

# ICS-IntentMetadata.PDF.1.5

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**Secretariat: CIP4**  
**ICS — Intent Metadata for PDF**

## Abstract

This CIP4 JDF Interoperability Conformance Specification (ICS) defines standardized product intent metadata for embedding in PDF including PDF/VT. Such metadata is useful to receiving systems for determining the production intent of the PDF pages and to aid the creation of job tickets.



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## Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CIP4 shall not be held responsible for identifying any or all such patent rights.

This document was prepared by the Document Metadata sub-group of the Digital Print Workflow Working Group.

## 1. Introduction

This document defines an Interoperability Conformance Specification for the definition of standard metadata keys for PDF and their meanings for the purposes of driving workflows or aiding the creation of parameterized JDF-based job tickets. The published metadata keys are intended to not only be useful to the CIP4 community, but also for users of non-JDF based job tickets.

The intent is to accomplish this through standardizing the use of metadata in content creation. Note that product or service ICS documents will have the responsibility of specifying which metadata keys are required to be supported or prohibited.

PDF files represent content pages and do not normally contain information identifying the purpose of these content pages. Standardized metadata is a simple mechanism that allows for the exchange of information regarding these content pages to aid the receiver of the PDF files in determining the intended use of those content pages in the final print product. By understanding the intended use of content pages the receiver of the PDF file can make more informed decisions regarding the production process for the final print product.

This version builds on the initial ICS-Common Metadata for Document Production Workflow published in 2010. This version focuses on defining standardized metadata into PDF files including PDF/VT.

This version of the pdf metadata ICS defines standardized metadata to:

- provide summary information to aid in optimizing or simplification of the production process
- provide product intent specifications such as paper media selection and binding information
- provide contact information of the owner of the PDF files
- identify what content pages are intended to represent (e.g. a brochure, letter, postcard, etc)
- identify the intended recipient of each of the content pages for variable document printing applications

Future versions of this specification are expected to be published that standardize additional print application specific metadata using the architecture defined in this specification.

### 1.1. Scope



ICS-46 - define the parent PDF version

Depending on

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we may need to update this section.

This Interoperability Conformance Specification (ICS) defines a set of metadata keys and their meanings used in PDF. The metadata keys defined by this ICS are intended for direct interpretation by a conforming reader but may also be used to create job tickets such as JDF.

This ICS defines a base conformance level that includes the syntax and semantics of metadata keys to aid in the production of documents. This base conformance level provides a set of predefined keys but does not require support for any specific set of metadata keys by a conforming reader or conforming writer. CIP4 welcomes any proposals for new standardized keys to be added to the CIP4 metadata hierarchy in future versions of this specification.

### 1.2. Normative references



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The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

*Adobe PDF Reference, fifth edition, version 1.6.*, Adobe Systems Incorporated (ISBN 0-321-30474-8).

Available from internet <http://www.npes.org/standards/toolspdfx.html>

ISO 8601:2004 *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 3166-1:2006 *Codes for the representation of names of countries and their subdivisions- Part 1: Country codes*  
ISO 16612-2 *Graphic technology — Variable data exchange — Part 2: Using PDF/X-4 and PDF/X-5 (PDF/VT-1 and PDF/VT-2)*  
ISO 32000-1 *Document management -- Portable document format -- Part 1: PDF 1.7*

*Extensible Markup Language (XML) 1.0 (Second Edition)*, 6 October 2000, World Wide Web Consortium, Available from internet <<http://www.w3.org>>  
*JDF Specification*, Release 1.5, 2013, CIP4 Organization, Available from internet <<http://www.CIP4.org>>  
*XML Path Language (XPath) 1.0 specification*, 16 November 1999. Available from internet <<http://www.w3.org/tr/xpath>>  
*XMP Specification*, June 2005, Adobe Systems Incorporated. Available from internet <<http://www.npes.org/standards/toolspdfx.html>>

### 1.3. Terms and Definitions

For the purposes of this document, the following terms and definitions apply:

#### **conforming reader**

software application that is able to read and process PDF data in accordance with this ICS.

#### **conforming writer**

software application that is able to write PDF data in accordance with this ICS.

#### **document**

collection of related document parts.

#### **document part**

set of related pages and/or related sets of pages as defined in section 6.5 of the [PDF/VT Reference](#).

**EXAMPLE:** chapter pages of a book or all sets of pages intended for a recipient

#### **document part hierarchy**

hierarchical data structure that specifies the organization of document parts as defined in section 6.5 of the [PDF/VT Reference](#).

#### **document part metadata**

metadata associated with a document part as defined in section 6.6 of the [PDF/VT Reference](#).

#### **hybrid**

Hybrid refers to mixed production using both conventional printing equipment such as flexographic or offset presses and also digital printers in the context of variable data.

#### **ICS**

Interoperability Conformance Specification

#### **JDF**

Job Definition Format

#### **job definition**

information that specifies the production requirements and workflow of a unit of work involving purposing PDF content to one or more messaging channels

## job ticket

electronic specification of process control for print production

## PDF

Portable Document Format according to ISO 32000 and earlier versions as defined by Adobe Systems Inc.

## print product

outcome of the processing of a document through a print manufacturing process

**EXAMPLE:** a perfect bound book or postcard.

## product part

part of a print product

**EXAMPLE:** the cover part of a saddle-stitched booklet.

## recipient

the person or institution that receives a print product.

## reused content

part of the PDF data that is included more than once in one or more page definitions by reference. In PDF reused content is encoded as indirect objects. Examples include Form XObjects and Image XObjects.

## 1.4. Conformance

This ICS defines a base conformance level for the exchange of metadata in PDF files. The Base Conformance Level defines the syntax and semantics of metadata properties.

Conforming PDF data SHALL conform to all the technical requirements set out in Clauses 2, 3 and 4 of this ICS. Conforming PDF data SHALL include the **CIP4\_Root/CIP4\_Metadata/CIP4\_Conformance**, **CIP4\_Root/CIP4\_Metadata/CIP4\_Creator** and **CIP4\_Root/CIP4\_Metadata/CIP4\_ModificationDate** properties at the root of the document part hierarchy of the PDF data as defined in Clause 3.1 of this ICS.

A conforming writer is a software application that SHALL write PDF data conforming to [PDF Reference](#) or earlier versions of PDF and contains metadata conforming to the requirements defined in this ICS.

A conforming reader is a software application that SHALL read and appropriately process PDF data conforming to [PDF Reference](#) or earlier versions of PDF and SHALL read and appropriately process the metadata encoded in the PDF data conforming to the requirements defined in this ICS.

## 1.5. Usage of metadata in production

If print job ticket information such as JDF or explicit production control commands specified in a device control is provided, the job control information specified in the job tickets or production control defines the process behavior of the system. In the absence of print job ticket information such as JDF or explicit production control the documents SHOULD be produced in such a way that the resulting products best match the intent specified in the metadata.

**NOTE:** The job ticket may require usage of the metadata provided in the PDF.

The documents SHOULD include visual hints to the user that certain types of finishing requirements are embedded in the metadata of the document. Such visual hints MAY include a visual representation of holes, fold marks, trim marks, binding and (pre-printed) media which SHOULD be encoded in an optional content group whose auto state array disables the visual hints for printing by setting the PrintState key in the Print dictionary (which is an entry in the dictionary referenced by the AS key in the optional content group definition) to OFF. The visual representation of each pre-printed media should be in a separate optional content group where the PageElement key in the Print dictionary references a dictionary with as Subtype key set to BG or L. In all other cases the PageElement key SHOULD not be present.

**NOTE:** The purpose of placing each pre-printed media in a separate optional content group is to easily allow blank media to be substituted for pre-printed media by enabling the optional content for the background image at print time.

## 1.6. Relation of DPart metadata with XMP metadata

The metadata provided in this ICS applies to individual document parts, whereas XMP metadata typically applies to the scope of the entire document. XMP may apply to the scope of an individual page or part of a page but this usage is very uncommon. Thus XMP is not applicable for the case where metadata is required for sets of pages such as multiple recipients or binding information. For example, XMP is used within PDF/X for file conformance identification and is also used for additional file level information such as author.

