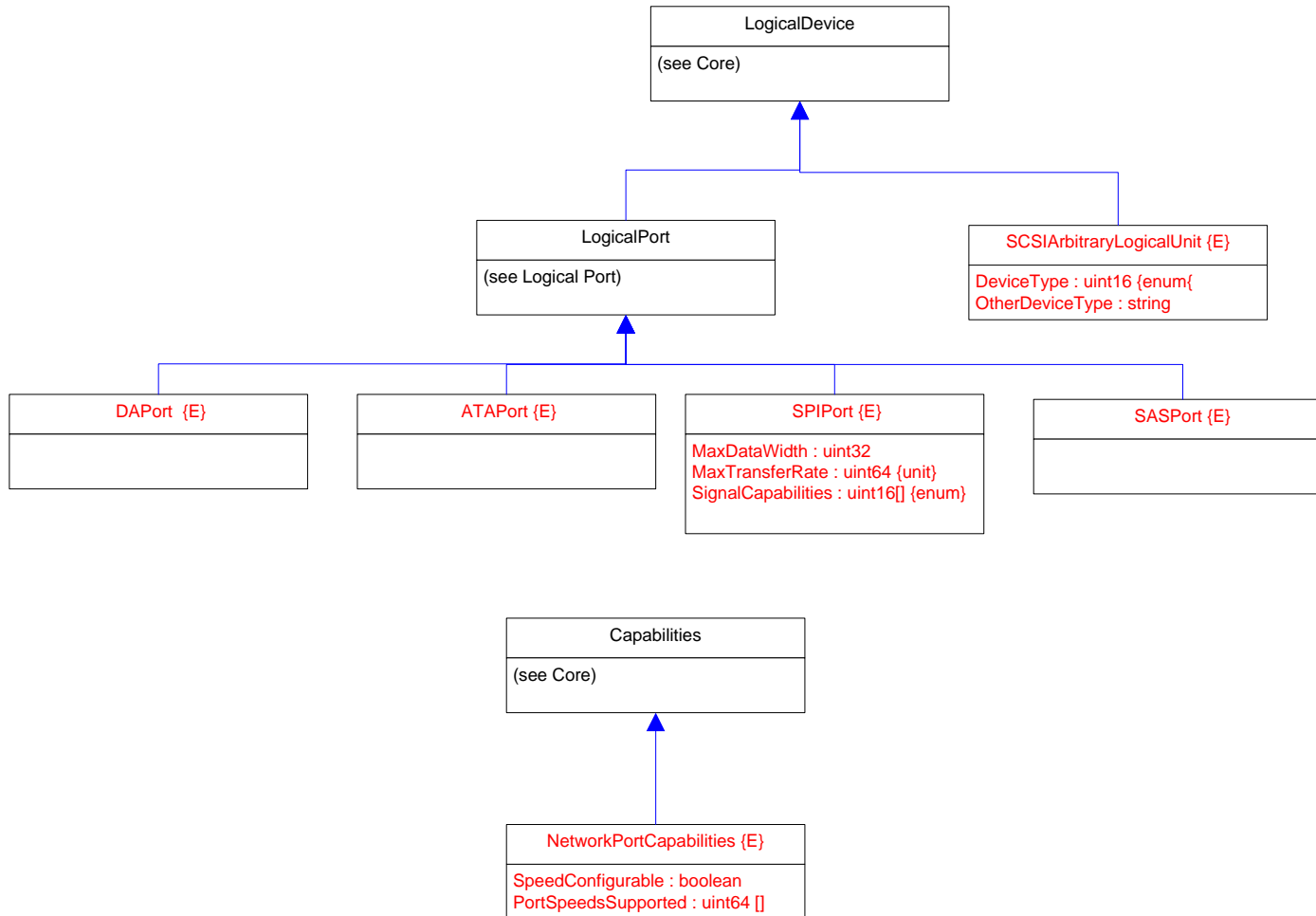
Page 6 - PCI Controllers














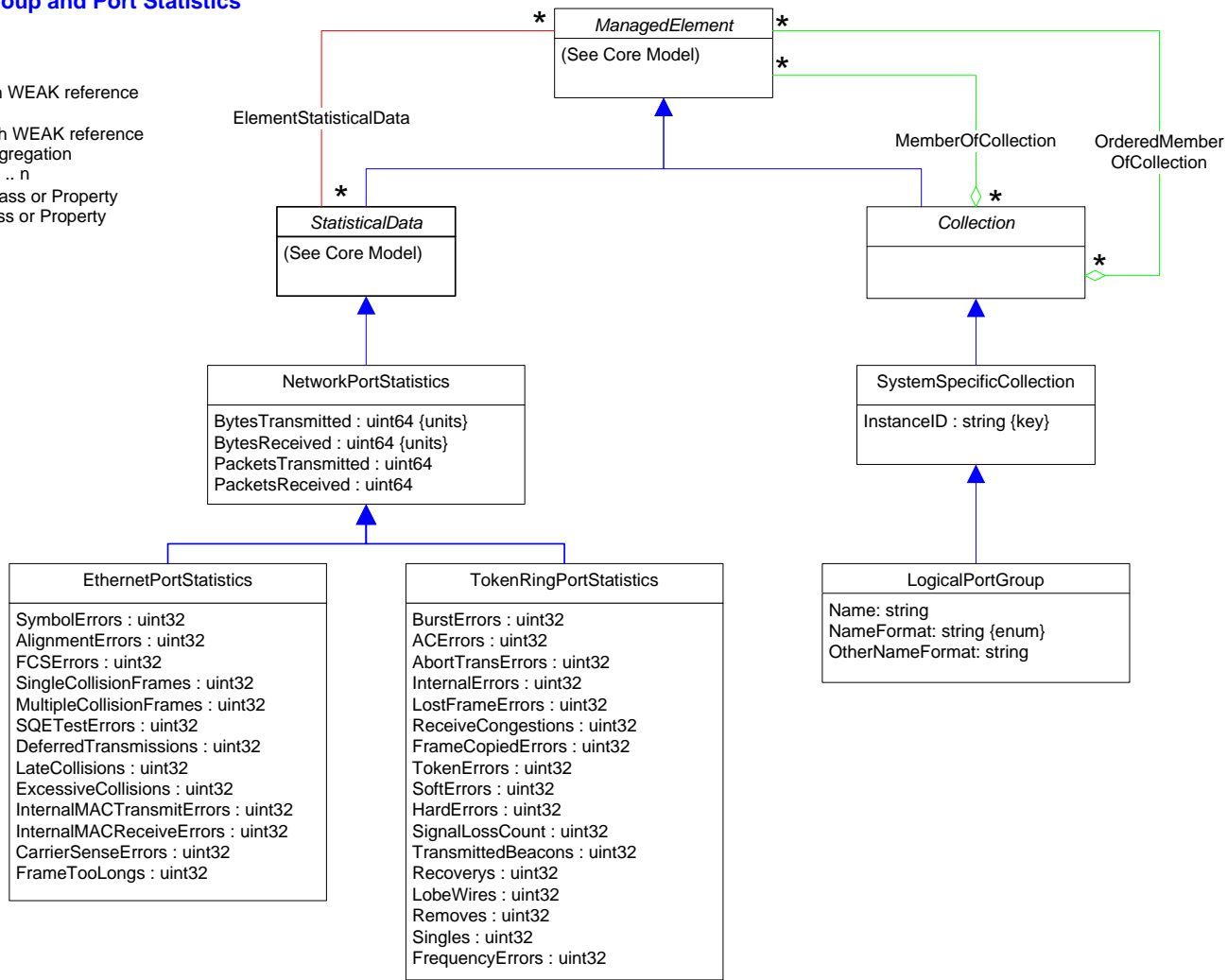
Page 8 – Ports 2










-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
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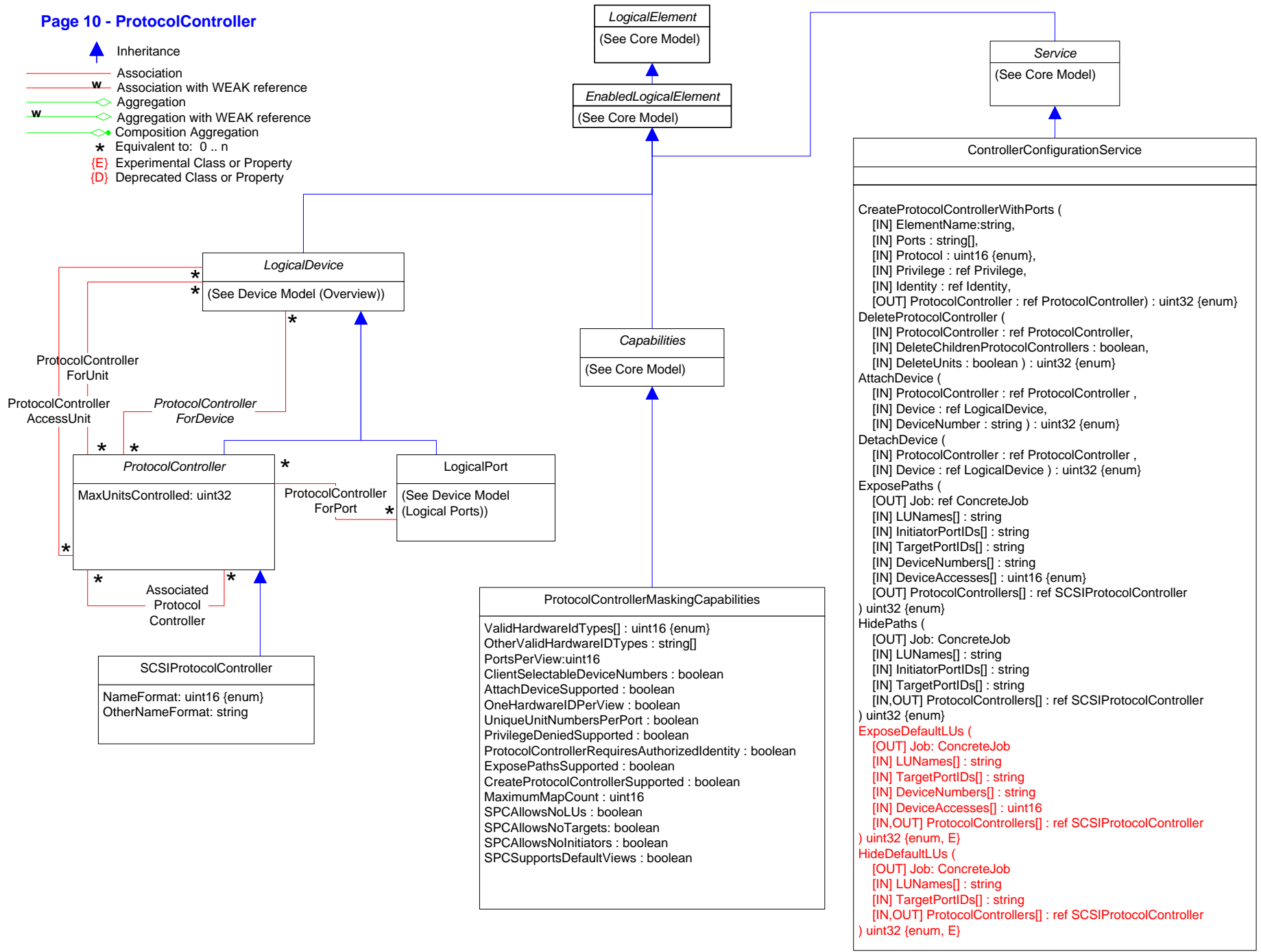


Page 9 - Logical Port Group and Port Statistics

-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  {E} Experimental Class or Property
-  {D} Deprecated Class or Property












-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  (E) Experimental Class or Property
-  (D) Deprecated Class or Property



```

ControllerConfigurationService
CreateProtocolControllerWithPorts (
    [IN] ElementName:string,
    [IN] Ports : string[],
    [IN] Protocol : uint16 {enum},
    [IN] Privilege : ref Privilege,
    [IN] Identity : ref Identity,
    [OUT] ProtocolController : ref ProtocolController ) : uint32 {enum}
DeleteProtocolController (
    [IN] ProtocolController : ref ProtocolController,
    [IN] DeleteChildrenProtocolControllers : boolean,
    [IN] DeleteUnits : boolean ) : uint32 {enum}
AttachDevice (
    [IN] ProtocolController : ref ProtocolController ,
    [IN] Device : ref LogicalDevice,
    [IN] DeviceNumber : string ) : uint32 {enum}
DetachDevice (
    [IN] ProtocolController : ref ProtocolController ,
    [IN] Device : ref LogicalDevice ) : uint32 {enum}
ExposePaths (
    [OUT] Job: ref ConcreteJob
    [IN] LUNames[] : string
    [IN] InitiatorPortIDs[] : string
    [IN] TargetPortIDs[] : string
    [IN] DeviceNumbers[] : string
    [IN] DeviceAccesses[] : uint16 {enum}
    [OUT] ProtocolControllers[] : ref SCSIProtocolController ) : uint32 {enum}
HidePaths (
    [OUT] Job: ConcreteJob
    [IN] LUNames[] : string
    [IN] InitiatorPortIDs[] : string
    [IN] TargetPortIDs[] : string
    [IN,OUT] ProtocolControllers[] : ref SCSIProtocolController ) : uint32 {enum}
ExposeDefaultLUs (
    [OUT] Job: ConcreteJob
    [IN] LUNames[] : string
    [IN] TargetPortIDs[] : string
    [IN] DeviceNumbers[] : string
    [IN] DeviceAccesses[] : uint16
    [IN,OUT] ProtocolControllers[] : ref SCSIProtocolController ) : uint32 {enum, E}
HideDefaultLUs (
    [OUT] Job: ConcreteJob
    [IN] LUNames[] : string
    [IN] TargetPortIDs[] : string
    [IN,OUT] ProtocolControllers[] : ref SCSIProtocolController ) : uint32 {enum, E}
    
```

-  Inheritance
-  Association
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-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0..n
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-  (D) Deprecated Class or Property

FCAdapterEventCounters (D)

ABTSFramesReceived : uint64
 ABTSFramesSent : uint64
 FBSYsReceived : uint64
 PBSYsReceived : uint64
 PBSYsSent : uint64
 FRJTsReceived : uint64
 PRJTsReceived : uint64
 PRJTsSent : uint64
 PRLIsRejected : uint64
 PRLsRejected : uint64
 ABTSFramesRejected : uint64

ResetCounter ([IN] SelectedCounter : uint16) : uint32

FibrePortEventCounters (D)

PLOGIsReceived : uint64
 PLOGIsSent : uint64
 EOFAbortsReceived : uint64
 EOFAbortsTransmitted : uint64
 PLOGOsReceived : uint64
 PLOGOsSent : uint64
 PLOGOsRejected : uint64
 PLOGOsRejected : uint64

ResetCounter ([IN] SelectedCounter : uint16) : uint32

DeviceStatistical Information
 (See Core Model)

LogicalPort
 (See Device Model (Logical Port))

PhysicalConnector
 (See Physical Model)

EnabledLogicalElement
 (See Core Model)

LogicalDevice
 (See Device Model (Overview))

Service
 (See Core Model)

OOBAlertService
 (See System Model)

WakeUpService
 (See System Model)

FibrePort (D)

