



# **Intelligence Community Enterprise Architecture**

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## **Mapping of Information Resource Metadata to Department of Defense Discovery Metadata**

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## Chapter 1 - Introduction

The XML Data Encoding Specification for Information ddms:resource Metadata (IRM) is a means to leverage the Department of Defense Discovery Metadata Specification (DDMS) for use throughout the Intelligence Community (IC). As needs arose to both extend DDMS by adding elements and restrict DDMS by constraining its values, IRM was used to implement these changes, while still striving to maintain conceptual parity with DDMS. The IRM modifications were submitted as change requests to DDMS, and the implementation of DDMS 4.0 was made with consideration of harmonization with IRM Version 5. Thus, IRM Version 6 consists of a full integration of DDMS 4.0. The IRM ddms:resource node **irm:ICResourceMetadataPackage** remains, but in Version 6, its only sub-element is a **ddms:resource** node. Should the need arise, the **irm:ICResourceMetadataPackage** could be modified in the future to further extend and/or restrict the DDMS constructs.

This document provides a detailed mapping of the previous IRM constructs and how they will be translated to DDMS. As IRM does still constrain certain values of DDMS, those constraints are listed here, as well.

## Chapter 2 - Summary of Changes from IRM Version 5 to IRM Version 6

The following sections outline the full mapping of elements in IRM version 5 to their locations in IRM version 6.

### 2.1 - irm:ICResourceMetadataPackage to ddms:resource

The following table lists the new locations for elements that were previously sub-elements of **irm:ICResourceMetadataPackage** and where they are now represented in **ddms:resource**. All IRM XPathS in this table are relative to **irm:ICResourceMetadataPackage**; likewise, the corresponding DDMS XPathS are relative to **irm:ICResourceMetadataPackage**.

**Table 1 - Mapping of elements in irm:ICResourceMetadataPackage to ddms:resource**

<b>irm:ICResourceMetadataPackage (V5)</b>	<b>irm:ICResourceMetadataPackage (V6)</b>
ntk:Access	ddms:resource/ddms:security/ntk:Access
irm:MetaCardIRM	ddms:resource/ddms:metacardInfo
irm:DescribedItemIRM	ddms:resource

### 2.2 - irm:MetaCardIRM to ddms:metacardInfo

The following table lists the new locations for elements that were previously sub-elements of **irm:MetaCardIRM** and where they are now represented in **ddms:metacardInfo**. All IRM XPathS in this table are relative to **irm:ICResourceMetadataPackage/irm:MetaCardIRM**; likewise, the corresponding DDMS XPathS are relative to **irm:ICResourceMetadataPackage/ddms:resource/ddms:metacardInfo**. DDMS elements that existed in prior IRM versions are not listed unless their structure or location has been modified.

**Table 2 - Mapping of elements in irm:MetaCardIRM to ddms:metacardInfo**

<b>irm:MetaCardIRM (V5)</b>	<b>ddms:metacardInfo (V6)</b>
irm:PublishingAgency	ddms:publisher/ddms:organization/ddms:name
irm:PublishingAgency/@irm:acronym	ddms:publisher/ddms:organization/ @ddms:acronym
irm:PublishingAgency/irm:SubAgency	ddms:publisher/ddms:organization/ ddms:subOrganization
irm:IdentifierList	Removed and flattened into a sequence of ddms:identifier sub-elements.
irm:IdentifierList/ddms:identifier	ddms:identifier
irm:CreatorPublishList	Removed and flattened into a sequence of ddms:creator, ddms:publisher, ddms:contributor and ddms:pointOfContact sub-elements.