## 2. Technical Requirements

### 2.1. Document part (DPart) hierarchy

A document part hierarchy is a tree of document parts as defined in section 6.5 of the [PDF/VT Reference](#) where the leaf nodes represent one or more pages. The **DPart** structure as defined in section 6.5 of the [PDF/VT Reference](#) defines a variable depth document part hierarchy where each **DPart** dictionary represents a document part. Each **DPart** dictionary MAY contain a **DPM** key whose value is a dictionary representing the metadata. Each top-most metadata hierarchy level SHALL be encoded as a PDF dictionary whose name is *Root* and SHALL use the second class name prefix of the top-most hierarchy level. The value of that PDF metadata SHALL be a dictionary value representing the metadata hierarchy contained within that top-most hierarchy level. All the specific metadata properties defined in this specification are contained in a PDF dictionary with name **CIP4\_Root**.

Note: This document refers to sections 6.5 and 6.6 of the [PDF/VT Reference](#) solely for the purpose of defining the document part hierarchy. Therefore there is no requirement for a PDF document that complies with this ICS to be a compliant PDF/VT document.

Note: ISO 32000-2 is anticipated to adopt the **DPart** structure as specified in sections 6.5 and 6.6 of the [PDF/VT Reference](#) for general use in PDF 2.0.

### 2.2. Defining Metadata within a DPart

Metadata properties defined for a given **DPart** SHALL be considered to apply to all **DParts** that are child nodes of that **DPart**. Metadata properties SHALL NOT be specified in **DParts** that are in the scope of parent **DParts** which already specify the same metadata properties. In accordance with section 6.6 of the [PDF/VT Reference](#), each **DPart** node SHALL have at most one **DPM** containing a dictionary of one or more metadata properties from the common metadata hierarchy specified within it.

### 2.3. Encoding metadata keys

The metadata hierarchy SHALL be encoded as a collection of dictionaries, where each dictionary represents a level in the metadata hierarchy. Each metadata key SHALL be encoded as a pdf name that consists of the second class name prefix of the metadata property followed by an underscore symbol and the name of the metadata property.

A vendor wishing to add private metadata properties and levels into the CIP4 hierarchy may do so but SHALL explicitly identify those private metadata properties and levels by specifying an alternate second class name prefix for that property or level. An alternate second class name prefix SHALL be specified by prefixing the name of a metadata property or level with a second class name prefix followed by an underscore character.

EXAMPLE A vendor that is using the second class name prefix **ACME** that wishes to encode a value for a key named **foobar** in the **CIP4\_Root/CIP4\_Recipient** hierarchy will therefore use a metadata property called **CIP4\_Root/CIP4\_Recipient/ACME\_foobar**.

**NOTE 3** A vendor wishing to add private metadata properties is required to register and use a second class name prefix for that private metadata. This ensures maximum interoperability as the CIP4 defined hierarchy can only contain known standard keys with a predefined meaning. The private keys are therefore clearly separated and allow the reader to skip them more readily.

### 2.4. Encoding metadata values

The value of metadata properties SHALL be encoded using the syntax defined in Adobe PDF Reference.

#### 2.4.1. Mapping of the encoding of JDF Intent

Explicit product definitions SHALL only be specified in the **CIP4\_Root/CIP4\_Intent** hierarchy. This hierarchy is based on the Intent resources that are defined in chapter 7 of JDF1.5.

The key names in **CIP4\_Intent** SHALL match the respective JDF Intent resource element names. Any attributes on a JDF Intent resource SHALL be specified as keys in their respective parent level. Attributes in the JDF namespace SHALL be specified using the local name without any namespace prefixes. The data types of the attributes SHALL be mapped according to table below:

JDF datatype	PDF datatype	Comments
Integer double IntegerSpan NumberSpan	number	Non numeric values such as NaN and INF SHALL NOT be specified.

List	Array of base type	Any list that is encoded in JDF as a whitespace separated list of base type is encoded as an array of the respective base type, e.g. IntegerList will be encoded as an Array of number. List includes named list types such as XYPair, Rectangle, Matrix, CMYKColor etc.
Range	Array of 2 base type	Any range is encoded as an array of 2 elements of the respective base type, e.g. IntegerRange will be encoded as an Array of 2 numbers.
NMTOKEN Enumeration ID EnumerationSpan NameSpan	Name	
NMTOKENS Enumerations	Array of Name	
boolean OptionSpan	boolean	
String StringSpan	string	
Any other singular datatype	string	This includes dateTime, date, duration, etc.
XML elements with a maximum cardinality of one	dictionary	XML elements that are specified in JDF with a maximum cardinality of 1 SHALL be encoded as a metadata key whose value is a dictionary. The name of the metadata key SHALL be the local name of the element with a CIP4_ prefix.  Any PDF dictionary that represents an XML element MAY contain an optional key with a name of "ElementName" and a value of the local name of the element with a CIP4_ prefix.  Note: This addition allows for identification of the dictionaries when they are encoded as indirect objects.
XML elements with a maximum cardinality of 2 or more	Array of dictionary	XML elements that are specified in JDF with a maximum cardinality of 2 or more SHALL be encoded as a metadata key whose value is an array of dictionaries. The name of the metadata key SHALL be the local name of the element with a CIP4_ prefix. All other restrictions are identical to XML elements with a maximum cardinality of one.

**Note:** The span elements defined in JDF1.5, section 7.4.2 are mapped to the datatype as defined by Span/@Actual. JDF Partitioning is not supported. The explicit values SHALL be specified in the context of the DPart node.

**Note:** When encoding Intent data in PDF, the Intent data MAY be encoded as indirect objects and referenced multiple times.

## 2.5. Registered Second Class Name Prefixes

Prefix	Namespace URI	Organization
GTS_	http://www.npes.org/pdfx/ns/id/	NPES & ISO
CIP4_	urn:cip4.org:CommonMetadata:CIP4	CIP4

## 3. The CIP4 Common Metadata Hierarchy

The CIP4 Common metadata hierarchy is designed to associate metadata to ranges of pages.

Standard metadata definitions are provided by this ICS for use in describing:

- finished printed products or parts of printed products;
- summary information to aid in optimizing the production process;
- recipient information for variable data jobs.

### 3.1. CIP4\_Root Hierarchy

The root of CIP4 metadata trees is **DPM/CIP4\_Root**. Some types of metadata are restricted in scope to specific **DParts**. These restrictions are called out in the column labeled "Scope" in the tables below. Some metadata keys are optional. Optional keys are labeled with an

additional "?" in the column labeled "Name" in the tables below.

Some metadata types SHALL only occur at certain levels within the **DPart** hierarchy. These restrictions are called out in the column labeled scope. The following levels are defined:

- **Any**: The metadata MAY occur at any level in the **DPart** hierarchy.
- **Root**: The metadata SHALL NOT occur at any level other than the document root in the **DPart** hierarchy.
- **Record**: The metadata SHALL NOT occur at any level other than the record level defined by **DPartRoot/RecordLevel** in the **DPart** hierarchy.
- **non Leaf**: The metadata SHALL NOT occur at the leaf level, which is any level that has no **DPart** children in the **DPart** hierarchy.

Name	Data Type	Scope	Description
<b>CIP4_Metadata</b>	CIP4_Metadata	Root	The <b>CIP4_Metadata</b> level contains metadata properties that provides information regarding the PDF data as a whole.
<b>CIP4_Summary ?</b>	CIP4_Summary	Any	The <b>CIP4_Summary</b> level SHALL contain metadata properties that have values that can be determined by inspecting the PDF data.
<b>CIP4_Recipient ?</b>	CIP4_Recipient	Record	The <b>CIP4_Recipient</b> level contains metadata properties with information regarding the intended recipient of the pages. <b>CIP4_Recipient</b> SHALL NOT be specified in <b>DPart</b> levels other than those selected by <b>DPartRoot/RecordLevel</b> .
<b>CIP4_Intent ?</b>	CIP4_Intent	Any	<b>CIP4_Intent</b> specifies the creator's view of a product or document.
<b>CIP4_Production ?</b>	CIP4_Production	Any	The <b>CIP4_Production</b> level contains metadata properties that MAY be used to parameterize a job ticket or provide additional production information that is not available in <b>CIP4_Root/CIP4_Intent</b> .