AddressIdentifier : uint32
 SupportedPortTypes : uint16[]
 PortTypeVersions : string[]
 EnabledPortTypes : uint16[]
 EnabledVersions : string[]
 CurrentPortType : uint16
 CurrentVersion : string
 AliasAddresses : uint32[]
 LossOfSignalCounter : uint64
 LossOfSyncCounter : uint64
 CRCErrors : uint64
 InvalidTransmissionWords : uint64
 FramesTooShort : uint64
 FramesTooLong : uint64
 ElasticityBufferUnderruns : uint64
 ElasticityBufferOverruns : uint64
 ReceiverTransmitterTimeout : uint64
 BypassedState : uint16
 ConnectedMedia : uint16

FibreChannelAdapter (D)

MaxFrameSize : uint64
 SupportedCOS : uint16[]
 FC4TypesSupported : uint16[]
 FC4VendorUniqueTypes : uint16[]
 CurrentFC4Types : uint16[]
 CurrentFC4VendorTypes : uint16[]
 Capabilities : uint16[]
 CapabilityDescriptions : string[]
 ReceiveBufferErrors : uint64
 ReceiveEndErrors : uint64
 ResourceAllocationTimeout : uint64
 ErrorDetectTimeout : uint64
 Class1SequencesSent : uint64
 Class2SequencesSent : uint64
 Class3SequencesSent : uint64
 Class4SequencesSent : uint64
 Class2OctetsReceived : uint64
 Class2OctetsTransmitted : uint64
 Class2FramesReceived : uint64
 Class2FramesTransmitted : uint64
 Class2DiscardFrames : uint64
 Class3OctetsReceived : uint64
 Class3OctetsTransmitted : uint64
 Class3FramesReceived : uint64
 Class3FramesTransmitted : uint64
 Class3DiscardFrames : uint64
 ParityErrors : uint64
 FrameTimeouts : uint64
 BufferCreditErrors : uint64
 EndCreditErrors : uint64
 OutOfOrderFramesReceived : uint64

NetworkAdapter (D)

PermanentAddress : string
 NetworkAddresses : string[]
 Speed : uint64
 MaxSpeed : uint64
 FullDuplex : boolean
 AutoSense : boolean
 OctetsTransmitted : uint64
 OctetsReceived : uint64

EthernetAdapter (D)

MaxDataSize : uint32
 Capabilities : uint16[] (enum)
 CapabilityDescriptions : string[]
 EnabledCapabilities : uint16[] (enum)
 SymbolErrors : uint32
 TotalPacketsTransmitted : uint64
 TotalPacketsReceived : uint64
 AlignmentErrors : uint32
 FCSErrors : uint32
 SingleCollisionFrames : uint32
 MultipleCollisionFrames : uint32
 SQETestErrors : uint32
 DeferredTransmissions : uint32
 LateCollisions : uint32
 ExcessiveCollisions : uint32
 InternalMACTransmitErrors : uint32
 InternalMACReceiveErrors : uint32
 CarrierSenseErrors : uint32
 FrameTooLongs : uint32

TokenRingAdapter (D)

MaxDataSize : uint32
 Capabilities : uint16[] (enum)
 CapabilityDescriptions : string[]
 EnabledCapabilities : uint16[] (enum)
 RingStatus : uint32
 RingState : uint16
 RingOpenStatus : uint16
 RingSpeed : uint16
 BurstErrors : uint32
 ACErrors : uint32
 AbortTransErrors : uint32
 InternalErrors : uint32
 LostFrameErrors : uint32
 ReceiveCongestions : uint32
 FrameCopiedErrors : uint32
 TokenErrors : uint32
 SoftErrors : uint32
 HardErrors : uint32
 SignalLossCount : uint32
 TransmittedBeacons : uint32
 Recoverys : uint32
 LobeWires : uint32
 Removes : uint32
 Singles : uint32
 FrequencyErrors : uint32

ExtraCapacityGroup
 (See Core Model)

0..1

AdapterActive Connection (D)

FibrePortOn FCAAdapter (D)

0..1

0..1

OOBAlertServiceOn

0..1

Network VirtualAdapter (D)

NetworkAdapter RedundancyComponent (D)

WakeUpServiceOn

NetworkAdapter (D)

FibrePort ActiveLogin (D)

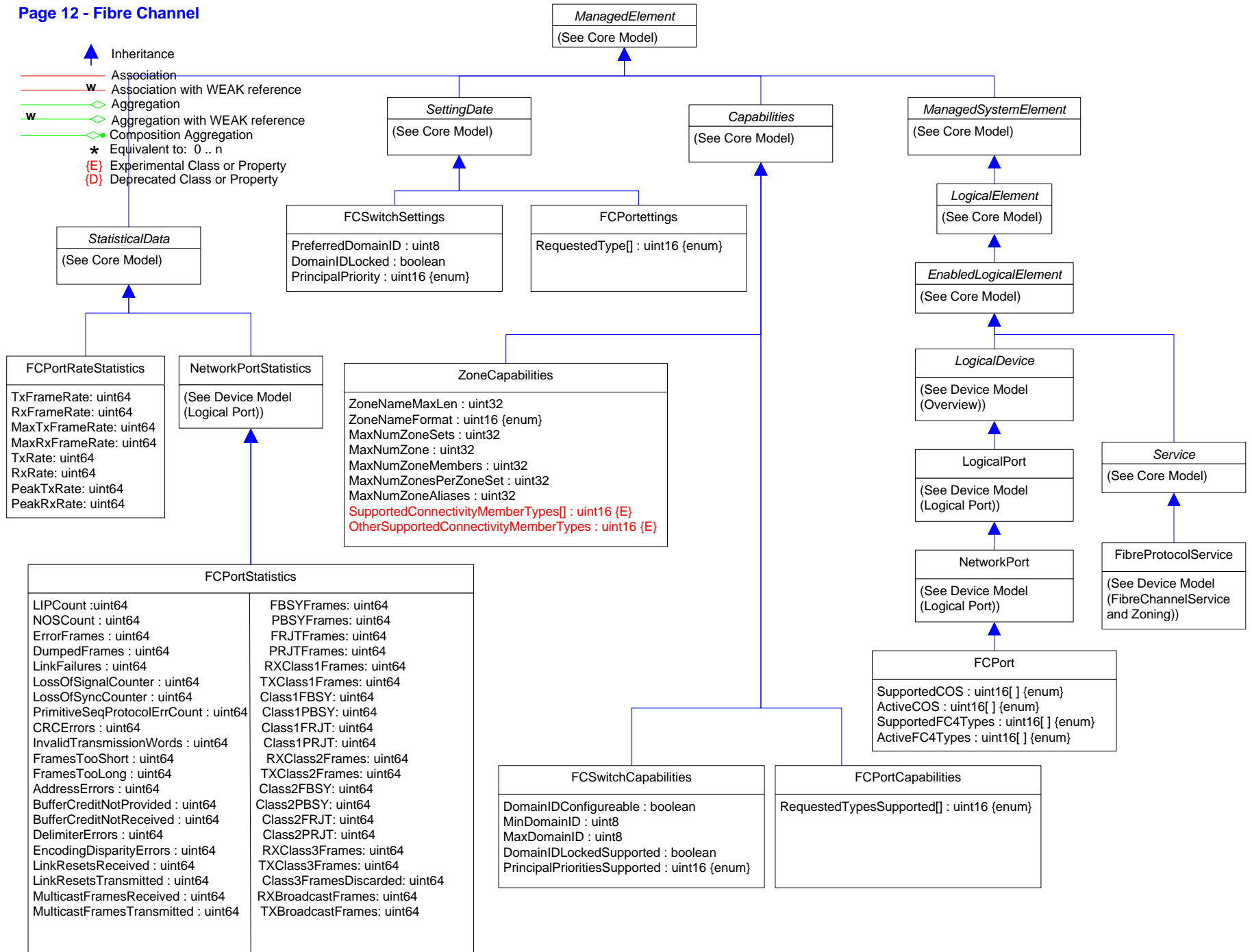
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*

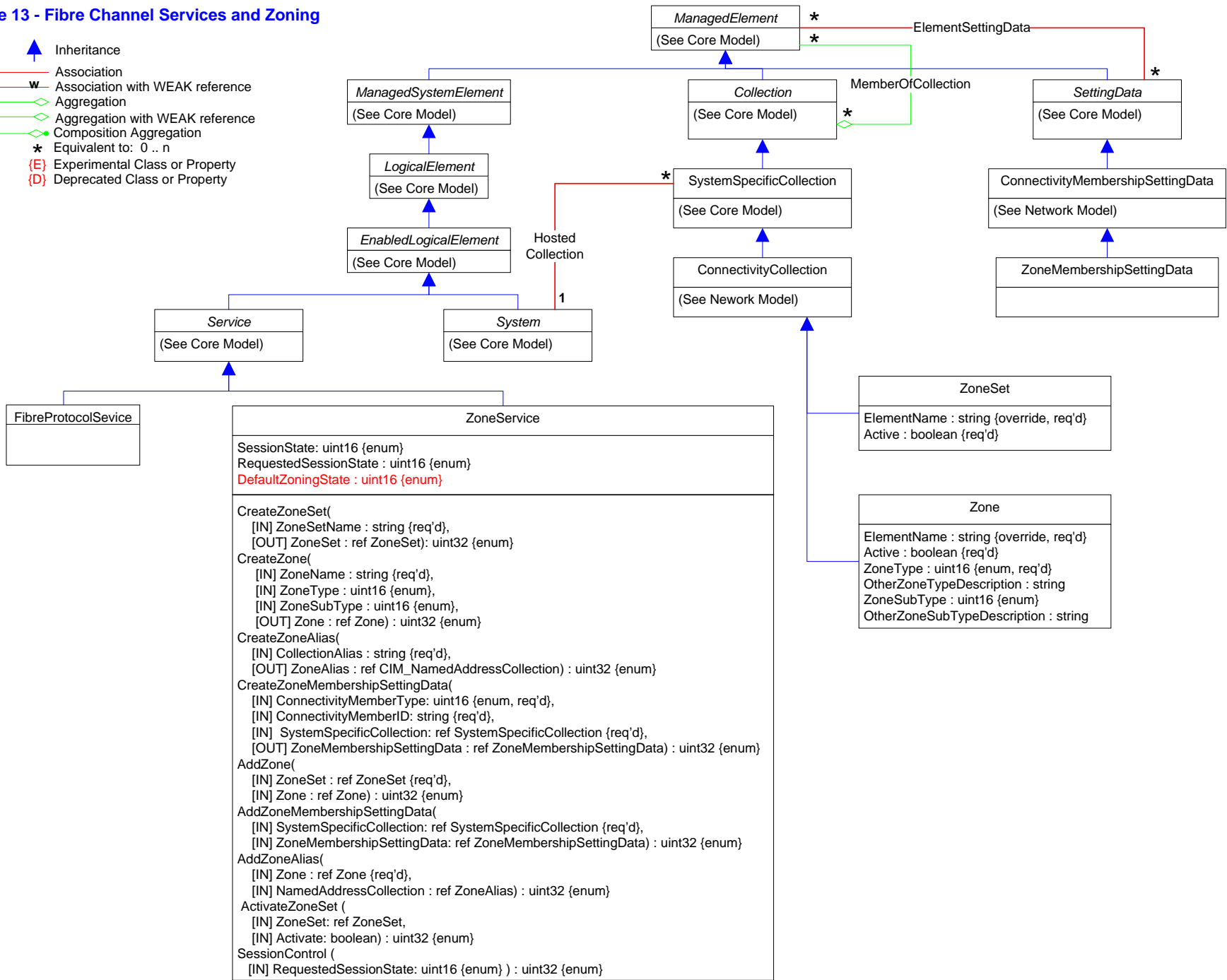
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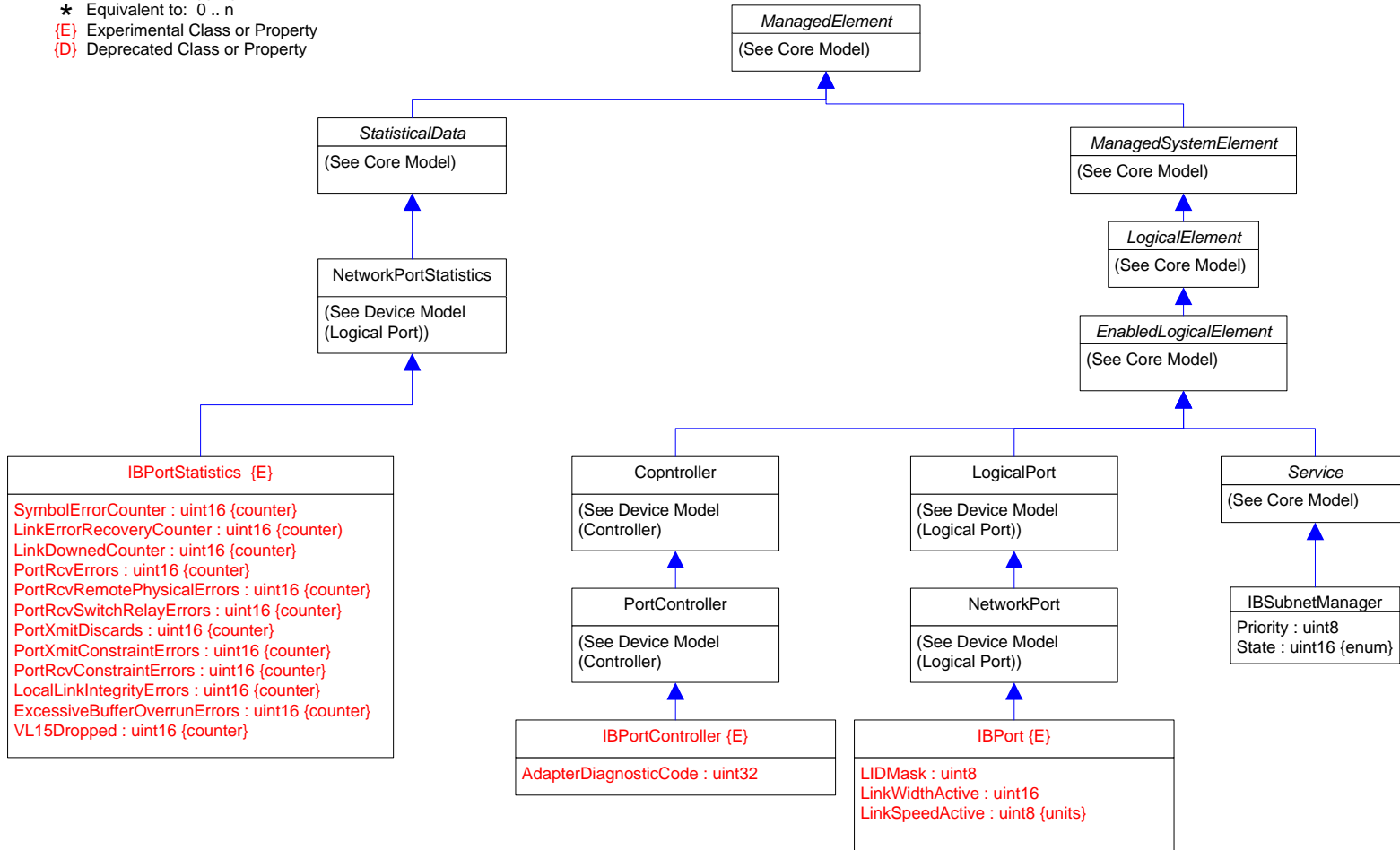


-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  Experimental Class or Property
-  Deprecated Class or Property