<b>irm:MetaCardIRM (V5)</b>	<b>ddms:metacardInfo (V6)</b>
irm:CreatorPublishList/irm:creator	ddms:creator
irm:CreatorPublishList/irm:publisher	ddms:publisher
irm:CreatorPublishList/irm:contributor	ddms:contributor
irm:CreatorPublishList/irm:pointOfContact	ddms:pointOfContact
irm:CreatorPublishList/irm:*/@ism:pocType	ddms:*/@ddms:POCType
irm:RevisionRecall	ddms:revisionRecall
irm:RevisionRecall/@irm:revisionID	ddms:revisionRecall/@ddms:revisionID
irm:RevisionRecall/@irm:revisionType	ddms:revisionRecall/@ddms:revisionType
irm:RevisionRecall/irm:Link	ddms:revisionRecall/ddms:link
irm:RevisionRecall/irm:Details	ddms:revisionRecall/ddms:details
irm:ProcessingInfoList	Removed and flattened into a sequence of ddms:processingInfo sub-elements.
irm:ProcessingInfoList/irm:ProcessingInfo	ddms:processingInfo
irm:ProcessingInfoList/irm:ProcessingInfo/@irm:dateProcessed	ddms:processingInfo/@ddms:dateProcessed
irm:Dates/@irm:dateApproved	ddms:dates/@ddms:approvedOn
irm:Dates/@irm:dateReceived	ddms:dates/@ddms:receivedOn
ism:NoticeList	ddms:noticeList
ism:NoticeList/ism:Notice	ddms:noticeList/ism:Notice
irm:RecordsManagementInfo	ddms:resourceManagement/ ddms:recordsManagementInfo
irm:RecordsManagementInfo/ irm:VitalRecordIndicator/@irm:indicator	ddms:recordsManagementInfo/ @ddms:vitalRecordIndicator
irm:RecordsManagementInfo/ irm:ApplicationSoftware	ddms:recordsManagementInfo/ ddms:applicationSoftware
irm:RecordsManagementInfo/ irm:RecordKeeper	ddms:recordsManagementInfo/ ddms:recordKeeper
irm:RecordsManagementInfo/ irm:RecordKeeper/irm:RecordKeeperID	ddms:recordsManagementInfo/ ddms:recordKeeper/ddms:recordKeeperID

## 2.3 - irm:DescribedItemIRM to ddms:resource

The following table lists the new locations for elements that were previously sub-elements of **irm:DescribedItemIRM** and where they are now represented in **ddms:resource**. All IRM XPaths in this table are relative to **irm:ICResourceMetadataPackage/irm:DescribedItemIRM**; likewise, the corresponding DDMS XPaths are relative to **irm:ICResourceMetadataPackage/ddms:resource**. DDMS elements that existed in prior IRM versions are not listed unless their structure or location has been modified.