### 3.3. The Metadata level

The **CIP4\_Root/CIP4\_Metadata** level contains metadata properties that provides information regarding the PDF data as a whole. The **CIP4\_Root/CIP4\_Metadata** SHALL NOT be defined in any **DPart** node other than the root **DPart** node.

#### 3.3.1. CIP4\_Metadata level

Name	Data Type	Scope	Description
<b>CIP4_Conformance</b>	string	Root	<p><b>CIP4_Conformance</b> indicates the list of ICS's separated by spaces to which all the metadata in the PDF data adheres. A value of <i>CIP4_IntentBase_1.5</i> SHALL be used if no other more restrictive ICS applies.</p> <p><b>Note:</b> The value of <i>CIP4_IntentBase_1.5</i> was chosen to indicate that current intent is a mapping from JDF 1.5.</p> <p>Each ICS that restricts the use of metadata properties defined in this ICS SHOULD include a required value for this metadata property that uniquely identifies that ICS. That required value SHALL adhere to the requirements for XML name token.</p>
<b>CIP4_Creator</b>	string	Root	<b>CIP4_Creator</b> identifies the conforming writer of that metadata.
<b>CIP4_Modification Date</b>	string	Root	<p><b>CIP4_ModificationDate</b> identifies the date at which the PDL data was last modified or created. The data SHALL conform to the format specified in ISO 8601:2004.</p> <p><b>NOTE 1</b> <b>CIP4_ModificationDate</b> allows detection of the modifications to PDF data by a non-conforming writer. The PDF specification already encodes a last modification date but this modification date by itself is not necessarily sufficient to detect modifications relating to the metadata by a non-conforming writer.</p> <p><b>NOTE 2</b> A conforming writer that includes metadata in a private namespace MAY need to include a method to detect whether a different application has made changes to the document as such changes may require certain metadata to be updated. Therefore a conforming writer that maintains private metadata SHOULD include a modification date as private metadata in order to detect changes made to the document by applications that do not understand the private metadata. Comparing the modification date stored in private metadata with the metadata modification date stored under <b>CIP4_Root/CIP4_Metadata/CIP4_ModificationDate</b> property will allow the application to detect that another application has modified the document (including the metadata) as the other application will not have updated the modification mode in private metadata.</p>
<b>CIP4_JobID ?</b>	string	Root	<b>CIP4_JobID</b> identifies the job or contract to which the PDF data as a whole belongs in the context of the originating system.



<b>CIP4_ProjectID ?</b>	string	Root	<b>CIP4_ProjectID</b> identifies the project or group of jobs that the PDF data as a whole belongs to in the context of the originating system.
<b>CIP4_Accounting ?</b>	CIP4_Contact	Root	<b>CIP4_Accounting</b> identifies the CIP4_Contact information of where to send the bill for the production of the PDL data.
<b>CIP4_Sender ?</b>	CIP4_Contact	Root	<b>CIP4_Sender</b> identifies the CIP4_Contact information for the sender or originator of the PDL data.
<b>CIP4_Author ?</b>	CIP4_Contact	Root	<b>CIP4_Author</b> identifies the <b>CIP4_Contact</b> information for the author of the PDL data.
<b>CIP4_Administrator ?</b>	CIP4_Contact	Root	<b>CIP4_Administrator</b> identifies the <b>CIP4_Contact</b> information regarding the execution of the PDL data.

### 3.4. The Summary level

The optional **CIP4\_Root/CIP4\_Summary** level SHALL contain metadata properties that have values that can be determined by inspecting the PDF data.

#### 3.4.1. CIP4\_Summary Level

Name	Data Type	Scope	Description
<b>CIP4_PageCount ?</b>	numeric	Any	<b>CIP4_PageCount</b> SHALL equal the total number of pages in the document part in which this property is specified.
<b>CIP4_Uniform ?</b>	CIP4_Uniform	Any	<b>CIP4_Uniform</b> SHALL specify properties of a DPart that are uniform within the scope of the DPart.
<b>CIP4_UniformRecipientStructure ?</b>	boolean	Root	<b>CIP4_UniformRecipientStructure</b> SHALL have the value <i>true</i> if and only if the structure of each <b>DPart</b> intended for a single recipient has the same structure and corresponding <b>DPart</b> leaf nodes have the same number of pages of the same size.
<b>CIP4_UniformNodeStructure ?</b>	boolean	non Leaf	<b>CIP4_UniformNodeStructure</b> SHALL only have the value <i>true</i> if and only if the structure of each <b>DPart</b> contained in the <b>DPart</b> in which this property is specified, has the same structure and the corresponding <b>DPart</b> leaf nodes have the same number of pages of the same size.  Note: a value of <i>true</i> implies that all pages reference directly or indirectly from the <b>DPart</b> MAY be imposed using the same imposition template.
<b>CIP4_RecipientCount ?</b>	numeric	Recipient	<b>CIP4_RecipientCount</b> SHALL indicate the total number of recipients for which there are <b>DParts</b> contained within the <b>DPart</b> in which this property is specified. <b>CIP4_RecipientCount</b> SHALL NOT be defined in any <b>DPart</b> node that does not directly or indirectly contain recipient <b>DPart</b> nodes.
<b>CIP4_Content ?</b>	CIP4_Content	Any	<b>CIP4_Content</b> SHALL contain information about reused content definition referenced from pages contained within the <b>DPart</b> in which this property is specified
<b>CIP4_IntentSummary ?</b>	CIP4_IntentSummary	Any	<b>CIP4_IntentSummary</b> SHALL specify intent properties of a DPart that are in use within the scope of the DPart.

#### 3.4.2. CIP4\_Uniform Level

Name	Data Type	Scope	Description
<b>CIP4_Orientation ?</b>	boolean	Any	<b>CIP4_Orientation</b> SHALL be <i>true</i> for a <b>DPart</b> if and only if all the pages of that <b>DPart</b> have the same orientation (e.g. all portrait or all landscape).
<b>CIP4_Size ?</b>	boolean	Any	<b>CIP4_Size</b> SHALL be <i>true</i> for a <b>DPart</b> if and only if all the pages of that <b>DPart</b> have the same size independent of orientation (e.g. an A4 landscape page is the same size as an A4 portrait page).
<b>CIP4_Color ?</b>	boolean	Any	<b>CIP4_Color</b> SHALL be <i>true</i> for a <b>DPart</b> if and only if all of the page content of the <b>DPart</b> uses multiple colorants
<b>CIP4_Monochrome ?</b>	boolean	Any	<b>CIP4_Monochrome</b> SHALL be <i>true</i> for a <b>DPart</b> if and only if all the graphical content of all pages of the <b>DPart</b> use a single colorant other than black.
<b>CIP4_Black ?</b>	boolean	Any	<b>CIP4_Black</b> SHALL be <i>true</i> for a <b>DPart</b> if and only if all the graphical content of all pages of the <b>DPart</b> use black colorant.