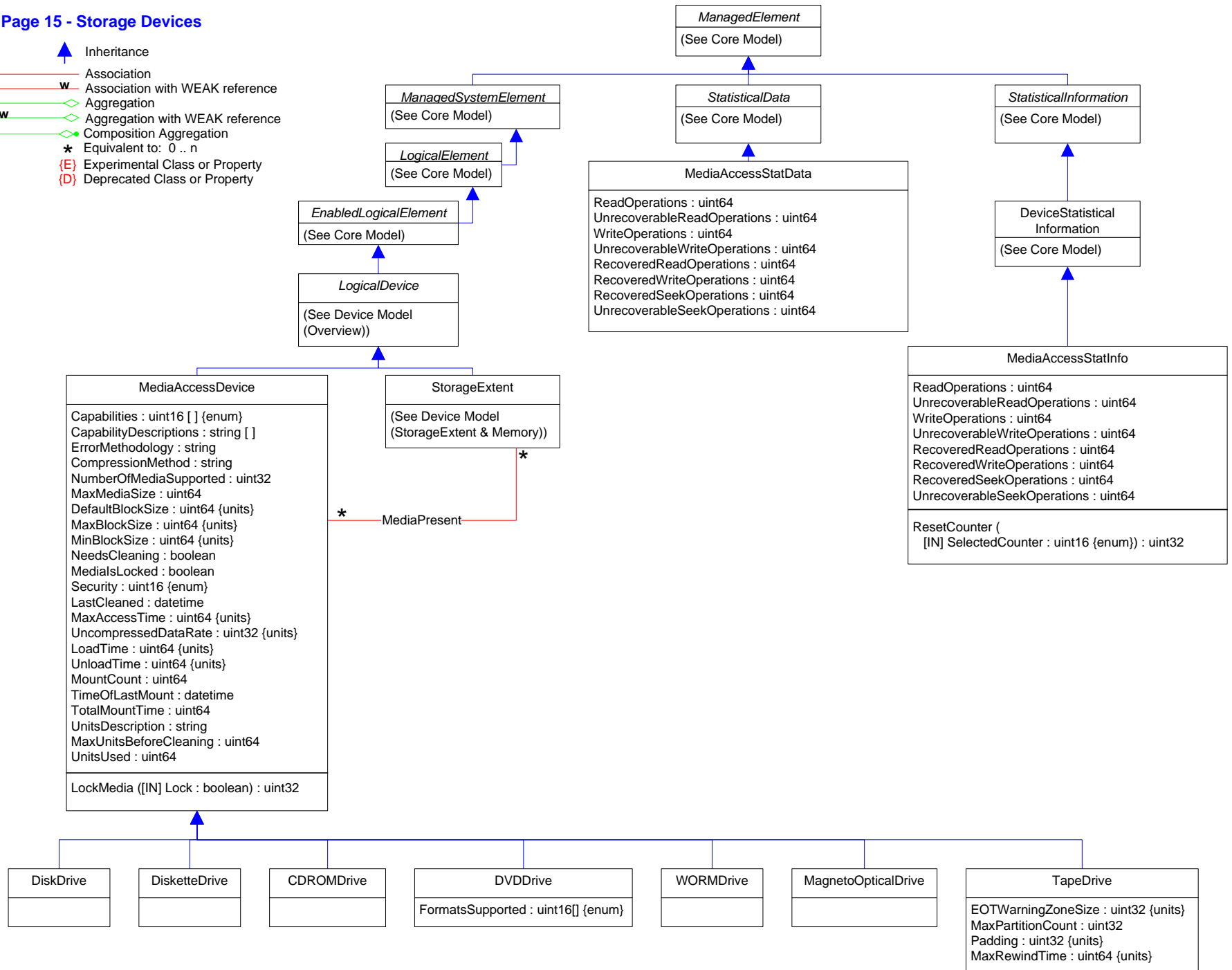
Page 14 - Infiniband

-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  (E) Experimental Class or Property
-  (D) Deprecated Class or Property



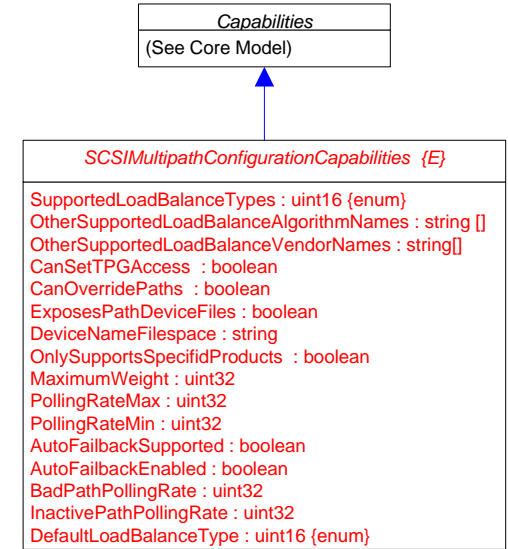
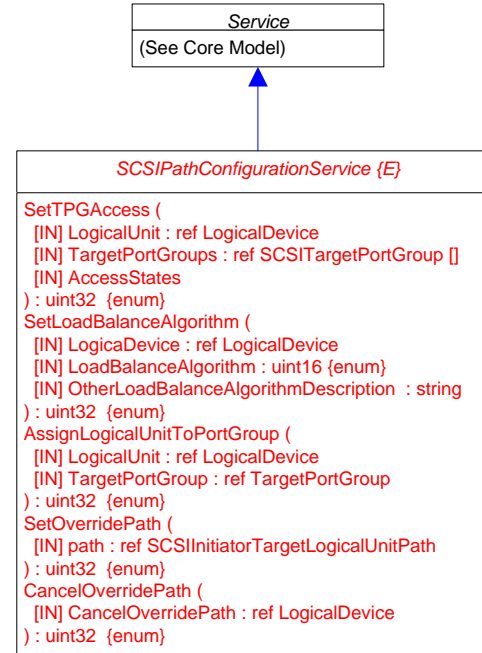
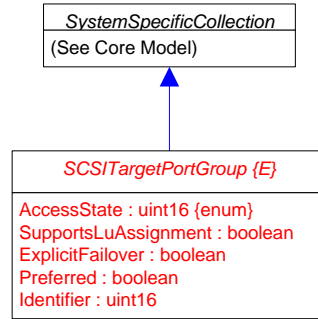
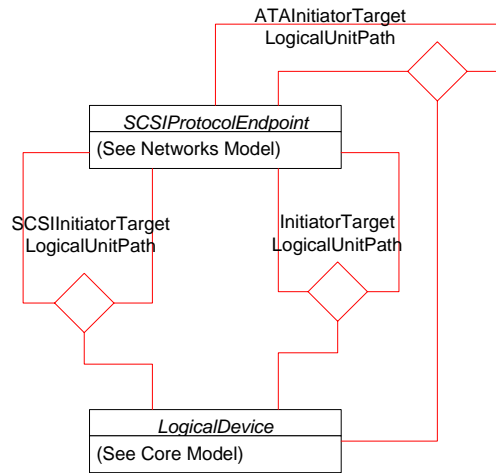
Page 15 - Storage Devices

- ▲ Inheritance
- Association
- w Association with WEAK reference
- ◇ Aggregation
- w◇ Aggregation with WEAK reference
- ◊ Composition Aggregation
- * Equivalent to: 0 .. n
- {E} Experimental Class or Property
- {D} Deprecated Class or Property



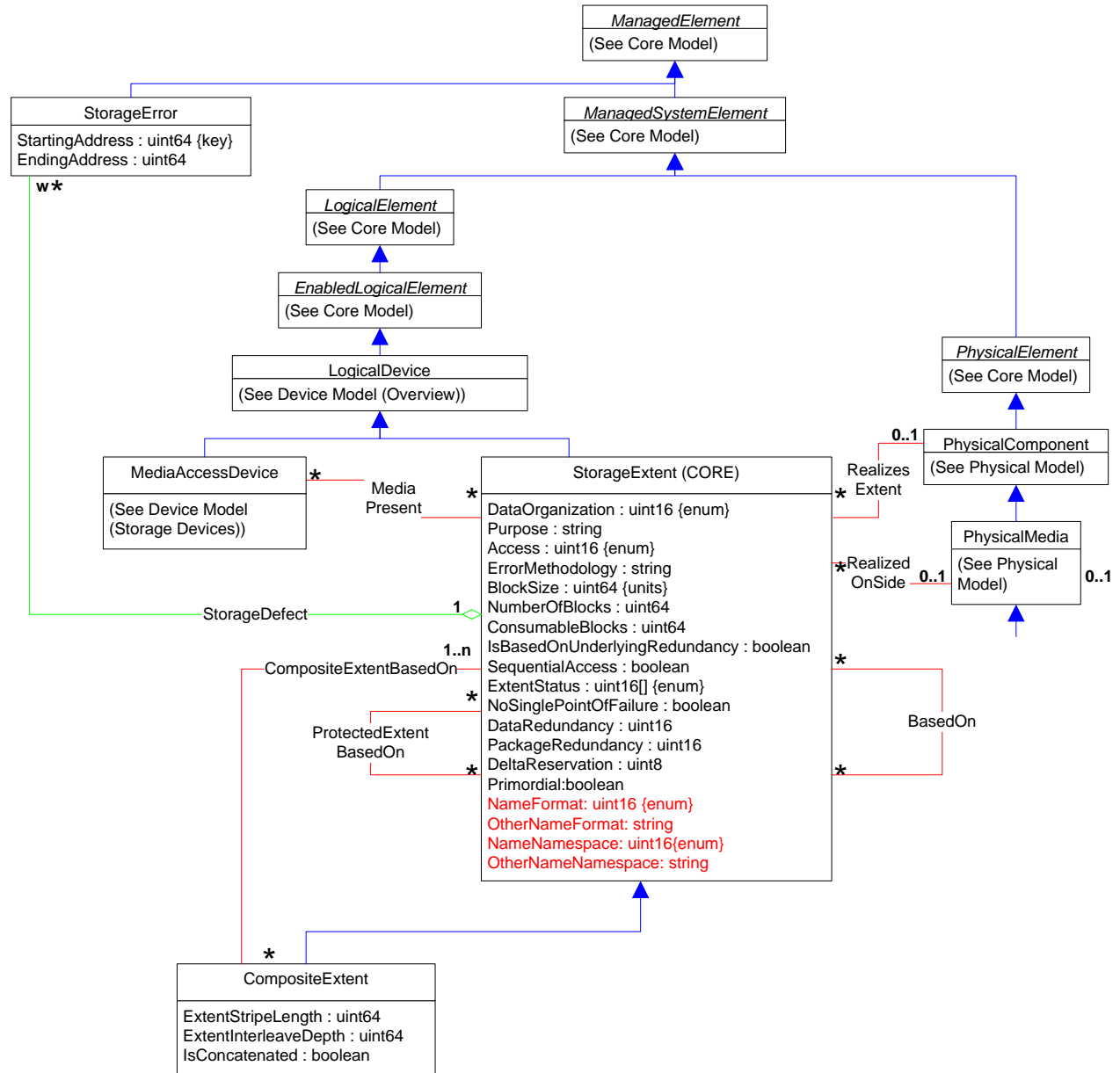
Page 16 - Storage Mutipath

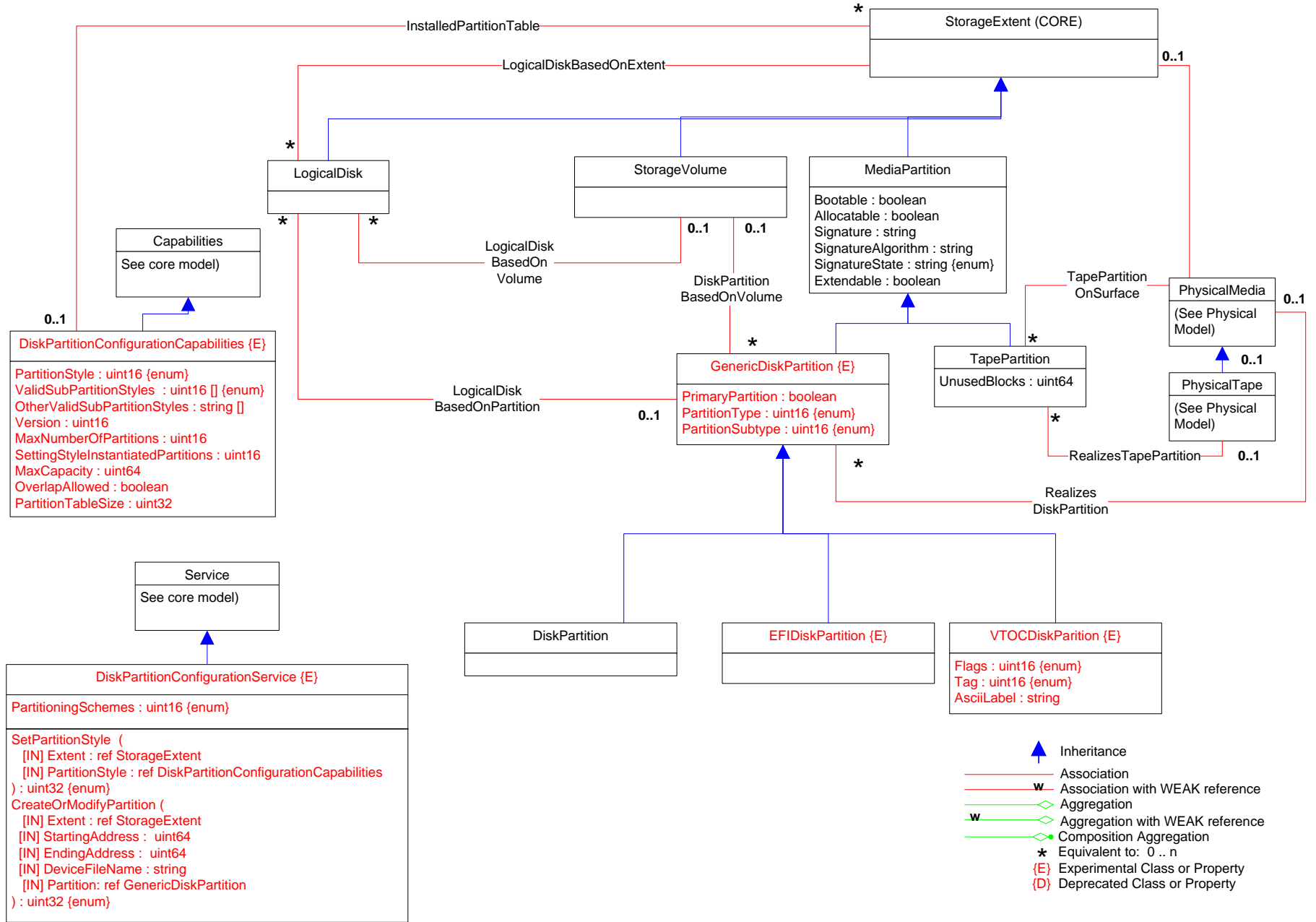
- Inheritance
- Association
- Association with WEAK reference
- Aggregation
- Aggregation with WEAK reference
- Composition Aggregation
- Composition
- Equivalent to: 0 .. n
- {E} Experimental Class or Property
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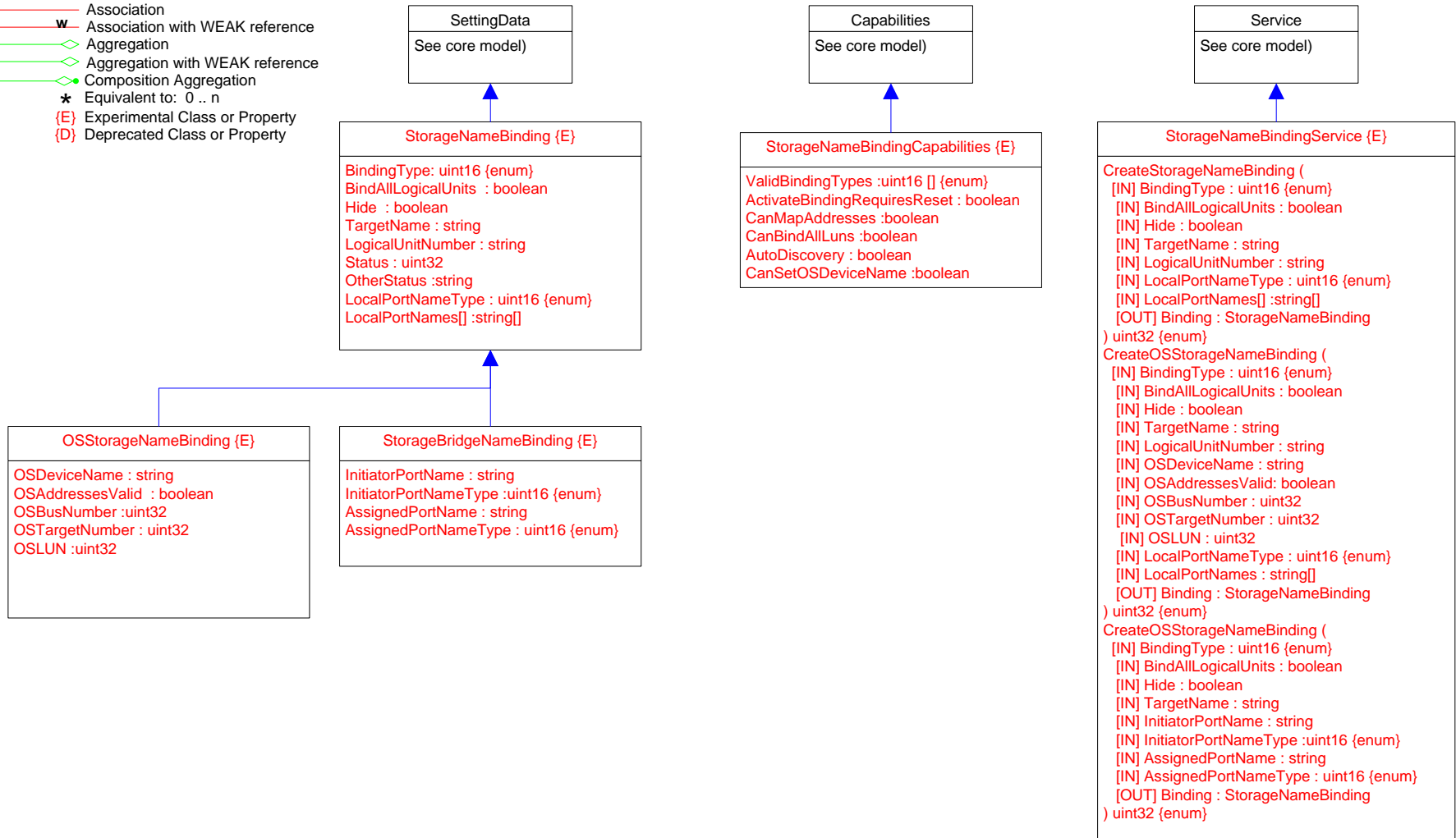
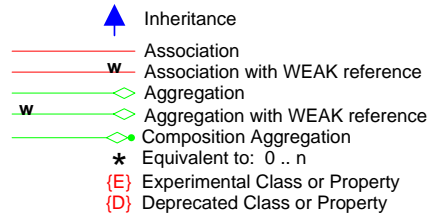
Page 17- StorageExtent