**Table 3 - Mapping of elements in irm:DescribedItemIRM to ddms:resource**

<b>irm:DescribedItemIRM (V5)</b>	<b>ddms:resource (V6)</b>
irm:PublishingAgency	ddms:publisher/ddms:organization/ddms:name
irm:PublishingAgency/@irm:acronym	ddms:publisher/ddms:organization/ @ddms:acronym
irm:PublishingAgency/irm:SubAgency	ddms:publisher/ddms:organization/ ddms:subOrganization
irm:TaskingInfoList	Removed and flattened into a sequence of ddms:resourceManagement/ddms:taskingInfo sub-elements.
irm:TaskingInfoList/irm:TaskingInfo	ddms:resourceManagement/ddms:taskingInfo
irm:TaskingInfoList/irm:TaskingInfo/ irm:RequesterInfoList	Removed and flattened into a sequence of ddms:requestorInfo sub-elements.
irm:TaskingInfoList/irm:TaskingInfo/ irm:RequesterInfoList/irm:RequesterInfo	ddms:resourceManagement/ddms:taskingInfo/ ddms:requestorInfo
irm:TaskingInfoList/irm:TaskingInfo/ irm:AddresseeInfoList	Removed and flattened into a sequence of ddms:addressee sub-elements.
irm:TaskingInfoList/irm:TaskingInfo/ irm:AddresseeInfoList/irm:Addressee	ddms:resourceManagement/ddms:taskingInfo/ ddms:addressee
irm:TaskingInfoList/irm:TaskingInfo/irm:TaskID	ddms:resourceManagement/ddms:taskingInfo/ ddms:taskID
irm:TaskingInfoList/irm:TaskingInfo/ irm:TaskID/@irm:taskingSystem	ddms:resourceManagement/ddms:taskingInfo/ ddms:taskID/@ddms:taskingSystem
irm:RevisionRecall	ddms:resourceManagement/ ddms:revisionRecall
irm:RevisionRecall/@irm:revisionID	ddms:resourceManagement/ ddms:revisionRecall/@ddms:revisionID
irm:RevisionRecall/@irm:revisionType	ddms:resourceManagement/ ddms:revisionRecall/@ddms:revisionType
irm:RevisionRecall/irm:Link	ddms:resourceManagement/ ddms:revisionRecall/ddms:link
irm:RevisionRecall/irm:Details	ddms:resourceManagement/ ddms:revisionRecall/ddms:details
irm:IntelType	Removed and flattened into a sequence of ddms:type sub-elements.
irm:IntelType/irm:IntelDiscipline/ @irm:discipline	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: disciplines:v1']/ @ddms:value
irm:IntelType/irm:IntelDiscipline/ @irm:otherDiscipline	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: disciplines:v1']/ @ddms:value (prefixed with 'other:')



<b>irm:DescribedItemIRM (V5)</b>	<b>ddms:resource (V6)</b>
irm:IntelType/irm:IntelDiscipline/ irm:IntelSubdiscipline/@irm:subDiscipline	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: subdisciplines:v1']/ @ddms:value
irm:IntelType/irm:IntelDiscipline/ irm:IntelSubdiscipline/@irm:otherDiscipline	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: subdisciplines:v1']/ @ddms:value (prefixed with 'other:')
irm:IntelType/irm:IntelDiscipline/ irm:IntelSubdiscipline/ irm:IntelSubdisciplineTechnique/ @irm:subdisciplineTechnique	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: subdisciplinetechniques:v1']/@ddms:value
irm:IntelType/irm:IntelDiscipline/ irm:IntelSubdiscipline/ irm:IntelSubdisciplineTechnique/ @irm:othersubdisciplineTechnique	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:intel: subdisciplinetechniques:v1']/@ddms:value (prefixed with 'other:')
irm:IntelType/irm:ReportingLevel	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:reportinglevel']/@ddms:value
irm:ProductLine	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:productline']/@ddms:value
irm:Activity	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:activity: v1']
irm:Activity/@irm:activityType	ddms:type[@ddms:qualifier= 'urn:us:gov:ic:cenum:activity: v1']/ @ddms:value
irm:Dates/@irm:dateApproved	ddms:dates/@ddms:approvedOn
irm:Dates/@irm:dateReceived	ddms:dates/@ddms:receivedOn
ism:NoticeList	ddms:security/ddms:noticeList
ism:NoticeList/ism:Notice	ddms:security/ddms:noticeList/ism:Notice
irm:ProductionMetricsList	Removed and flattened into a sequence of ddms:subjectCoverage/ddms:productionMetric sub-elements.
irm:ProductionMetricsList/irm:ProductionMetric	ddms:subjectCoverage/ddms:productionMetric
irm:ProductionMetricsList/ irm:ProductionMetric/ irm:ProductionMetricSubject	ddms:subjectCoverage/ ddms:productionMetric/@ddms:subject
irm:ProductionMetricsList/ irm:ProductionMetric/ irm:ProductionMetricCoverage	ddms:subjectCoverage/ ddms:productionMetric/@ddms:coverage
ntk:Access	ddms:security/ntk:Access
irm:RecordsManagementInfo	ddms:resourceManagement/ ddms:recordsManagementInfo