**NOTE:** When both *CIP4\_Size* and *CIP4\_Orientation* are *true* the dimensions of all pages are the same.

### 3.4.3. CIP4\_Content Level

Name	Data Type	Scope	Description
<b>CIP4_Referenced ?</b>	array of string	Any	<b>CIP4_Referenced</b> SHALL contain the identifier for each reused content definition referenced from pages contained within the <b>DPart</b> in which this property is specified. The value of the <b>/GTS_XID</b> key of the recurring <b>XObject</b> SHALL be used.
<b>CIP4_ReferenceCount ?</b>	array of integer	Any	Each entry in the <b>CIP4_ReferenceCount</b> array value SHALL be the number of references, within the <b>DPart</b> in which this property is defined, for the reused content indicated in the corresponding entry of the <b>CIP4_Referenced</b> property on the same <b>DPart</b> .
<b>CIP4_Identical ?</b>	array of integer	Recipient	The integers in the <b>CIP4_Identical</b> property reference the zero based page numbers in the context of an individual recipient that contain identical static (non-variable) content and MAY be pre-produced in a hybrid workflow. Negative numbers count backwards from the last page in the context of an individual recipient. The <b>CIP4_Identical</b> SHALL NOT be defined in any <b>DPart</b> node that does not directly or indirectly contain recipient <b>DPart</b> nodes.
<b>CIP4_StaticID ?</b>	Name	Any	<b>DPart</b> nodes with the same <b>CIP4_StaticID</b> property SHALL have the same structure, number of pages and content and metadata. This value SHOULD be used to identify static components that MAY be produced with a more efficient method in a hybrid workflow.

### 3.4.4. The CIP4\_IntentSummary level

Each referenced dictionary SHOULD be referenced at least once by **CIP4\_Root/CIP4\_Intent** properties that are defined within the **DPart** in which this property is defined.

The **CIP4\_Root/CIP4\_Summary/CIP4\_IntentSummary** property defines a set of intent resources and SHALL have a value of type array of dictionary. Values are:

Name	Data Type	Scope	Description
<b>CIP4_BindingIntent ?</b>	array of CIP4_BindingIntent	any	
<b>CIP4_ColorIntent ?</b>	array of CIP4_ColorIntent	any	
<b>CIP4_EmbossingIntent ?</b>	array of CIP4_EmbossingIntent	any	
<b>CIP4_FoldingIntent ?</b>	array of CIP4_FoldingIntent	any	
<b>CIP4_HoleMakingIntent ?</b>	array of CIP4_HoleMakingIntent	any	
<b>CIP4_InsertingIntent ?</b>	array of CIP4_InsertingIntent	any	
<b>CIP4_LaminatingIntent ?</b>	array of CIP4_LaminatingIntent	any	
<b>CIP4_LayoutIntent ?</b>	array of CIP4_LayoutIntent	any	
<b>CIP4_MedialIntent ?</b>	array of CIP4_MedialIntent	any	
<b>CIP4_ProductionIntent ?</b>	array of CIP4_ProductionIntent	any	
<b>CIP4_ScreeningIntent ?</b>	array of CIP4_ScreeningIntent	any	
<b>CIP4_ShapeCuttingIntent ?</b>	array of CIP4_ShapeCuttingIntent	any	

## 3.5. The Recipient level

The **CIP4\_Recipient** level contains metadata properties with information regarding the intended recipient of the pages.

### 3.5.1. CIP4\_Recipient

Name	Data Type	Scope	Description
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<b>CIP4_Uniqueld ?</b>	string	recipient	The value of the <b>CIP4_Uniqueld</b> property SHALL uniquely identify the recipient.
<b>CIP4_Contact ?</b>	CIP4_Contact	recipient	The value of the <b>CIP4_Contact</b> property SHALL provide contact information about the recipient.

## 3.6. The Intent level

JDF Intent specifies the creator's view of a product or document. Providing intent level information within the **CIP4\_Root/CIP4\_Intent** hierarchy of a PDF allows a PDF creator to specify additional properties how the respective pages that are referenced by the **DPart** SHALL be used in the context of a finished product.

### 3.6.1. Intent referencing

Each key under **CIP4\_Root/CIP4\_Intent** MAY be an indirect reference to a dictionary that is referenced from **CIP4\_Root/CIP4\_Summary/CIP4\_IntentSummary** under the same name.

Name	Data Type	Scope	Description
<b>CIP4_ProductType ?</b>	Name	any	<p>The value of <b>CIP4_ProductType</b> property SHALL indicate what the <b>DPart</b> represents. The name SHOULD be one of the following:</p> <ul style="list-style-type: none"> <li>• <i>BackCover</i>:</li> <li>• <i>Body</i>: Generic content inside of a Cover</li> <li>• <i>Book</i>: Body with a Cover and a Spine</li> <li>• <i>BookBlock</i>:</li> <li>• <i>BookCase</i>:</li> <li>• <i>Booklet</i>: Body with a Cover without a Spine (typically stapled)</li> <li>• <i>Box</i></li> <li>• <i>Brochure</i>: A single folded sheet</li> <li>• <i>BusinessCard</i></li> <li>• <i>Chapter</i></li> <li>• <i>Cover</i>: A single sheet covering a side of a print product.</li> <li>• <i>CoverLetter</i>: A letter accompanying another print product</li> <li>• <i>Envelope</i></li> <li>• <i>FrontCover</i></li> <li>• <i>Insert</i>: A product part intended to be inserted into a print product</li> <li>• <i>Jacket</i>: Hard cover case jacket</li> <li>• <i>Label</i></li> <li>• <i>Leaflet</i>: A single unfolded sheet</li> <li>• <i>Letter</i></li> <li>• <i>Map</i>:</li> <li>• <i>Newspaper</i></li> <li>• <i>Postcard</i></li> <li>• <i>Poster</i></li> <li>• <i>ResponseCard</i>: A SelfMailer to respond to an offer</li> <li>• <i>Section</i></li> <li>• <i>SelfMailer</i>: A document to be sent via the post without an additional envelope.</li> <li>• <i>Spine</i>: The binding side of a print product</li> <li>• <i>WrapAroundCover</i>: A single sheet containing the Front Cover, Spine and Back Cover.</li> </ul> <p><b>EXAMPLE:</b> A PostCard is a single-sheet self-mailer. A wafer-sealed document is also a self-mailer.</p> <p>NOTE 3 The value of the <b>CIP4_ProductType</b> property can be any name but for sake of interoperability and automatic processing the property SHOULD be given a value listed in this specification if the finished product has the same physical characteristics or purpose. Therefore an invoice should be classified as a Letter if it is sent in an windowed envelope or as a SelfMailer if the invoice pages will be folded and glued into an addressed envelope. A data sheet should be classified as a Leaflet if it is a single unfolded sheet or as a Brochure if it's a single folded sheet or a Booklet if it contains multiple pages stapled together.</p>
<b>CIP4_BindingIntent ?</b>	CIP4_BindingIntent	any	<p><b>CIP4_BindingIntent</b> specifies details of Binding.</p> <p><b>CIP4_BindingIntent</b> SHALL NOT be specified if <b>CIP4_InsertingIntent</b> is present.</p>
<b>CIP4_ColorIntent ?</b>	CIP4_ColorIntent	any	<p><b>CIP4_ColorIntent</b> specifies details of coating and that are independent of the print process. It is a placeholder for optional extensions.</p>
<b>CIP4_EmbossingIntent ?</b>	CIP4_EmbossingIntent	any	<p><b>CIP4_EmbossingIntent</b> specifies details of embossing. It is a placeholder for optional extensions.</p>

<b>CIP4_FoldingIntent ?</b>	CIP4_FoldingIntent	any	<b>CIP4_FoldingIntent</b> specifies details of folding of the finished product that are NOT implied by the value of <b>CIP4_BindingIntent/CIP4_BindingType</b> .
<b>CIP4_HoleMakingIntent ?</b>	CIP4_HoleMakingIntent	any	<b>CIP4_HoleMakingIntent</b> specifies details of hole punching.
<b>CIP4_InsertingIntent ?</b>	CIP4_InsertingIntent	non leaf	<b>CIP4_InsertingIntent</b> specifies how various parts of a PDF/VT document are inserted into containers such as envelopes. <b>CIP4_InsertingIntent</b> SHALL NOT be specified if <b>CIP4_BindingIntent</b> is present.
<b>CIP4_LaminatingIntent ?</b>	CIP4_LaminatingIntent	any	<b>CIP4_LaminatingIntent</b> specifies details of laminating. It is a placeholder for optional extensions.
<b>CIP4_LayoutIntent ?</b>	CIP4_LayoutIntent	any	<b>CIP4_LayoutIntent</b> specifies details of page layout.
<b>CIP4_MedialIntent ?</b>	CIP4_MedialIntent	any	<b>CIP4_MedialIntent</b> specifies the media that SHALL be printed.
<b>CIP4_ProductionIntent ?</b>	CIP4_ProductionIntent	any	<b>CIP4_ProductionIntent</b> specifies additional production details. It is a placeholder for optional extensions.
<b>CIP4_ScreeningIntent ?</b>	CIP4_ScreeningIntent	any	<b>CIP4_ScreeningIntent</b> specifies details of half-tone screening. It is a placeholder for optional extensions.
<b>CIP4_ShapeCuttingIntent ?</b>	CIP4_ShapeCuttingIntent	any	<b>CIP4_ShapeCuttingIntent</b> specifies details of die cutting or other physical manipulation of the printed media. It is a placeholder for optional extensions.