- ▲ Inheritance
- Association
- w Association with WEAK reference
- ◇ Aggregation
- w◇ Aggregation with WEAK reference
- ◊ Composition Aggregation
- * Equivalent to: 0 .. n
- {E} Experimental Class or Property
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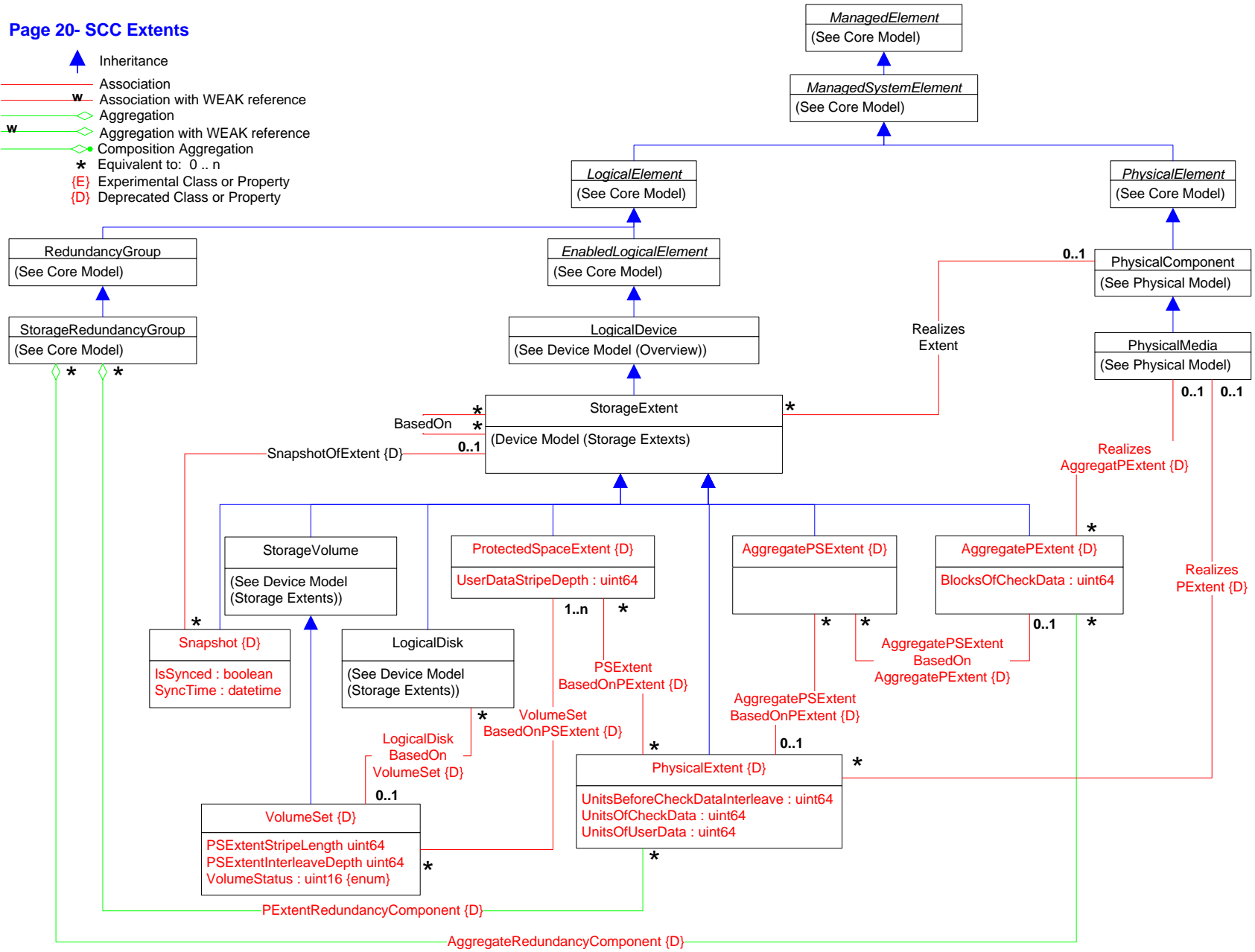


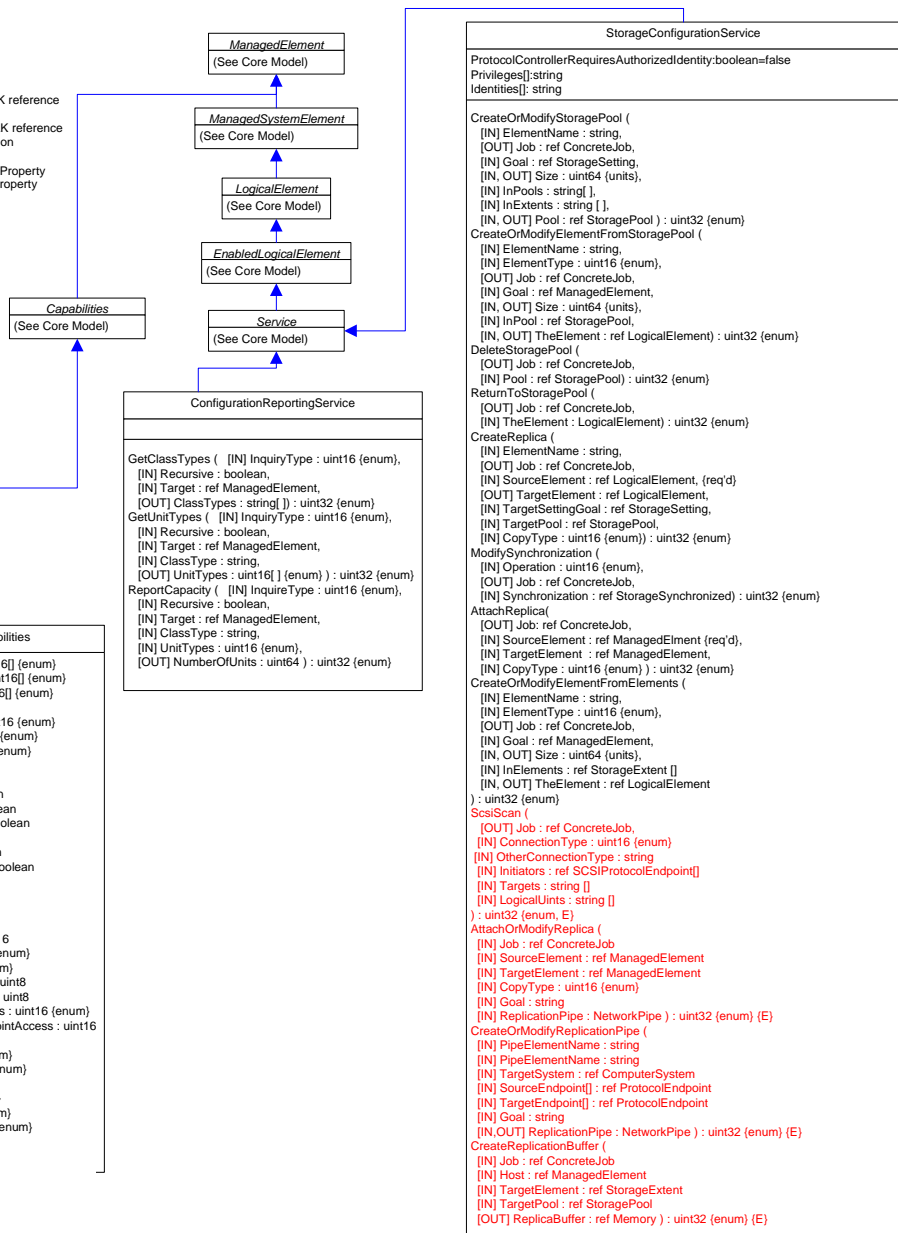
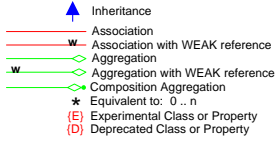
Page 19 - Storage Name Binding