<b>irm:DescribedItemIRM (V5)</b>	<b>ddms:resource (V6)</b>
irm:RecordsManagementInfo/ irm:VitalRecordIndicator/@irm:indicator	ddms:resourceManagement/ ddms:recordsManagementInfo/ @ddms:vitalRecordIndicator
irm:RecordsManagementInfo/ irm:ApplicationSoftware	ddms:resourceManagement/ ddms:recordsManagementInfo/ ddms:applicationSoftware
irm:RecordsManagementInfo/ irm:RecordKeeper	ddms:resourceManagement/ ddms:recordsManagementInfo/ ddms:recordKeeper
irm:RecordsManagementInfo/ irm:RecordKeeper/irm:RecordKeeperID	ddms:resourceManagement/ ddms:recordsManagementInfo/ ddms:recordKeeper/ddms:recordKeeperID
irm:NonStateActorCoverageList	Removed and flattened into a sequence of ddms:subjectCoverage/ddms:nonStateActor sub-elements.
irm:NonStateActorCoverageList/ irm:NonStateActor	ddms:subjectCoverage/ddms:nonStateActor
irm:NonStateActorCoverageList/ irm:NonStateActor/@irm:order	ddms:subjectCoverage/ddms:nonStateActor/ @ddms:order
irm:CountryCodeCoverageList	Removed and flattened into a sequence of ddms:geospatialCoverage/ ddms:geographicIdentifier/ddms:countryCode sub-elements.
irm:CountryCodeCoverageList/ irm:CountryCode	ddms:geospatialCoverage/ ddms:geographicIdentifier/ddms:countryCode/ @ddms:value
irm:CountryCodeCoverageList/ irm:CountryCode/@irm:vocabulary	ddms:geospatialCoverage/ ddms:geographicIdentifier/ddms:countryCode/ @ddms:qualifier (converted from 'ISO-3' or 'FIPS' values to appropriate CVE identifier)
irm:CountryCodeCoverageList/ irm:CountryCode/@irm:precedence	ddms:geospatialCoverage/ ddms:geographicIdentifier/@ddms:precedence
irm:CountryCodeCoverageList/ irm:CountryCode/@irm:order	ddms:geospatialCoverage/@ddms:order
irm:SubCountryCodeCoverageList	Removed and flattened into a sequence of ddms:geospatialCoverage/ ddms:geographicIdentifier/ ddms:subDivisionCode sub-elements.

irm:DescribedItemIRM (V5)	ddms:resource (V6)
irm:SubCountryCodeCoverageList/ irm:SubCountryCode	ddms:geospatialCoverage/ ddms:geographicIdentifier/ ddms:subDivisionCode/@ddms:qualifier= 'urn:us:gov:ic:cenum:coverage: iso3166-2:subcountry:v1'  ddms:geospatialCoverage/ ddms:geographicIdentifier/ ddms:subDivisionCode/@ddms:value
irm:SubCountryCodeCoverageList/ irm:SubCountryCode/@irm:order	ddms:geospatialCoverage/@ddms:order

## Chapter 3 - Summary of Changes to DDMS from Version 3.0 to Version 4.0

This section lists the modifications made to existing DDMS 3.0 elements in implementing DDMS 4.0.

**Table 4 - DDMS 4.0 Change Summary**

DDMS 3.0 Element Name	DDMS 4.0 Element Name	Type of Modification	Notes
	applicationSoftware	ADDED	New element for DDMS 4.0.
category	category	CHANGED	ISM security markings were added and are optional.
creator	creator	CHANGED	Attribute @ddms:POCType added.
contributor	contributor	CHANGED	Attribute @ddms:POCType added.
dates	dates	CHANGED	Attributes @ddms:approvedOn and @ddms:receivedOn added.
	details	ADDED	New element for DDMS 4.0.
format	format	CHANGED	Sub-element Media was removed, and Media sub-elements mimeType, extent, and medium were moved to format.
geographicIdentifier	geographicIdentifier	CHANGED	Sub-element subDivisionCode was added.
geospatialCoverage	geospatialCoverage	CHANGED	Sub-element GeospatialExtent was removed, and GeospatialExtent sub-elements geographicIdentifier, boundingBox, boundingGeometry, postalAddress and vericalExtent were moved to GeospatialCoverage. Attributes @ddms:precedence and @ddms:order were added.
GeospatialExtent		REMOVED	Sub-elements geographicIdentifier, boundingBox, boundingGeometry, postalAddress and vericalExtent were moved to GeospatialCoverage.