### 3.7. Supported JDF Intents

This chapter lists the recommended JDF Intent dictionaries. All Intent values are optional. Intent values that are not listed in this section MAY be mapped according to the rules in the previous section.

Intent Dictionaries with the exception of **CIP4\_BindingIntent** and **CIP4\_InsertingIntent** apply to the **DPart** in which they are specified and to all descendant **DParts** of that **DPart**. When specified in a non-leaf **DPart**, **CIP4\_BindingIntent** and **CIP4\_InsertingIntent** the components represented by the direct descendants of said **DPart** SHALL be bound or inserted according to the instructions in **CIP4\_BindingIntent** or **CIP4\_InsertingIntent**. When **CIP4\_BindingIntent** is specified in a leaf **DPart**, the component represented by said **DPart** SHALL be bound according to the instructions in **CIP4\_BindingIntent**.

### 3.8. CIP4\_Intent/CIP4\_BindingIntent

The **CIP4\_Root/CIP4\_Intent/CIP4\_BindingIntent** specifies details of Binding. All pages that are referenced by this **DPart** Node or any of this **DPart** Node's descendant **DPart** Nodes SHALL be bound together according to the method specified in **BindingIntent**.

#### 3.8.1. CIP4\_BindingIntent

Name	Data Type	Scope	Description
<b>CIP4_BindingSide ?</b>	Name	any	The value of <b>CIP4_BindingSide</b> SHALL be one of the following: <ul style="list-style-type: none"> <li>• <i>Left</i>: SHALL be used for binding on the left edge of the product part</li> <li>• <i>Right</i>: SHALL be used for binding on the right edge of the product part</li> <li>• <i>Top</i>: SHALL be used for binding on the top edge of the product part</li> <li>• <i>Bottom</i>: SHALL be used for binding on the bottom edge of the product part</li> </ul>

<b>CIP4_BindingType ?</b>	Name	any	The value of <b>CIP4_BindingType</b> SHALL be one of the following: <ul style="list-style-type: none"> <li>• <i>ChannelBinding</i> – No folding and no hole punching are implied.</li> <li>• <i>CoilBinding</i> - No folding is implied. Either a system specified hole puncher SHALL be activated or the appropriate pre-punched Media SHALL be selected.</li> <li>• <i>CornerStitch</i> -Stitch in the corner that is at the clockwise end binding edge. For example, to stitch in the top left corner, set BindingSide = "Left". No folding and no hole punching are implied.</li> <li>• <i>PlasticComb</i> - No folding is implied. Either a system specified hole puncher SHALL be activated or the appropriate pre-punched Media SHALL be selected.</li> <li>• <i>Ring</i> - No folding is implied. Either a system specified hole puncher SHALL be activated or the appropriate pre-punched Media SHALL be selected.</li> <li>• <i>SaddleStitch</i> – An F4-1 fold is implied. no hole punching is implied.</li> <li>• <i>SideStitch</i> - No folding and no hole punching are implied.</li> <li>• <i>Tape</i> - No folding and no hole punching are implied.</li> <li>• <i>WireComb</i> - No folding is implied. Either a system specified hole puncher SHALL be activated or the appropriate pre-punched Media SHALL be selected.</li> </ul>
<b>CIP4_SaddleStitching ?</b>	CIP4_SaddleStitching	any	<b>CIP4_SaddleStitching</b> specifies the details of SaddleStitching. SHALL only be present if <b>CIP4_BindingType=SaddleStitch</b> .
<b>CIP4_SideStitching ?</b>	CIP4_SideStitching	any	<b>CIP4_SideStitching</b> specifies the details of SaddleStitching. SHALL only be present if <b>CIP4_BindingType=SideStitch</b> .
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_BindingIntent.

### 3.8.2. CIP4\_SaddleStitching

Name	Data Type	Scope	Description
<b>CIP4_StitchNumber ?</b>	integer	any	<b>CIP4_StitchNumber</b> specifies the number of stitches for SaddleStitching.
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_SaddleStitching.

### 3.8.3. CIP4\_SideStitching

Name	Data Type	Scope	Description
<b>CIP4_StitchNumber ?</b>	integer	any	<b>CIP4_StitchNumber</b> specifies the number of stitches for SideStitching.
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_SideStitching.

## 3.9. CIP4\_Intent/CIP4\_ColorIntent

**CIP4\_ColorIntent** specifies details of coating and that are independent of the print process. It is a placeholder for optional extensions.

**CIP4\_ColorIntent** SHALL NOT include information about printing color conditions. This information SHALL be provided using the standard methods defined for [PDFReference](#), e.g. output profiles.

### 3.9.1. CIP4\_ColorIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_ColorIntent.

## 3.10. CIP4\_Intent/CIP4\_EmbossingIntent

**CIP4\_EmbossingIntent** specifies details of embossing. It is a placeholder for optional extensions.

### 3.10.1. CIP4\_EmbossingIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_EmbossingIntent.

### 3.11. CIP4\_Intent/CIP4\_FoldingIntent

**CIP4\_FoldingIntent** specifies details of folding of the finished product that are NOT implied by the value of **CIP4\_BindingIntent/CIP4\_BindingType**. If a **CIP4\_BindingIntent/CIP4\_BindingType** implies a given Fold, then **CIP4\_Root/CIP4\_Intent/CIP4\_FoldingIntent** SHALL NOT be specified to describe that fold. Production folds such as those used in impositioning SHALL NOT be specified. All pages that are directly or indirectly referenced by this DPart Node SHALL be folded together according to the method specified in **CIP4\_FoldingIntent**. Logically all the pages directly or indirectly referenced by this **DPart** Node SHALL be folded as if the stack of sheets was folded as a single entity. The number and distribution of pages on sheets MAY be defined in **CIP4\_Root/CIP4\_Intent/CIP4\_LayoutIntent/CIP4\_SpreadType**.