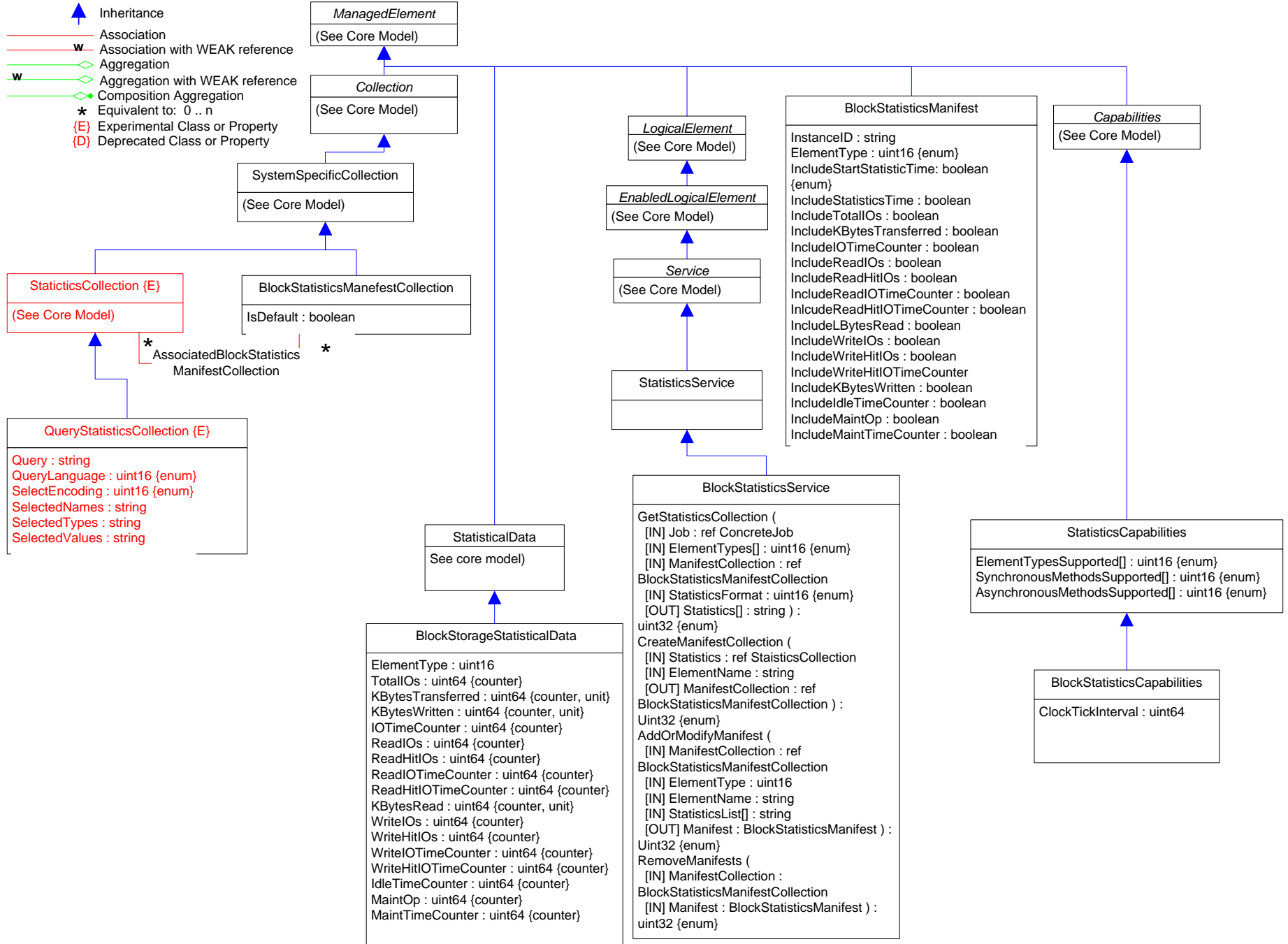
Page 20- SCC Extents

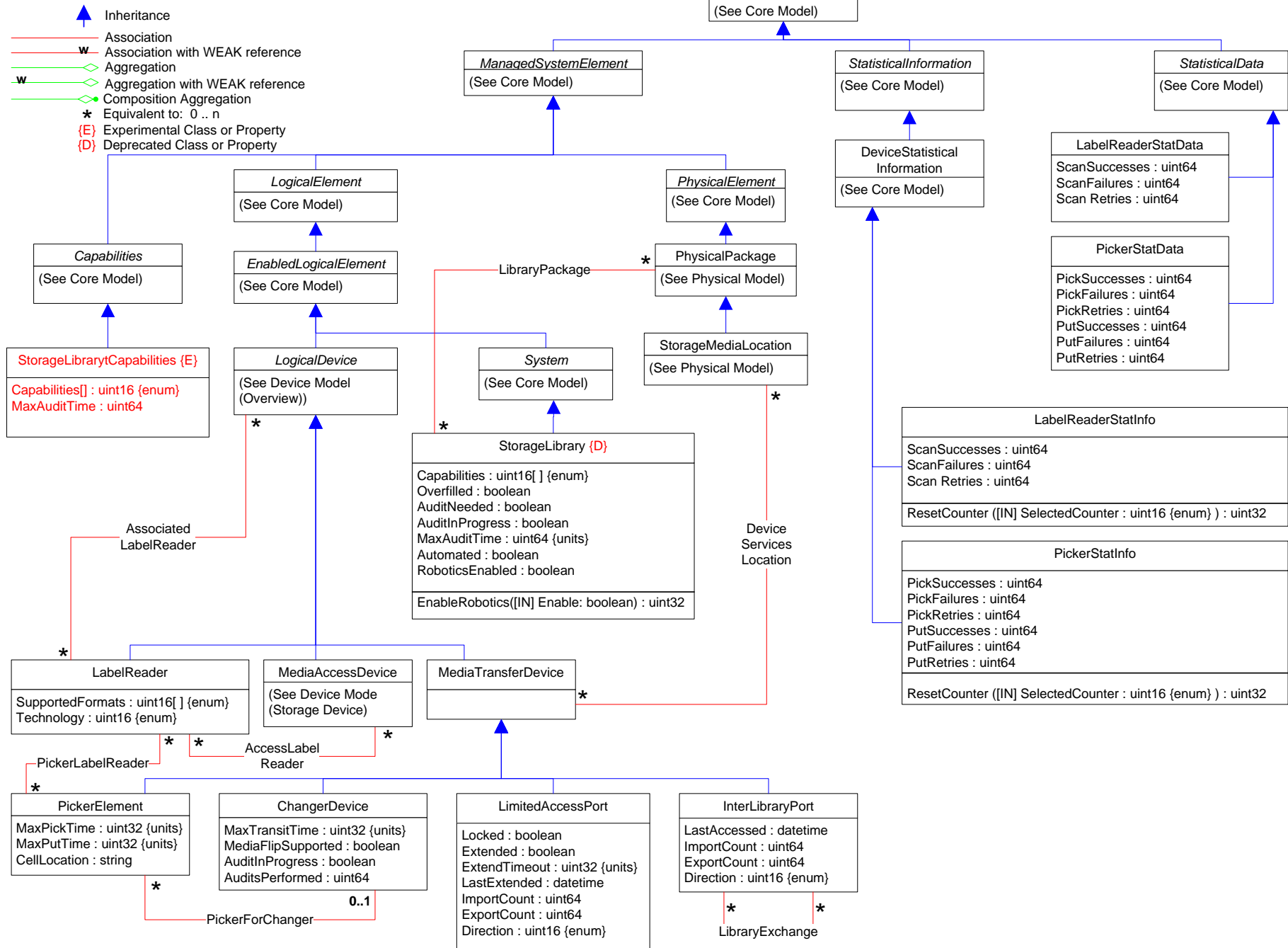
- Inheritance
- Association
- Association with WEAK reference
- Aggregation
- Aggregation with WEAK reference
- Composition Aggregation
- Equivalent to: 0..n
- Experimental Class or Property
- Deprecated Class or Property














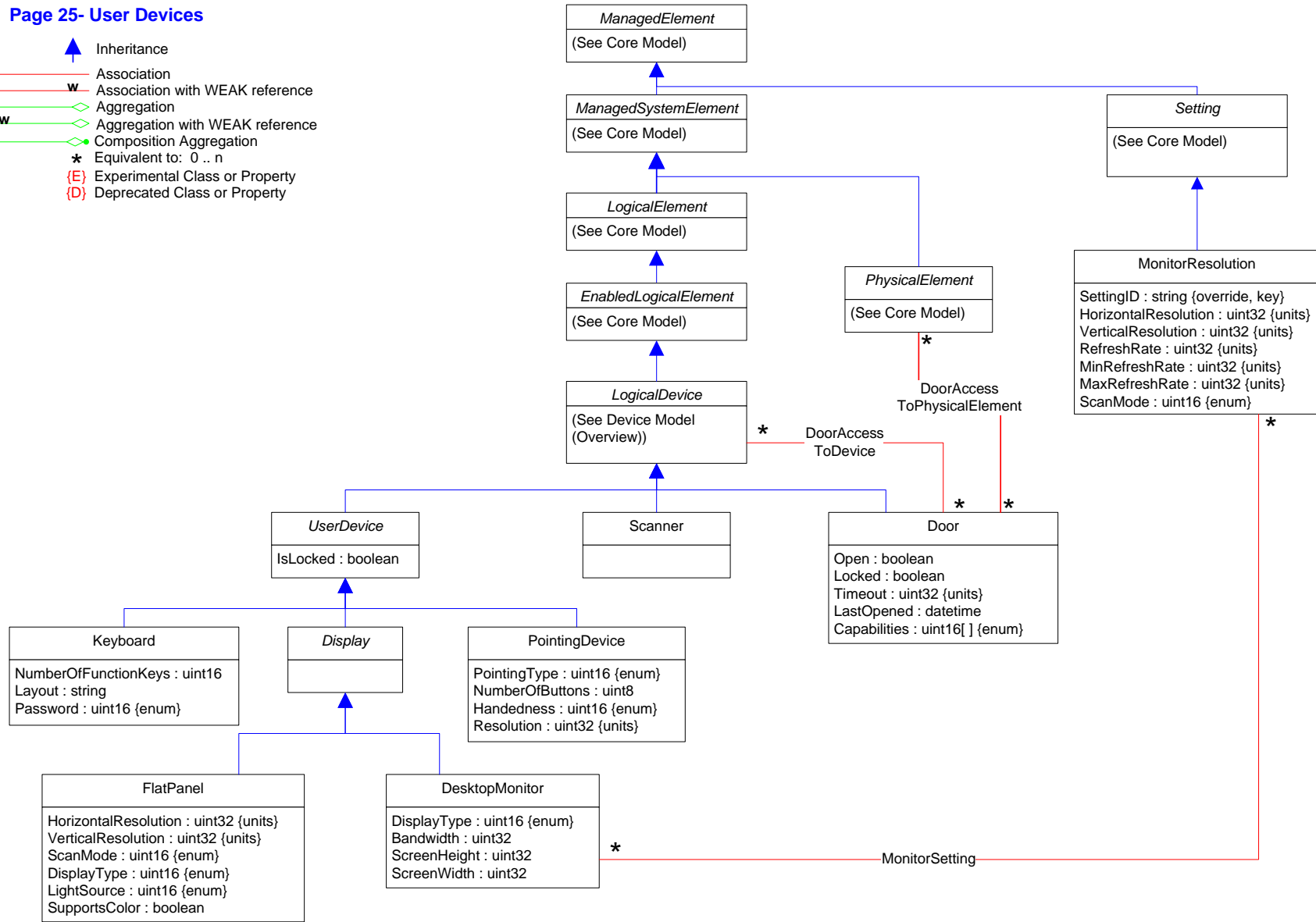
StorageReplicationCapabilities
SupportedSynchronizationType : uint16[] (enum)
SupportedAsynchronousActions[] : uint16[] (enum)
SupportedSynchronousActions : uint16[] (enum)
InitialReplicationState : uint16 (enum)
SupportedSpecializedElements[] : uint16 (enum)
SupportedModifyOperations[] : uint16 (enum)
ReplicationHostAccessibility : uint16 (enum)
HostAccessibleState[] : uint16 (enum)
SpaceLimitSupported : boolean
SpaceReservationSupported : boolean
LocalMirrorSnapshotSupported : boolean
RemoteMirrorSnapshotSupported : boolean
IncrementalDeltasSupported : boolean
PersistentReplicasSupported : boolean
BidirectionalConnectionsSupported : boolean
MaximumReplicasPerSource : uint16
MaximumPortsPerConnection : uint16
MaximumConnectionsPerPort : uint16
MaximumPeerConnections : uint16
MaximumLocalReplicationDepth : uint16
InitialSynchronizationDefault : uint16 (enum)
ReplicationPriorityDefault : uint16 (enum)
LowSpaceWarningThresholdDefault : uint8
SpaceLimitWarningThresholdDefault : uint8
RemoteReplicationServicePointAccess : uint16 (enum)
AlternateRemoteReplicationServicePointAccess : uint16 (enum)
DeltaReplicaPoolAccess : uint16 (enum)
RemoteBufferElementType : uint16 (enum)
RemoteBufferHost : uint16 (enum)
RemoteBufferLocation : uint16 (enum)
RemoteBufferSupported : uint16 (enum)
UseReplicationBufferDefault : uint16 (enum)
PeerConnectionProtocol : string