DDMS 3.0 Element Name	DDMS 4.0 Element Name	Type of Modification	Notes
keyword	keyword	CHANGED	ISM security markings were added and are optional.
Media		REMOVED	Sub-elements mimeType, extent, and medium were moved to format.
	metacardInfo	ADDED	New element for DDMS 4.0.
	nonStateActor	ADDED	New element for DDMS 4.0.
	noticeList	ADDED	New element for DDMS 4.0.
Organization	organization	CHANGED	Name changed from title case to lowercase. Attribute @ddms:acronym and element subOrganization added.
Person	person	CHANGED	Name changed from title case to lowercase.
pointOfContact	pointOfContact	CHANGED	Attribute @ddms:POCType added.
	processingInfo	ADDED	New element for DDMS 4.0.
	productionMetric	ADDED	New element for DDMS 4.0.
publisher	publisher	CHANGED	Attribute @ddms:POCType added.
	recordKeeper	ADDED	New element for DDMS 4.0.
	recordKeeperID	ADDED	New element for DDMS 4.0.
	recordsManagementInfo	ADDED	New element for DDMS 4.0.
RelatedResource	relatedResource	CHANGED	Attributes of parent element relatedResources moved to relatedResource.
relatedResources		REMOVED	Attributes were moved to sub-element relatedResource, and sub-element relatedResource was moved to be a sub-element of resource.
Resource	resource	CHANGED	Attribute @ntk:DESVersion and elements metacardInfo and resourceManagement were added. subjectCoverage sub-element maxOccurs changed from 1 to unbounded. relatedResources sub-element removed, and replaced with sub-element relatedResource.

DDMS 3.0 Element Name	DDMS 4.0 Element Name	Type of Modification	Notes
	resourceManagement	ADDED	New element for DDMS 4.0.
	revisionRecall	ADDED	New element for DDMS 4.0.
security	security	CHANGED	Sub-elements noticeList and ntk:Access were added.
Service	service	CHANGED	Name changed from title case to lowercase.
	subDivisionCode	ADDED	New element for DDMS 4.0.
Subject		REMOVED	Sub-elements category and keyword were moved to subjectCoverage.
subjectCoverage	subjectCoverage	CHANGED	Sub-element Subject was removed, and Subject sub-elements category and keyword were moved to subjectCoverage. Elements productionMetric and nonStateActor were also added.
	subOrganization	ADDED	New element for DDMS 4.0.
	taskingInfo	ADDED	New element for DDMS 4.0.
temporalCoverage	temporalCoverage	CHANGED	Sub-element TimePeriod removed, and its sub-elements name, start, and end were moved to temporalCoverage.
TimePeriod		REMOVED	Sub-elements name, start, and end were moved to temporalCoverage.
type	type	CHANGED	Element is now an extension of type String and can, therefore, hold text. ISM security markings were added and are optional.
Unknown	unknown	CHANGED	Name changed from title case to lowercase.

## Chapter 4 - Constraints on DDMS

As DDMS allows a wider set of allowable values than IRM does, there are several additional constraints that are not enforced by the DDMS schema. These constraints are encoded in Schematron in order to provide additional guidance on IC-specific requirements.