#### 3.11.1. CIP4\_FoldingIntent

Name	Data Type	Scope	Description																											
<b>CIP4_FoldingCatalog ?</b>	name	any	<p><b>CIP4_FoldingCatalog</b> property SHALL have a value of type name.</p> <p>Note: that additional values of <b>FoldingCatalog</b> MAY be supported.</p> <p>Details of the folding schemes and additional values can be found in: JDF1.5 Fig 8-30</p> <p>The name SHOULD be one of the following:</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 30%;"><b>F2-1</b> - No Fold</td> <td style="width: 10%;"><input type="checkbox"/></td> <td style="width: 60%;"><b>ICS-53</b> - 3D Folding Vector illustrations</td> </tr> <tr> <td colspan="3" style="text-align: center;">Add images here see: <b>DRAFTING</b></td> </tr> <tr> <td><b>F4-1</b> - Single Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F6-1</b> - Zigzag Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F6-3</b> - Altar Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F6-4</b> - Tri Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F6-7</b> - Z-Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F8-2</b> - Parallel Fold</td> <td></td> <td></td> </tr> <tr> <td><b>F8-4</b> - Gate Fold</td> <td></td> <td></td> </tr> </table>	<b>F2-1</b> - No Fold	<input type="checkbox"/>	<b>ICS-53</b> - 3D Folding Vector illustrations	Add images here see: <b>DRAFTING</b>			<b>F4-1</b> - Single Fold			<b>F6-1</b> - Zigzag Fold			<b>F6-3</b> - Altar Fold			<b>F6-4</b> - Tri Fold			<b>F6-7</b> - Z-Fold			<b>F8-2</b> - Parallel Fold			<b>F8-4</b> - Gate Fold		
<b>F2-1</b> - No Fold	<input type="checkbox"/>	<b>ICS-53</b> - 3D Folding Vector illustrations																												
Add images here see: <b>DRAFTING</b>																														
<b>F4-1</b> - Single Fold																														
<b>F6-1</b> - Zigzag Fold																														
<b>F6-3</b> - Altar Fold																														
<b>F6-4</b> - Tri Fold																														
<b>F6-7</b> - Z-Fold																														
<b>F8-2</b> - Parallel Fold																														
<b>F8-4</b> - Gate Fold																														
<b>CIP4_Orientation ?</b>	name	any	<p><b>CIP4_Orientation</b> SHALL specify the orientation of the unfolded sheet with respect to the Lay of the fold catalog entry:</p> <ul style="list-style-type: none"> <li>• <i>Rotate0</i>: The lay of the fold SHALL be the lower left corner of the sheet, face up. This is the default value.</li> <li>• <i>Rotate90</i>: The lay of the fold SHALL be the upper left corner of the sheet, face up.</li> <li>• <i>Rotate180</i>: The lay of the fold SHALL be the upper right corner of the sheet, face up.</li> <li>• <i>Rotate270</i>: The lay of the fold SHALL be the lower right corner of the sheet, face up.</li> <li>• <i>Flip0</i>: The lay of the fold SHALL be the upper right corner of the sheet, face down.</li> <li>• <i>Flip90</i>: The lay of the fold SHALL be the upper left corner of the sheet, face down.</li> <li>• <i>Flip180</i>: The lay of the fold SHALL be the lower left corner of the sheet, face down.</li> <li>• <i>Flip270</i>: The lay of the fold SHALL be the lower right corner of the sheet, face down.</li> </ul> <p>The orientation of the unfolded sheet SHALL be calculated from the orientation of the page after all transformations specified in the PDF have been applied.</p> <p>Note: This implies that the /Rotate flag SHALL be applied.</p>																											
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_FoldingIntent.																											

### 3.12. CIP4\_Intent/CIP4\_HoleMakingIntent

**CIP4\_HoleMakingIntent** specifies details of hole punching.

If a **CIP4\_BindingIntent/CIP4\_BindingType** implies a given **CIP4\_HoleMakingIntent**, then **CIP4\_HoleMakingIntent** NEED NOT be specified unless additional holes to those implied by **CIP4\_BindingIntent/CIP4\_BindingType** are required, e.g. Ringbinding in a two-hole Binder but holes for both two-hole and three-hole binding. In this case the complete **CIP4\_Root/CIP4\_Intent/CIP4\_HoleMakingIntent** including the entry specifying the holes implied by **CIP4\_BindingIntent/CIP4\_BindingType** SHALL be specified.

#### 3.12.1. CIP4\_HoleMakingIntent

Name	Data Type	Scope	Description
<b>CIP4_HoleReferenceEdge ?</b>	name	any	<p><b>CIP4_HoleReferenceEdge</b> SHALL specify the reference edge for the line of holes. Values <b>SHALL</b> be one of:</p> <ul style="list-style-type: none"> <li>• <i>Left</i>: SHALL be used for holes on the left edge of the product part</li> <li>• <i>Right</i>: SHALL be used for holes on the right edge of the product part</li> <li>• <i>Top</i>: SHALL be used for holes on the top edge of the product part</li> <li>• <i>Bottom</i>: SHALL be used for holes on the bottom edge of the product part</li> <li>• <i>Pattern</i>: SHALL be used for holes as implied by CIP4_HoleType. See <b>Appendix L</b> of the JDF <a href="#">Specification</a> for details which reference edge shall be used for which hole type.</li> </ul>
<b>CIP4_HoleType ?</b>	Array of Name		<p><b>CIP4_HoleType</b> SHALL define the hole patterns.</p> <p>Each name contained in <b>CIP4_Root/CIP4_Intent/CIP4_HoleMakingIntent/CIP4_HoleType</b> SHALL be a catalog ID listed in Appendix L of the <a href="#">JDF Specification</a></p>
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_HoleMakingIntent.

### 3.13. CIP4\_Intent/CIP4\_InsertingIntent

The **CIP4\_Root/CIP4\_Intent/CIP4\_InsertingIntent** specifies how various parts of a PDF/VT document are inserted into containers such as envelopes.

The first descendant **DPart** represents the receiving container such as an envelope and the remaining direct descendant **DParts** are inserted into the container in the order in which the children **DParts** are specified.

If no additional **FoldingIntent** is specified for a container, the MediaBox and other PDF boxes SHALL apply to the finished size of the container and the sides of the Media refer to the front and back side of the container. If **FoldingIntent** is specified for a container, the MediaBox and other PDF boxes SHALL apply to the flat size of the media used to construct the container and the front side of the Media refers to the front side of the flat media prior to folding. In case of 3-Dimensional containers, **CIP4\_Intent/CIP4\_LayoutIntent/CIP4\_Finished Dimensions** SHOULD be specified.

Each container is represented by a **DPart** and the PDF pages contained in that **DPart** describe the appearance of the container. If the container is not itself personalised then the PDF pages describing the appearance of the container SHOULD be marked as static by specifying a **CIP4\_StaticID**. In general any PDF page whose content is not personalised SHOULD be marked as static by specifying a **CIP4\_StaticID** enabling those pages to be produced in a separate process.

Note: For containers with negligible height such as an envelope the **DPart** describing the appearance of the container has one or two pages, showing the appearance of the front and back of the container. For 3-d containers such as a box the **DPart** describing the appearance of the container also has one or two pages but contains the appearance of the front (outside) and back (inside) of the flat from which the container is constructed by folding, trimming, cutting, etc.