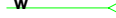






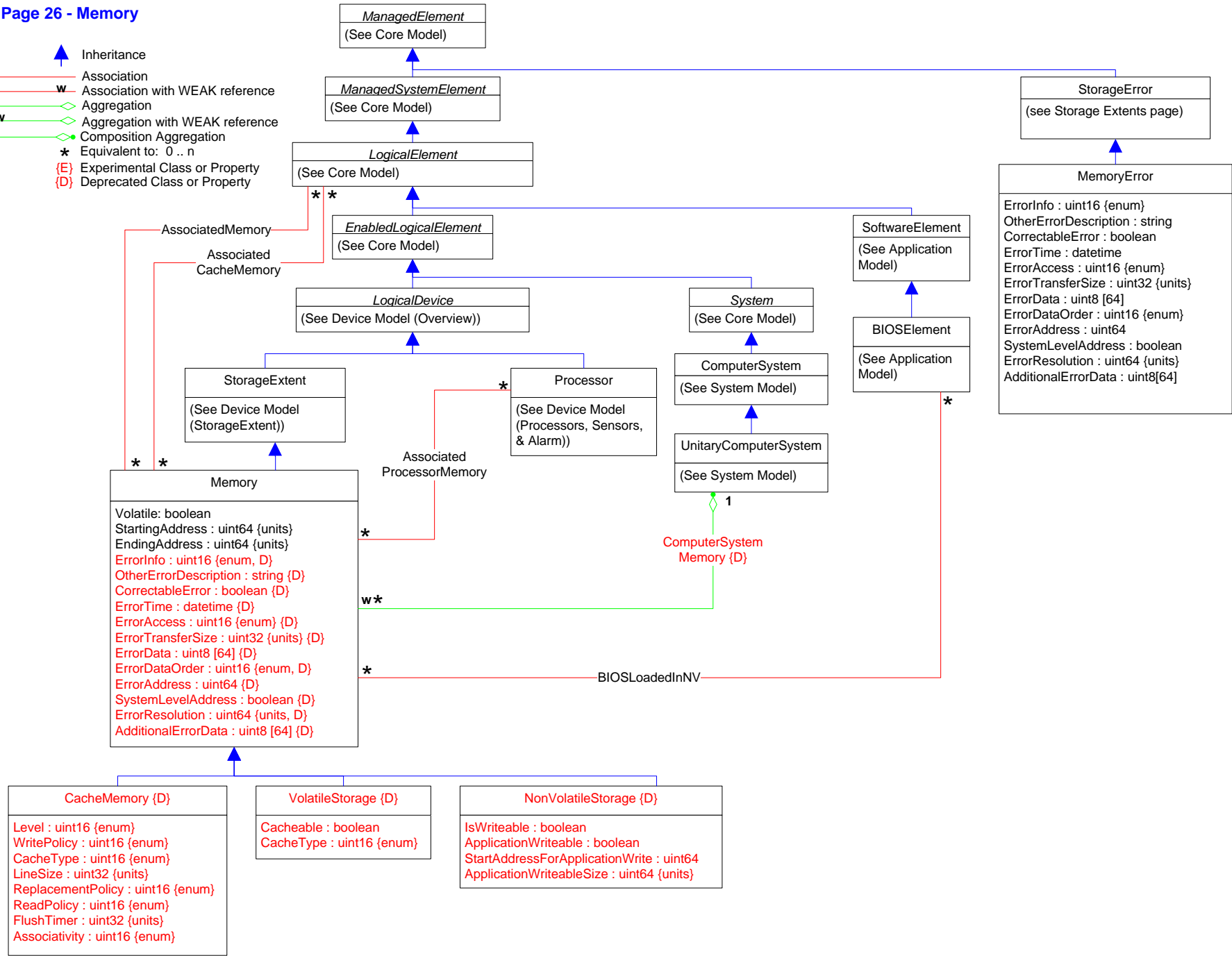











Page 25- User Devices

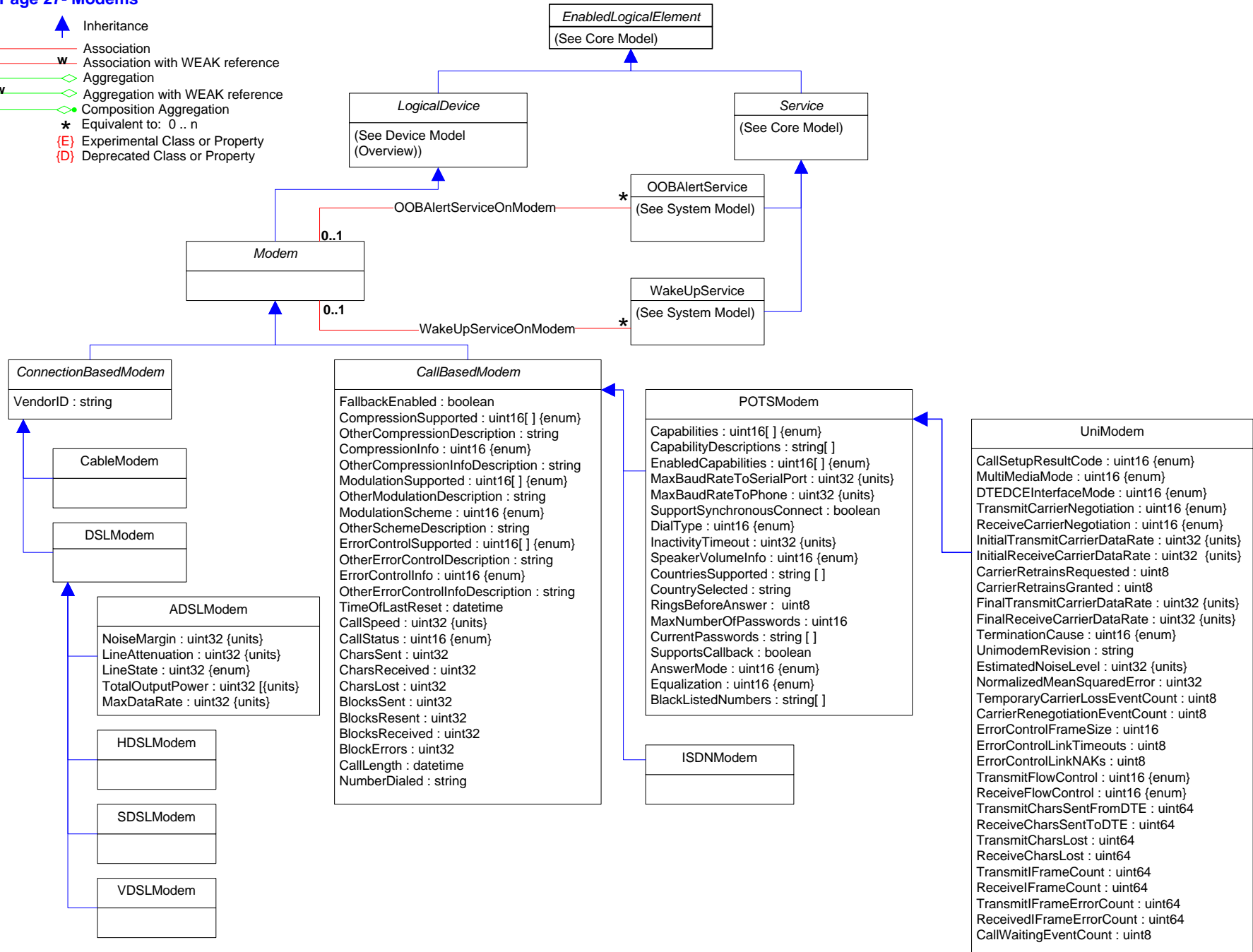
-  Inheritance
-  Association
-  Association with WEAK reference
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-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n
-  Experimental Class or Property
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-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
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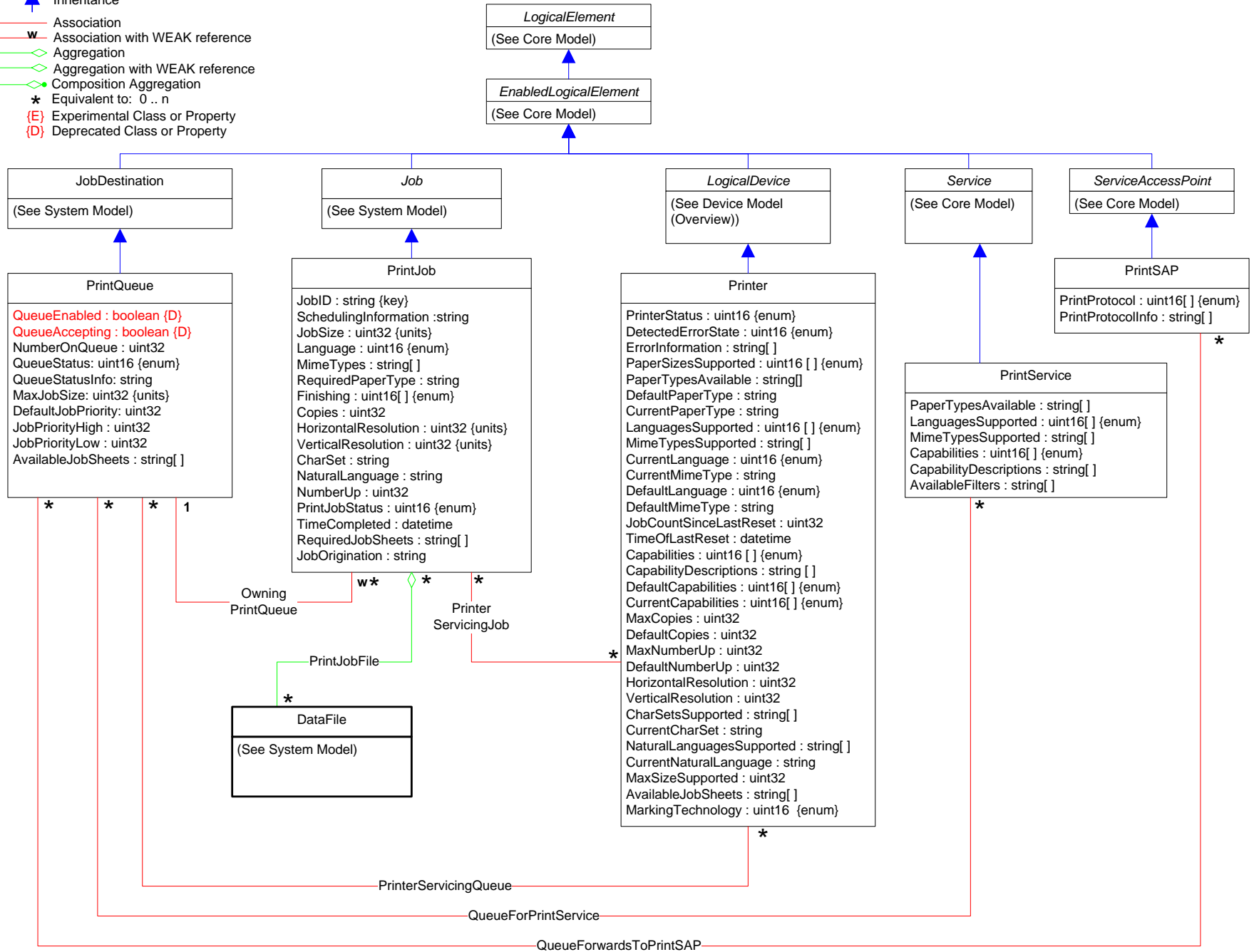


-  Inheritance
-  Association
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-  Aggregation with WEAK reference
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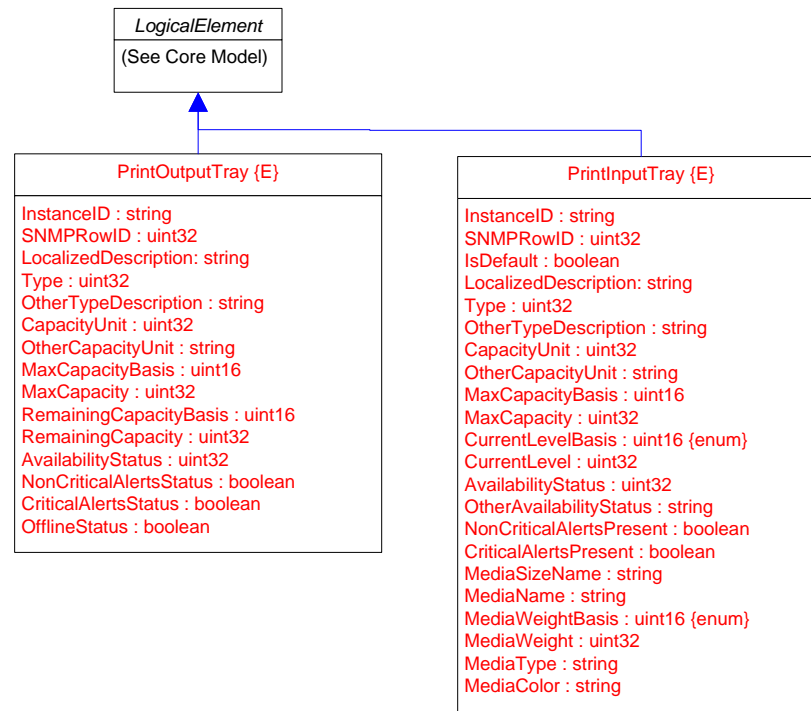
Page 28- Printer, Print Jobs, & Print Services

-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0..n
-  Experimental Class or Property
-  Deprecated Class or Property

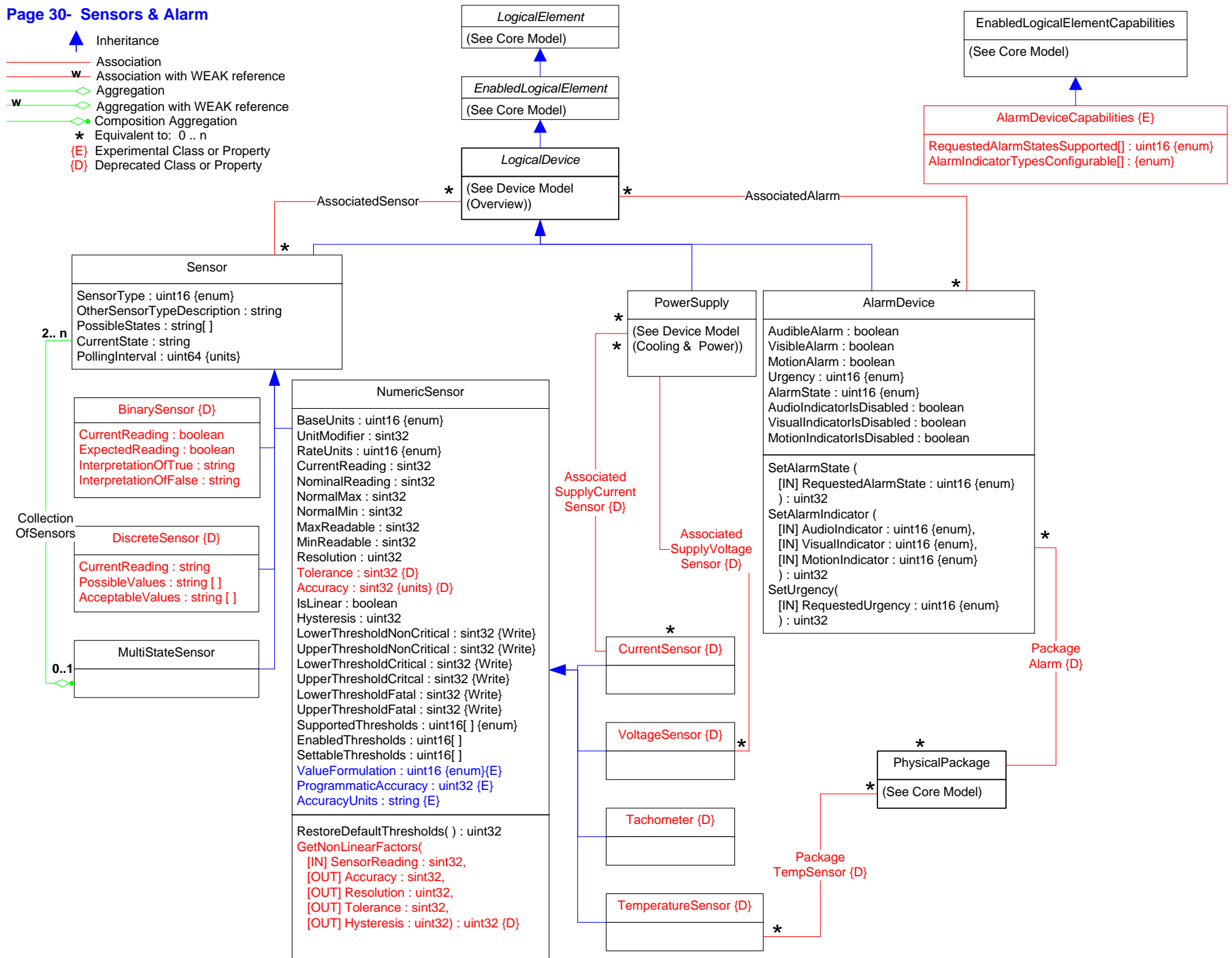









Page 29 - Printer, Print Jobs, & Print Services (2)

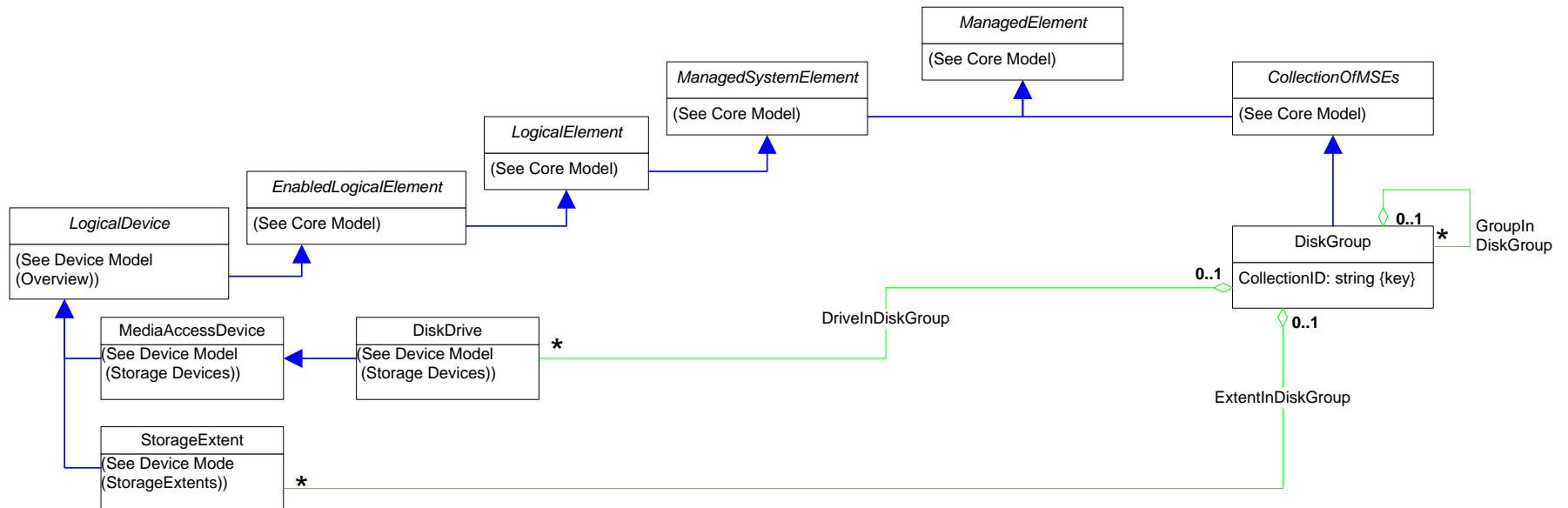
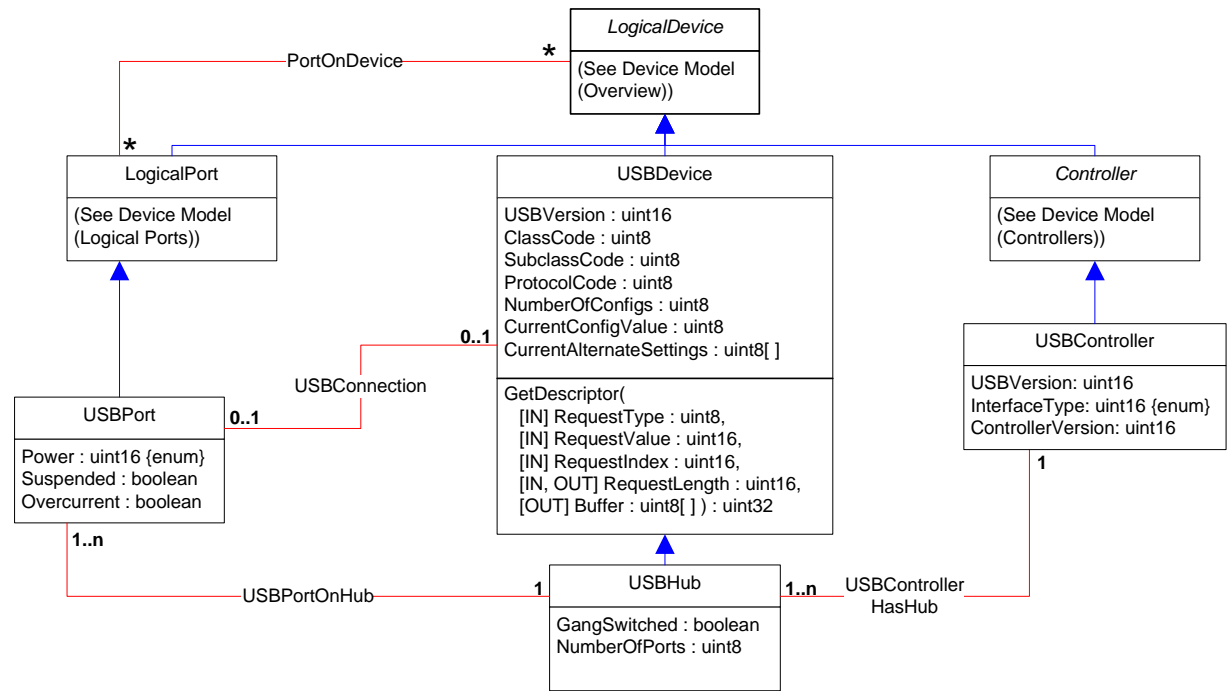
-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0..n
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- ▲ Inheritance
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- *** Equivalent to: 0 .. n
- (E) Experimental Class or Property
- (D) Deprecated Class or Property