### 4.1 - Value Enumeration Constraints

Several elements and attributes of the IRM.XML model use Controlled Vocabulary Enumerations (CVEs) to define the data allowed in the element or attribute. In some cases the specific CVE is specified via an attribute, which may include a default CVE. Further, in some of the cases where the CVE can be specified, the attribute may restrict the list of CVEs allowed and some may allow for the author to specify their own CVE. For each of these, the value must be in the specified external CVE or the default CVE.

Some CVEs are not available on all networks. A subset CVE will be provided for use on networks not approved for the entire list. If the processing will occur on a network where the entire CVE is not available, the subset CVE may be substituted in the constraint rules since the excluded values would be excluded from use on the lower network.

As noted in the specific rules, a failure of validation against a CVE will generate an Error.

**Table 5 - CVE Definitions**

CVE File Name	Definition	Element and Rule Cross Reference
CVEnumIRMActivity	All valid values used to identify a ddms:resource's associated type of activity.	type/@ddms:value IRM-ID-00053
CVEnum-IRMAgencyAcronym	All valid organization and agency acronyms attribute ddms:organization/@ddms:acronym	organization/ @ddms:acronym IRM-ID-00052
CVEnumIRMCompoundCountryCodeQualifierType	All valid values for attribute ddms:countryCode/@ddms:qualifier.	countryCode/ @ddms:qualifier IRM-ID-00031
CVEnumIRMCompoundLanguageQualifierType	All valid values for attribute ddms:language/@ddms:qualifier.	language/@ddms:qualifier IRM-ID-00034
CVEnumIRMCoverage-FIPSDigraph	All currently valid FIPS digraphs.	countryCode/@ddms:value IRM-ID-00001
CVEnumIRMCoverageISO-3166-2SubCountry	All currently valid ISO-3166-2 SubCountry Codes.	subDivisionCode/ @ddms:value IRM-ID-00049

CVE File Name	Definition	Element and Rule Cross Reference
CVEnumIRMCoverageISO-3166Digraph	All currently valid ISO-3166 digraphs.	language/@ddms:value IRM-ID-00008 IRM-ID-00009 IRM-ID-00010
CVEnumIRMCoverageISO-3166Trigraph	All currently valid ISO-3166 trigraphs.	countryCode/@ddms:value IRM-ID-00003
CVEnumIRMCoverageISO-3166Precedence	All valid values of the ddms:geospatialCoverage/@ddms:precedence attribute.	geospatialCoverage/@ddms:precedence IRM-ID-00054
CVEnum-IRMIntelDisciplines	All currently valid Intel Discipline codes.	type/@ddms:value IRM-ID-00048
CVEnumIRMIntelSub-disciplines	All currently valid Intel Sub-Discipline codes.	type/@ddms:value IRM-ID-00047
CVEnumIRMIntelSub-disciplineTechniques	All currently valid Intel Sub-Discipline Technique codes.	type/@ddms:value IRM-ID-00046
CVEnum-IRMISO639-2Trigraph	All currently valid ISO-639-2 trigraphs, excluding collectives.	language/@ddms:value IRM-ID-00006 IRM-ID-00009 IRM-ID-00010
CVEnum-IRMISO639-3Trigraph	All currently valid ISO-639-3 trigraphs.	language/@ddms:value IRM-ID-00007
CVEnum-IRMISO639Digraph	All currently valid ISO-639-1 digraphs for languages, excluding collectives.	language/@ddms:value IRM-ID-00008 IRM-ID-00009 IRM-ID-00010
CVEnumIRMMimeType	All currently valid MIME Types from IANA, with additional types for PUBS, IRM, MAT, and AUDIT.	mimeType IRM-ID-00033



CVE File Name	Definition	Element and Rule Cross Reference
CVEnumIRMProduction-MetricsCoverage	All currently valid coverage codes for a Production Metric.	productionMetric/ @ddms:coverage  IRM-ID-00051
CVEnumIRMProduction-MetricsSubject	All currently valid subject codes for a Production Metric.	productionMetric/ @ddms:subject  IRM-ID-00050

## 4.2 - Information Security Markings Constraints

Several elements in IRM Version 5 required Information Security Markings (ISM), while their DDMS 4.0 equivalents do not. To continue to enforce this requirement, several rules were written to ensure that ISM is present on certain DDMS elements.