#### 3.13.1. CIP4\_InsertingIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_InsertingIntent.

### 3.14. CIP4Intent/CIP4\_LaminatingIntent

**CIP4\_LaminatingIntent** specifies details of laminating. It is a placeholder for optional extensions.

#### 3.14.1. CIP4\_LaminatingIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_LaminatingIntent.

### 3.15. CIP4\_Intent/CIP4\_LayoutIntent

**CIP4\_LayoutIntent** specifies details of the page layout.

### 3.15.1. CIP4\_LayoutIntent

Name	Data Type	Scope	Description
CIP4_Sides	name	any	<p><b>CIP4_Sides SHALL</b> specify which sides to print and how front and back pages are oriented.</p> <p><i>OneSided</i> – Page contents will only be imaged on the front side of the media or the outside of a cover.</p> <p><i>OneSidedBack</i> – Page contents will only be imaged on the back side of the media or the inside of a cover.</p> <p><i>TwoSidedHeadToHead</i> – Impose pages upon the front and back sides of media Sheets so that the head (top) of page contents back up to each other.</p> <p><i>TwoSidedHeadToFoot</i> – Impose pages upon the front and back sides of media Sheets so that the head (top) of the front backs up to the foot (bottom) of the back.</p>
CIP4_FinishedDimensions ?	Array of numeric	any	<p><b>CIP4_FinishedDimensions SHALL</b> specify the width (X), height (Y) and depth (Z) in points, respectively, of the finished product <b>Component</b> after all finishing operations, including folding, trimming, etc. have been applied. The PDF pages referenced by the <b>DPart</b> node for which <b>CIP4_FinishedDimensions</b> is specified describe the flat from which the finished <b>Component</b> is created by applying cutting, folding, trimming, etc. If the TrimBox of the PDF pages are equal to the width and height specified in <b>CIP4_FinishedDimensions</b> then the PDF pages SHALL specify the front (top) and back (bottom) of the finished product <b>Component</b>, otherwise the PDF pages SHALL specify the front and back of the flat from which the finished product <b>Component</b> will be constructed by applying cutting, folding, trimming, etc.</p> <p>In the absence of <b>CIP4_FinishedDimensions</b> the width and height of the finished product <b>Component</b> SHOULD be taken from the TrimBox of the PDF pages and the depth of the finished product <b>Component</b> SHOULD be calculated from the thickness of the Media used for the container and its content.</p>
CIP4_SpreadType ?	name	any	<p><b>CIP4_SpreadType SHALL</b> specify the treatment of individual PDF pages referenced by the <b>DPart</b> node for which <b>CIP4_SpreadType</b> is specified for imposition purposes. Values <b>SHALL</b> be one of:</p> <p><i>Combine</i> - the content of each page SHALL be combined into a surface that folding etc. SHALL apply to. Examples include foldouts that are delivered as multiple pages or a trifold that is delivered as 6 logical pages.</p> <p><i>FoldOut</i> - the content of each page SHALL be imaged onto a Foldout. Each page SHALL be processed as a surface of the Foldout.</p> <p><i>SinglePage</i> - the content of each page SHALL be imaged in a single cell in imposition.</p> <p><i>Spread</i> - the content of each page SHALL be imaged as a single surface onto the final product. Examples include wraparound covers. <i>Spread</i> SHOULD NOT be provided for adjacent pages that are not imaged onto the same surface.</p> <p>If not specified, <b>CIP4_SpreadType</b> defaults to <i>SinglePage</i>.</p>
Type	name	any	The value of <b>Type</b> SHALL be CIP4_LayoutIntent.

### 3.16. CIP4\_Intent/CIP4\_MediaIntent

**CIP4\_MediaIntent** specifies details of the selected media to be printed on. This ICS provides 2 methods for selecting media. Media MAY be selected by name by specifying **CIP4\_MediaIntent/CIP4\_MediaQuality**. Not that this requires out of bands synchronization of the supported values of **CIP4\_MediaIntent/CIP4\_MediaQuality**. Media MAY be specified in more detail by supplying any of the additional keys of **CIP4\_MediaIntent** that are listed below.

Note: A change of Media MAY require blank pages to be inserted, for instance if an odd number of pages is specified for duplex printing. The placement of the inserted blank pages is device dependent.

#### 3.16.1. CIP4\_MediaIntent

Name	Data Type	Scope	Description
------	-----------	-------	-------------



<b>CIP4_BackCoatings ?</b>	name	any	<b>CIP4_BackCoatings</b> SHALL specify the preprocess coatings of the back side of the Media. Values are: <i>None</i> <i>Coated</i> <i>Glossy</i> <i>HighGloss</i> <i>InkJet</i> <i>Matte</i> <i>Satin</i> <i>Semigloss</i>
<b>CIP4_FrontCoatings ?</b>	name	any	<b>CIP4_FrontCoatings</b> describes the preprocess coatings of the front side of the Media. Values are the same as in <b>CIP4_BackCoatings</b> .
<b>CIP4_Grade ?</b>	integer	any	<b>CIP4_Grade</b> SHALL specify the media Grade of paper material is defined in accordance with the paper "types" set forth in [ISO12647-2:2004].
<b>CIP4_ISOPaperSubstrate ?</b>	name	any	<b>CIP4_ISOPaperSubstrate</b> SHALL have a value in the range of <i>PS1</i> through <i>PS8</i> . ISOPaperSubstrate type of paper material is defined in accordance with the Print Substrate set forth in [ISO12647-2:2013].
<b>CIP4_MediaColor ?</b>	name	any	<b>CIP4_MediaColor</b> is a machine readable color descriptor. Values are from <a href="http://www.w3.org/TR/html4/types.html#h-6.5">http://www.w3.org/TR/html4/types.html#h-6.5</a> .
<b>CIP4_MediaColorDetails ?</b>	name	any	<b>CIP4_MediaColorDetails</b> is a human readable color descriptor.
<b>CIP4_MediaQuality ?</b>	string	any	<b>CIP4_MediaQuality</b> SHALL specify the media to be selected in a recipient specific manner. This MAY be a media identifier from a device media catalog, a name of preprinted stock, a media source such as an input tray or a Media size or any other media selection method that the recipient understands.
<b>CIP4_MediaTypeDetails ?</b>	name	any	<b>CIP4_MediaTypeDetails</b> describes the details of the media such as <i>Envelope</i> or <i>Labels</i> and SHALL have a value of type Name.
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_MediaIntent.

**NOTE: CIP4\_MediaIntent** does not allow for pre-printed paper to be specified as this is considered part of the production process rather than a product intent. Each page whose content starts with the same static optional content can be produced using preprinted media by switching off the static optional content and using appropriate preprinted media. The benefit of this workflow is that the PDF has the correct appearance and the selection and placement of the pre-printed paper in a paper tray can be correctly identified by looking at the PDF. Static optional content can be identified by examining the usage directory of optional content groups. The value of the PageElement key will be a dictionary with a SubType key with a value of BG or L.

**NOTE: CIP4\_MediaTypeDetails** and **CIP4\_ProductType** serve distinct purposes: **CIP4\_MediaTypeDetails** provides information about the media to be used for a given PDF page, whilst **CIP4\_ProductType** typically provides information regarding the purpose of a component of the finished product. **CIP4\_MediaTypeDetails** and **CIP4\_ProductType** can be specified on the same DPart Node when a range of PDF pages are intended to use the same media or where a single PDF page comprises a component of the finished product. In all cases **CIP4\_MediaTypeDetails** controls the media to be used, whilst **CIP4\_ProductType** is only used to guide production decisions and aid in the identification of components.

### 3.17. CIP4Intent/CIP4\_ProductionIntent

**CIP4\_ProductionIntent** specifies additional production details. It is a placeholder for optional extensions.

#### 3.17.1. CIP4\_ProductionIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_ProductionIntent.

### 3.18. CIP4Intent/CIP4\_ScreeningIntent

**CIP4\_ScreeningIntent** specifies details of half-tone screening. It is a placeholder for optional extensions.

#### 3.18.1. CIP4\_ScreeningIntent

Name	Data Type	Scope	Description
------	-----------	-------	-------------

<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_ScreeningIntent.
-------------	------	-----	---

### 3.19. CIP4Intent/CIP4\_ShapeCuttingIntent

**CIP4\_ShapeCuttingIntent** specifies details of die cutting or other physical manipulation of the printed media. It is a placeholder for optional extensions.

#### 3.19.1. CIP4\_ShapeCuttingIntent

Name	Data Type	Scope	Description
<b>Type</b>	name	any	The value of <b>Type</b> SHALL be CIP4_ShapeCuttingIntent.

### 3.20. Excluded CIP4 Intent types

The following CIP4 Intent Resources SHALL NOT be mapped to PDF Metadata:

- **CIP4\_ArtDeliveryIntent**: The PDF has – by definition – already been delivered.
- **CIP4\_DeliveryIntent**: Distribution and Delivery of the printed products are out of scope.
- **CIP4\_NumberingIntent**: All variable data information SHALL be encoded in the PDF.
- **CIP4\_PackingIntent**: Packaging of the printed products is out of scope.
- **CIP4\_ProofingIntent**: Proofing and approval of the printed products are out of scope.
- **CIP4\_PublishingIntent**: Newspaper and magazine publication are out of scope.
- **CIP4\_SizeIntent**: Deprecated in JDF.

## 4. The Production level

The optional **CIP4\_Root/CIP4\_Production** level contains metadata properties that MAY be used to parameterize a job ticket or provide additional production information that is not available in **CIP4\_Root/CIP4\_Intent**.