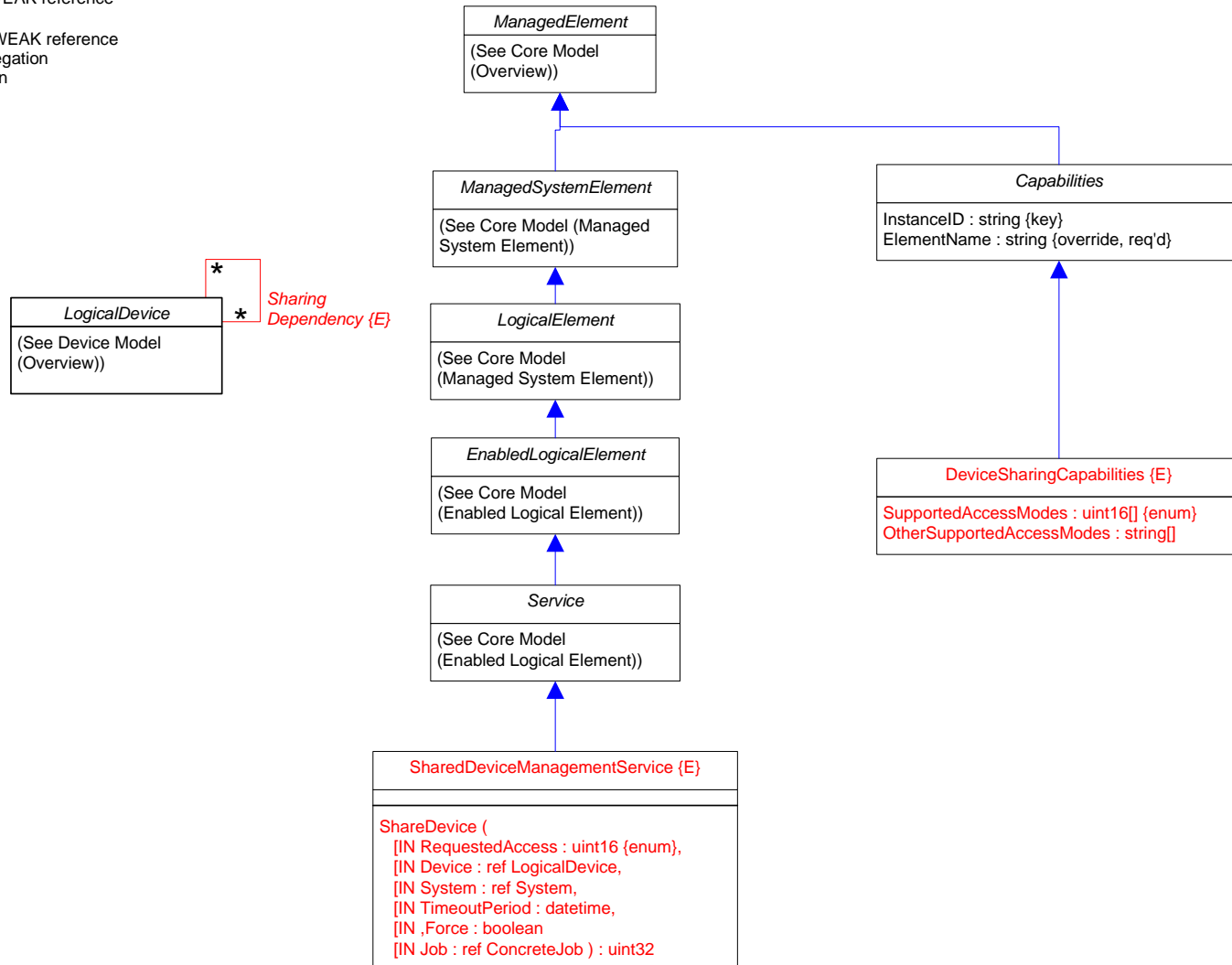









-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n

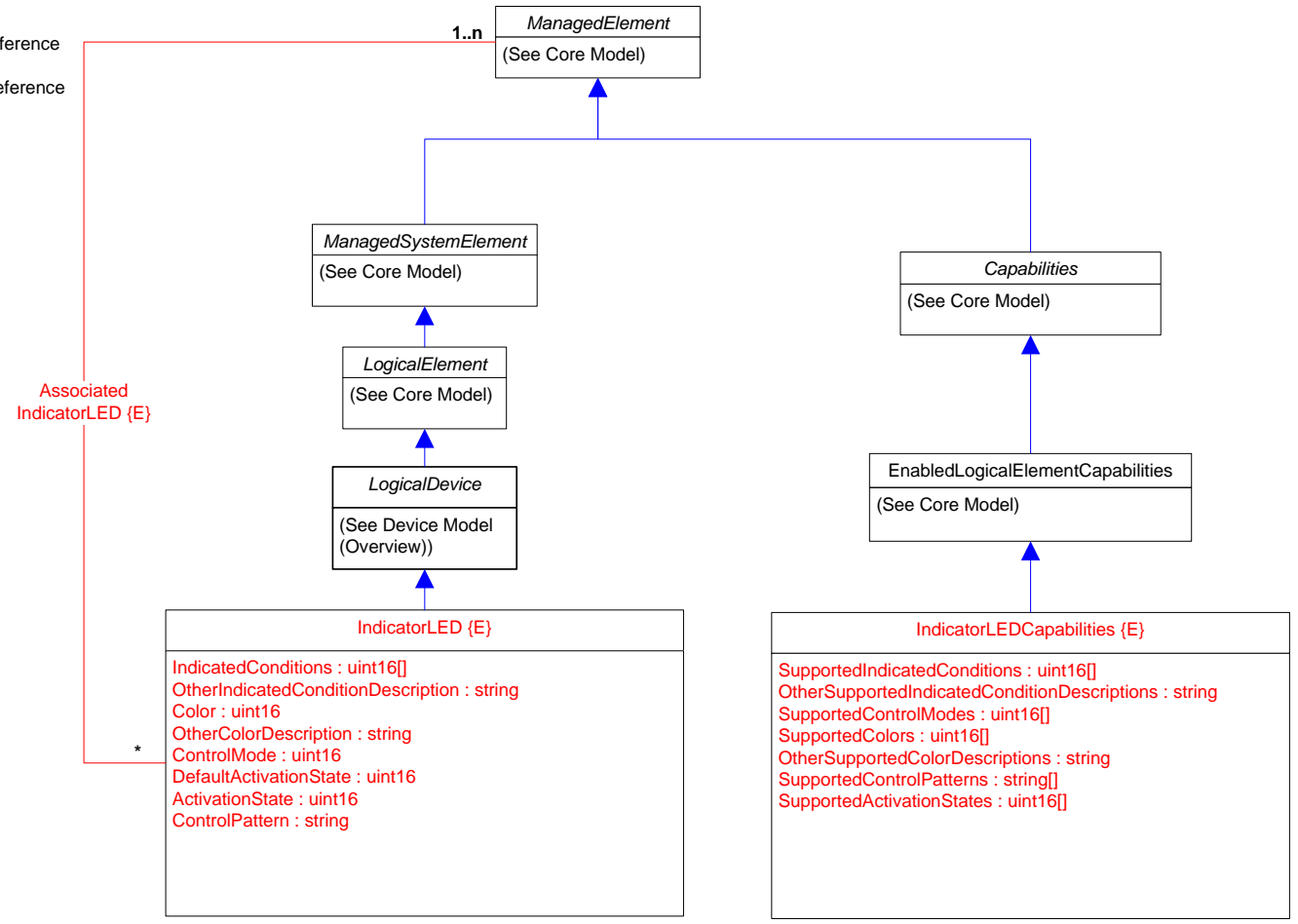


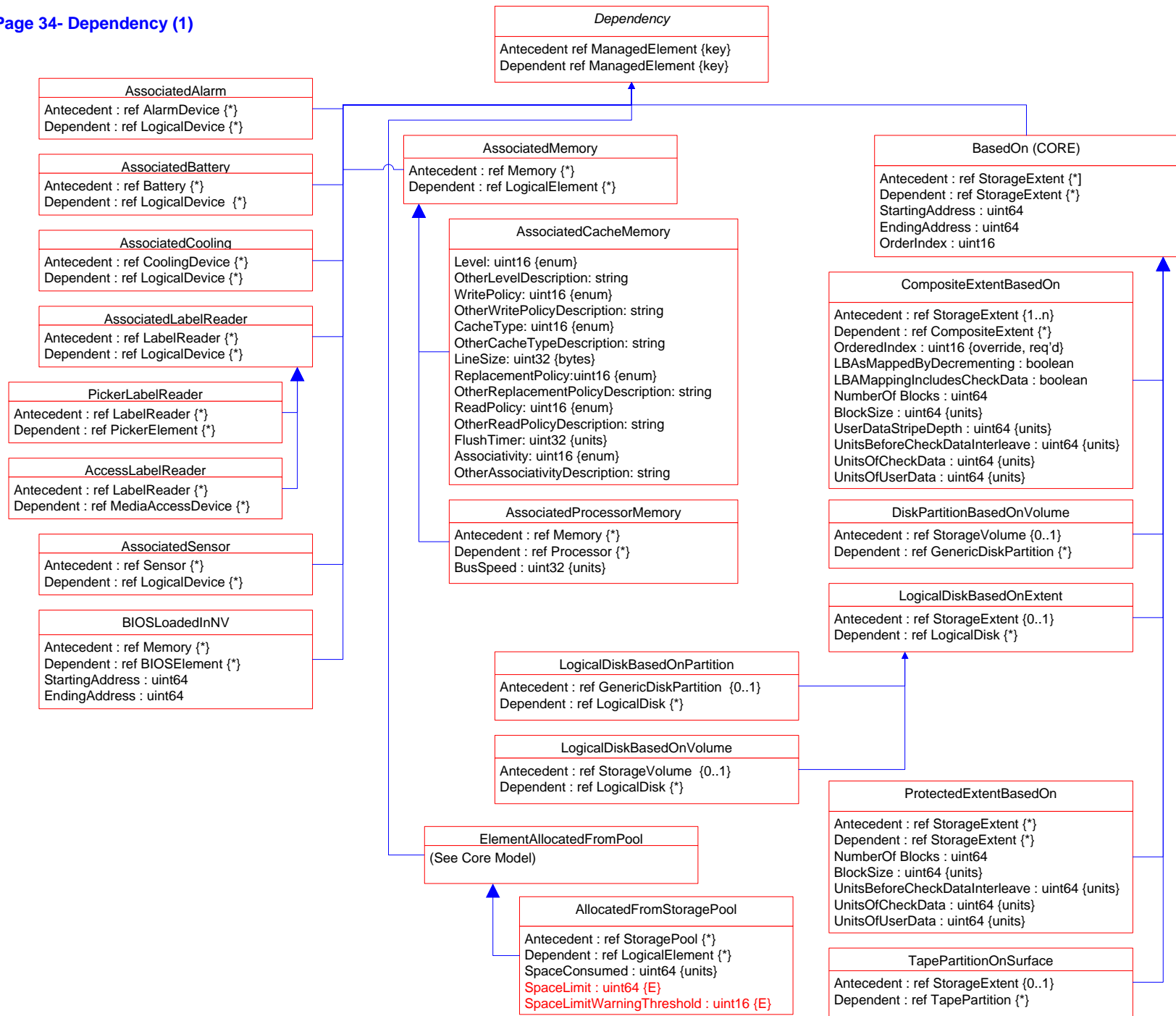
Page 32- Device Sharing

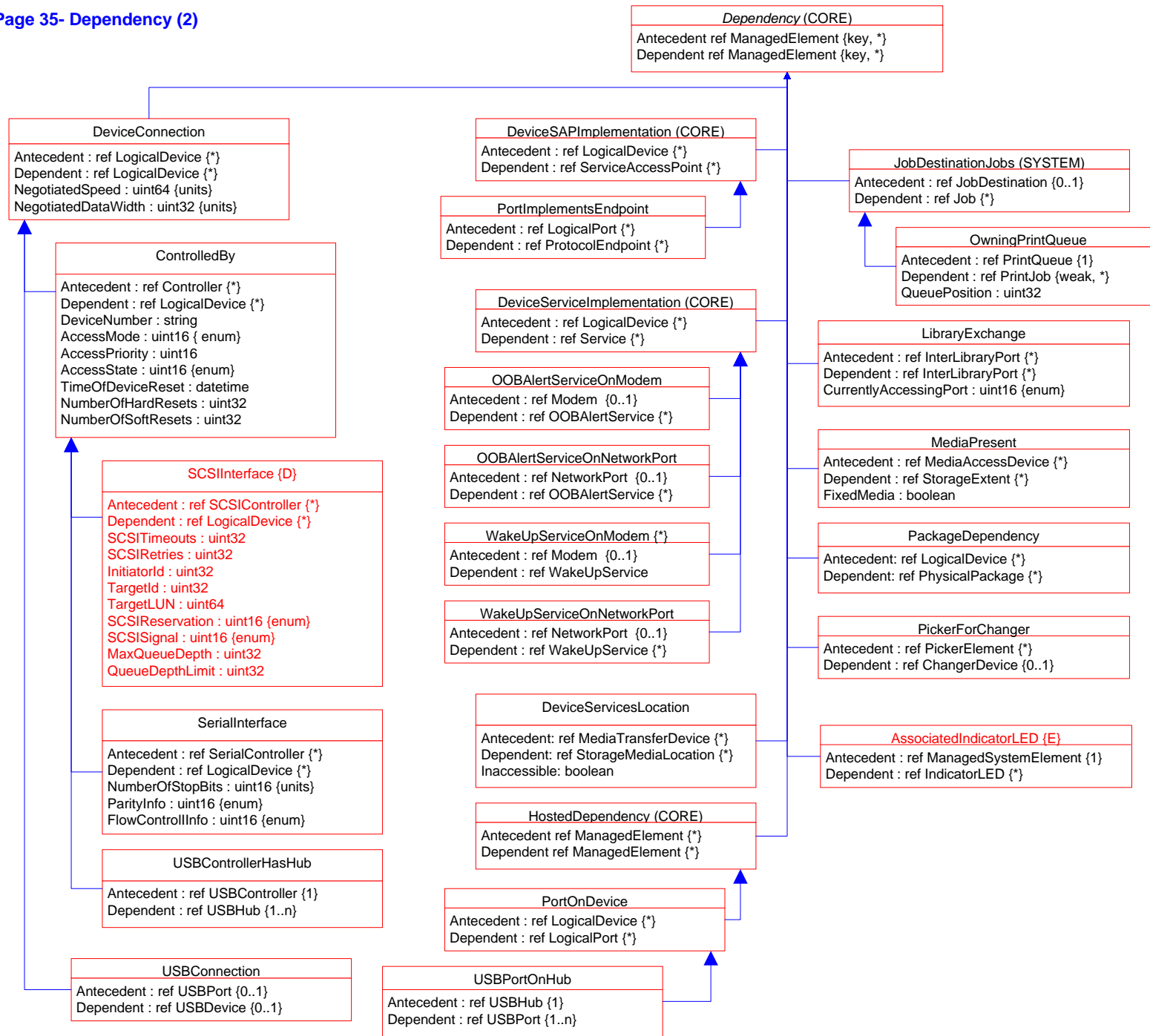
-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0 .. n