**Table 6 - Information Security Markings Constraints**

DDMS Element	Constraint Description and Number
@irm:* @ddms:*	IRM-ID-00002: For each element which specifies an attribute in the IRM or DDMS namespace, we make sure that each attribute in the IRM or DDMS namespace specifies a non-whitespace value.
resource/security	IRM-ID-00025: The attribute @ism:excludeFromRollup must not be specified for any element in the namespace [urn:us:mil:ces:metadata:ddms:4] except security.
resource/type[@ddms:qualifier='urn:us:gov:ic:cenum:irm:activity:v1']	IRM-ID-00040: If element ddms:type is specified with a qualifier of [urn:us:gov:ic:cenum:irm:activity:v1], then attribute ism:classification must also be specified.
resource/type[@ddms:qualifier='urn:us:gov:ic:cenum:irm:intel:disciplines:v1']	IRM-ID-00041: If element ddms:type is specified with a qualifier of [urn:us:gov:ic:cenum:irm:intel:disciplines:v1], then attribute ism:classification must also be specified.
resource/type[@ddms:qualifier='urn:us:gov:ic:cenum:irm:intel:subdisciplines:v1']	IRM-ID-00042: If element ddms:type is specified with a qualifier of [urn:us:gov:ic:cenum:irm:intel:subdisciplines:v1], then attribute ism:classification must also be specified.
resource/type[@ddms:qualifier='urn:us:gov:ic:cenum:irm:intel:subdisciplinetechniques:v1']	IRM-ID-00043: If element ddms:type is specified with a qualifier of [urn:us:gov:ic:cenum:irm:intel:subdisciplinetechniques:v1], then attribute ism:classification must also be specified.

DDMS Element	Constraint Description and Number
resource/type[@ddms:qualifier='urn:us:gov:ic:irm:productline']	IRM-ID-00044: If element ddms:type is specified with a qualifier of [urn:us:gov:ic:irm:productline], then attribute ism:classification must also be specified.
resource/geospatialCoverage	IRM-ID-00045: If element ddms:geospatialCoverage is specified, then attribute ism:classification must also be specified.
@xlink:*	IRM-ID-00036: If any XLink attributes are specified for an element, then the type and/or URL of the link must also be specified.

## 4.3 - Additional Constraints

**Table 7 - Additional Constraints on DDMS**

DDMS Element	Constraint Description and Number
resource/metacardInfo/identifier/@ddms:qualifier	IRM-ID-00012: Every metacard must have 1 and only 1 ID identified as an [IC-ID].
resource/identifier/@ddms:qualifier	IRM-ID-00014: Every resource must have 1 and only 1 ID identified as an [IC-ID].
resource/geospatialCoverage/@ddms:precedence	IRM-ID-00029: If a secondary country code is provided, there must also be a primary country code.
resource/geospatialCoverage/@ddms:order resource/subjectCoverage/nonStateActor/@ddms:order	IRM-ID-00030: The values of attribute @ddms:order must be numbered sequentially with no duplicates, beginning at 1.
resource/language	IRM-ID-00035: Every resource must specify its language.
creator/@ddms:POCType publisher/@ddms:POCType contributor/@ddms:POCType pointOfContact/@ddms:POCType	IRM-ID-00037: Elements denoted as POCs for an ORIGINATOR CONTROLLED memo must specify a phone number for that POC.
resource/publisher	IRM-ID-00038: At least one publishing agency must be specified in each metadata card.
resource/subjectCoverage/productionMetric	IRM-ID-00039: At least one production metric must be specified in each metadata card.