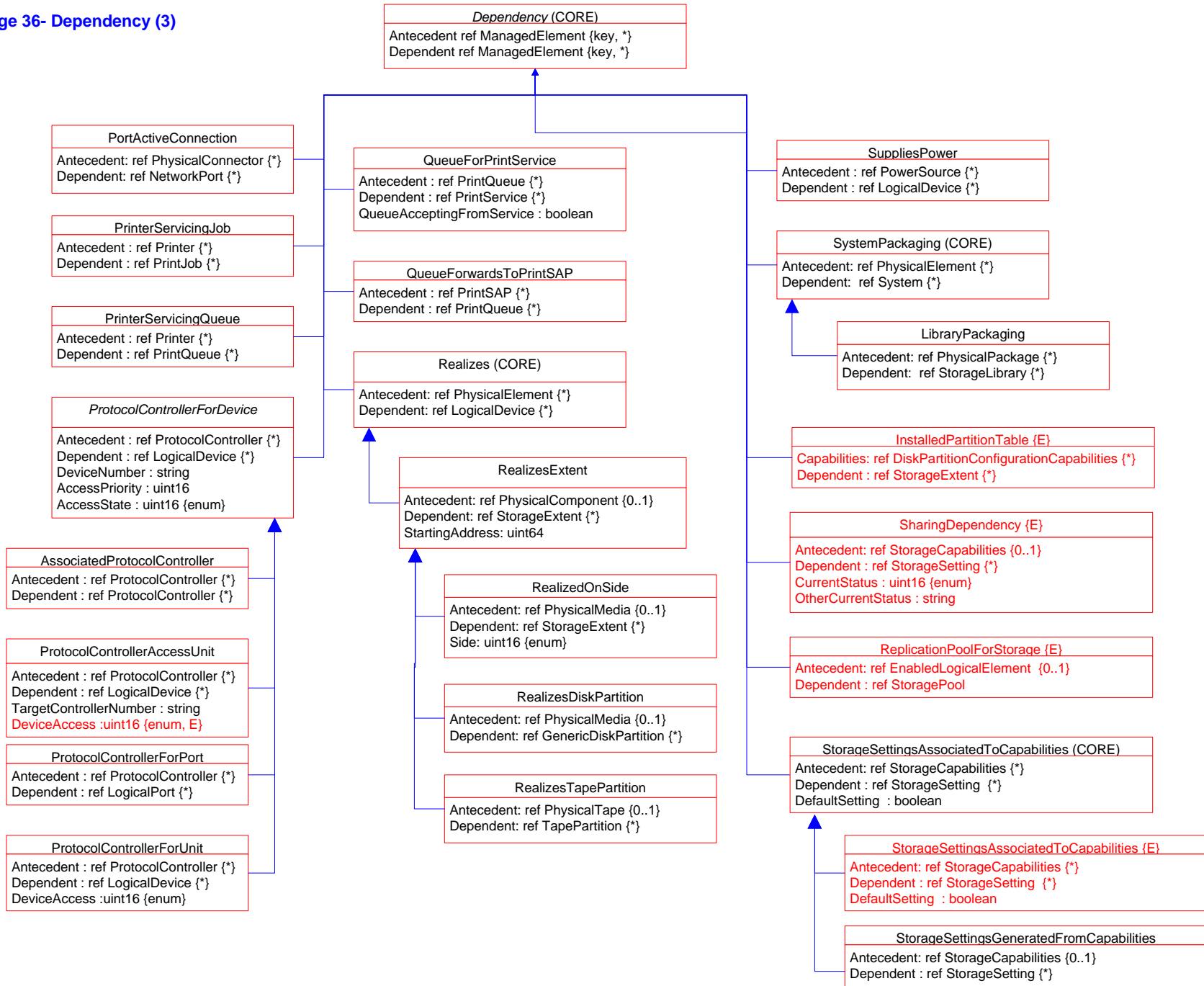


-  Inheritance
-  Association
-  Association with WEAK reference
-  Aggregation
-  Aggregation with WEAK reference
-  Composition Aggregation
-  Equivalent to: 0..n

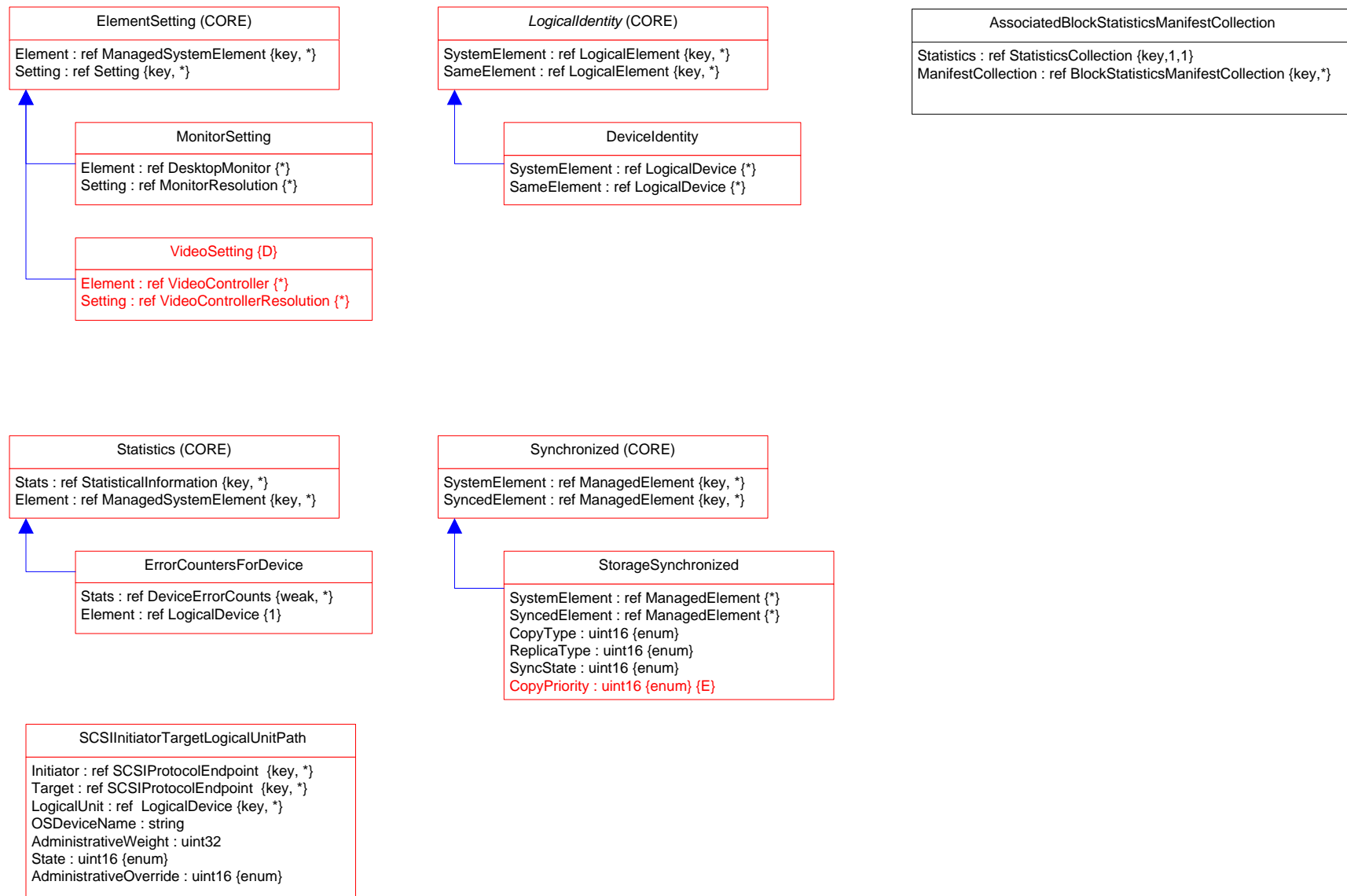


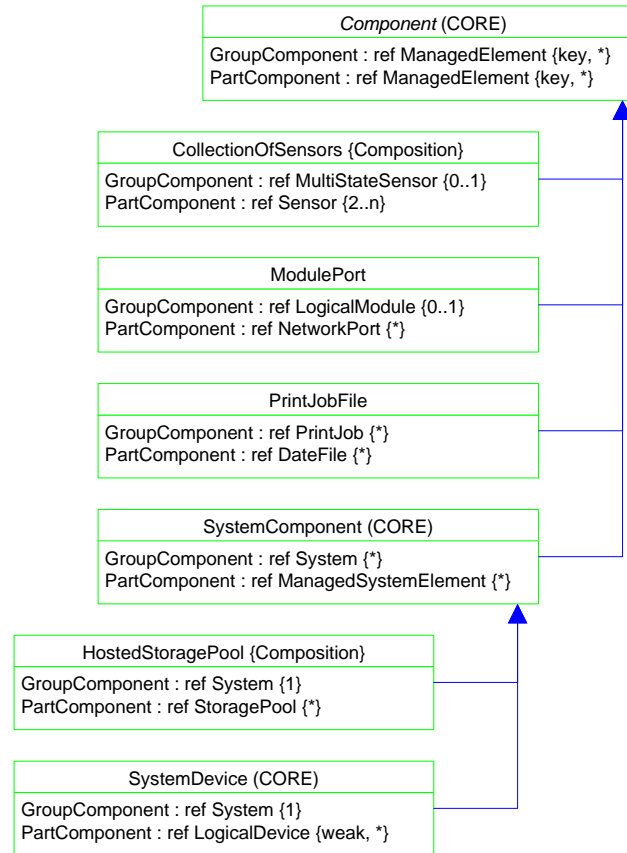
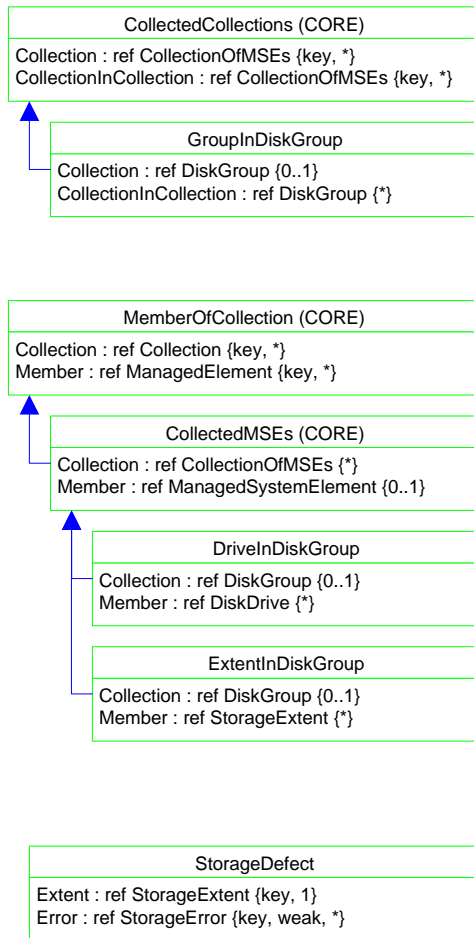


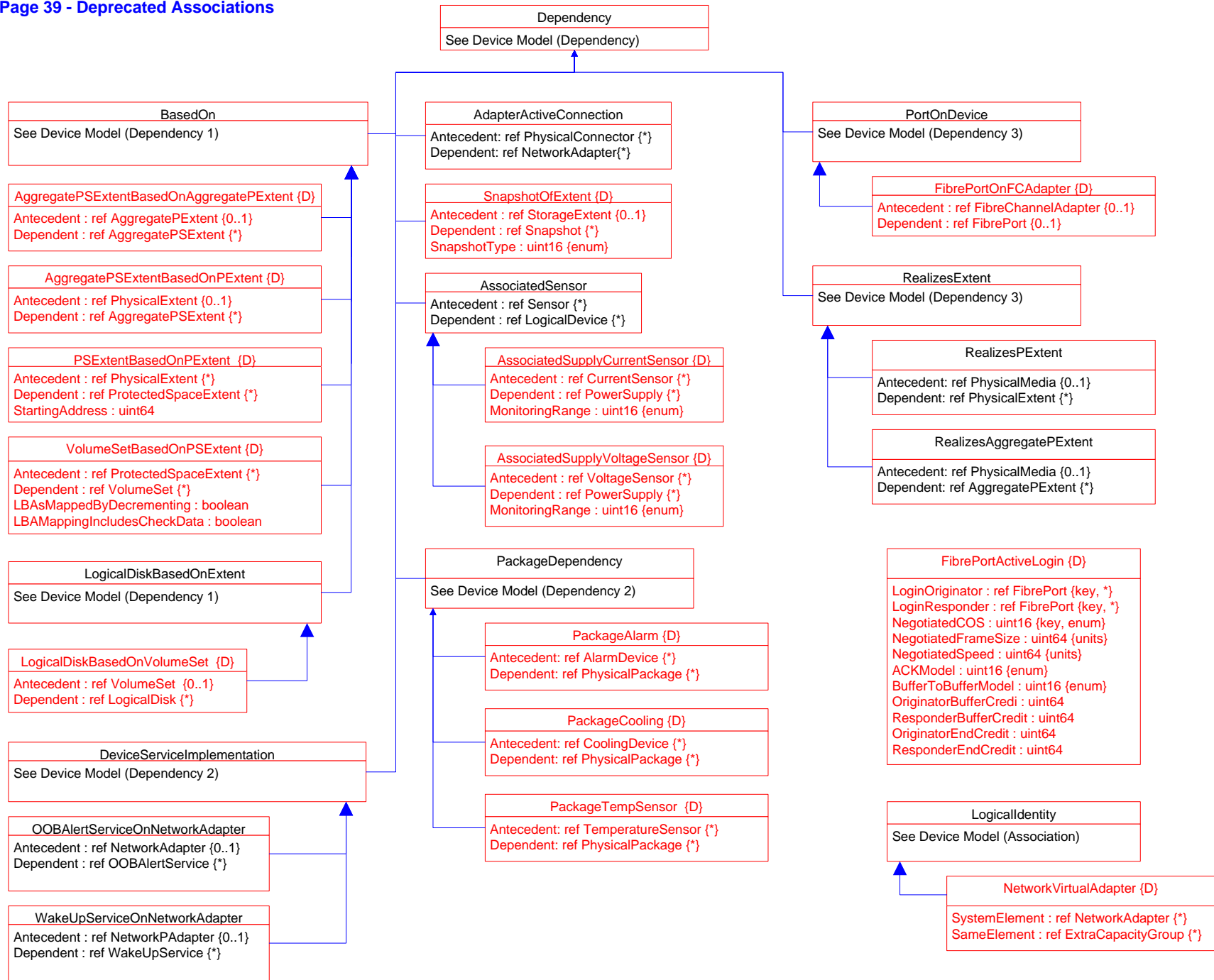




Page 37- Association Hierarchy







Page 40 - Deprecated Aggregations