#### 4.1.1. CIP4\_Production

Name	Data Type	Scope	Description
<b>CIP4_CopyCount ?</b>	integer	recipient	<b>CIP4_CopyCount</b> SHALL be a positive value. The value of this property SHALL indicate the number of copies requested of a document part. <b>CIP4_CopyCount</b> SHALL NOT be specified if a parent <b>DPart</b> already contains a <b>CIP4_CopyCount</b> .  <b>NOTE 1: CIP4_CopyCount</b> is typically used in variable data jobs where recipients receive varying amounts of identical instance documents.
<b>CIP4_DescriptiveName ?</b>	string	any	Human readable description of the production requirements.
<b>CIP4_Resource?</b>	dictionary	any	The keys of <b>CIP4_Production/CIP4_Resource</b> SHALL be one of the Parameter resource names provided in JDF 1.5, Chapter 8 - Parameters. The mapping of JDF parameter resources to <b>CIP4_Root/CIP4_Production/CIP4_Resource</b> SHALL follow the same rules as mapping of JDF Intent described in section 3.4.1. If JDF provides both Intent resources and matched Parameter resources, the JDF Intent resources SHOULD be specified. This ICS has no conformance requirements for the use of <b>CIP4_Production/CIP4_Resource</b> .

## 5. Common metadata structures

Common metadata structures are structures that MAY occur in multiple locations within a conforming PDF.

**Note:** The semantics of a given common metadata structure can be context sensitive. In this case the semantics will be specified in the calling section.

## 5.1. Contact Information

**CIP4\_Contact** information is encoded with properties relative to a level of the metadata hierarchy. The usage of the **CIP4\_Contact** is defined by the parent dictionary of the respective **CIP4\_Contact** dictionary.

### 5.1.1. CIP4\_Contact

Name	Data Type	Scope	Description
<b>CIP4_Address</b>	CIP4_Address	any	<b>CIP4_Address</b> SHALL identify the postal address of the Contact.
<b>CIP4_ComChannel ?</b>	array of CIP4_ComChannel	any	The value of each array element of <b>CIP4_ComChannel</b> SHALL identify means of contacting the recipient within the PDL data.
<b>CIP4_Company?</b>	array of CIP4_Company	any	<b>CIP4_ComChannel</b> SHALL identify a company or an organization.
<b>CIP4_ContactTypes ?</b>	array of name	any	<p>Classification of the <b>CIP4_Contact</b>. One <b>CIP4_Contact</b> MAY fulfil multiple roles. Additional <b>CIP4_ContactTypes</b> values may be defined.</p> <p><b>Values include:</b></p> <p><i>Accounting</i> – Address of where to send to the bill.</p> <p><i>Administrator</i> – Person to contact for queries concerning the execution of the Job.</p> <p><i>Agency</i> – The contact is an employee of an Agency.</p> <p><i>Approver</i> – Person who approves this Job.</p> <p><i>ArtReturn</i> – Return delivery or pickup address for artwork of this Job.</p> <p><i>Author</i> – New in JDF 1.4</p> <p><i>Billing</i> – Contact information that refers to a payment method (e.g., credit card).</p> <p><i>Customer</i> – The end customer.</p> <p><i>Delivery</i> – The delivery address for all products of this Job.</p> <p><i>DeliveryCharge</i> – The <b>Contact</b> is charged for delivery of this Job.</p> <p><i>Designer</i> –</p> <p><i>Editor</i> –</p> <p><i>Illustrator</i> –</p> <p><i>Owner</i> – The owner of a Resource.</p> <p><i>Photographer</i> –</p> <p><i>Pickup</i> – The pickup address for all products of this Job.</p> <p><i>Recipient</i> - The <b>Contact</b> is a recipient of a variable data record.</p> <p><i>Sender</i> – The source address of the delivery.</p> <p><i>Supplier</i> – Address of a supplier of needed goods.</p> <p><i>SurplusReturn</i> – Return delivery or pickup address for surplus products of this Job.</p> <p><i>TelephoneSanitizer</i> –</p>
<b>CIP4_DescriptiveName ?</b>	string	any	Human readable description of the contact.
<b>CIP4_ElementName ?</b>	name	any	The value of <b>CIP4_ElementName</b> SHALL be CIP4_Contact.
<b>CIP4_Person ?</b>	CIP4_Person	any	<p><b>CIP4_Person</b> specifies a human being.</p> <p>Note: Contacts NEED NOT contain a Person, e.g. when the Contact is a department in a company.</p>

## 5.2. CIP4\_Contact/CIP4\_Person

**CIP4\_Person** SHALL identify a human being.

## CIP4\_Person

Name	Data Type	Scope	Description
CIP4_DescriptiveName ?	string	any	Human readable description of the person.
CIP4_ElementName ?	name	any	The value of <b>CIP4_ElementName</b> SHALL be CIP4_Person.
CIP4_AdditionalNames ?	string	any	<b>CIP4_AdditionalNames</b> SHALL specify the middle name(s) of the person.
CIP4_FirstName ?	string	any	<b>CIP4_FirstName</b> SHALL specify the first name of the person.
CIP4_FullName ?	string	any	<b>CIP4_FullName</b> SHALL specify the entire full name of the person. <b>CIP4_FullName</b> SHOULD only be used where the original database does not provide all the individual details of the persons name.
CIP4_JobTitle ?	string	any	<b>CIP4_JobTitle</b> SHALL specify the job function of the person within the organization.
CIP4_LastName ?	string	any	<b>CIP4_LastName</b> SHALL specify the last name of the person.
CIP4_NamePrefix ?	string	any	<b>CIP4_NamePrefix</b> SHALL specify a prefix to the name of the person., e.g. <i>Mr., Ms., Dr.,</i> etc.
CIP4_NameSuffix ?	string	any	<b>CIP4_NameSuffix</b> SHALL specify a suffix to the name of the person, e.g. <i>jr., III,</i> etc.

## 5.3. CIP4\_Contact/CIP4\_Company

**CIP4\_Company** SHALL identify a company or an organization.

### 5.3.1. CIP4\_Company

Name	Data Type	Scope	Description
CIP4_DescriptiveName ?	string	any	Human readable description of the company.
CIP4_ElementName ?	name	any	The value of <b>CIP4_ElementName</b> SHALL be CIP4_Company.
CIP4_OrganizationName	string	any	<b>CIP4_OrganizationName</b> SHALL specify the name of the organization to which the recipient belongs.
CIP4_OrganizationalUnit ?	array of string	any	<b>CIP4_OrganizationalUnit</b> SHALL specify the organizational units. A company reference MAY refer to multiple <b>CIP4_OrganizationalUnit</b> values. For example, "North American Division" and "Marketing".

## 5.4. CIP4\_Contact/CIP4\_Address

**CIP4\_Address** SHALL identify the postal address of the recipient within the PDL data.

NOTE: This ICS does not define the method to convert the above dictionary values into address lines as this is country and language specific.

### 5.4.1. CIP4\_Address

Name	Data Type	Scope	Description
CIP4_DescriptiveName ?	string	any	Human readable description of the address.
CIP4_ElementName ?	name	any	The value of <b>CIP4_ElementName</b> SHALL be CIP4_Address.

<b>CIP4_AddressLines ?</b>	array of string	any	<b>CIP4_AddressLines</b> SHALL specify the complete address as a sequence of address lines.  NOTE: An address may be encoded as a set of address lines, metadata or both. The latter case may occur where the original database does not provide all the individual details of the address.
<b>CIP4_City ?</b>	string	any	<b>CIP4_City</b> SHALL specify the name of the city in which the address is located.
<b>CIP4_CivicNumber ?</b>	string	any	<b>CIP4_CivicNumber</b> SHALL specify the civic number of the address.
<b>CIP4_Country ?</b>	string	any	<b>CIP4_Country</b> SHALL specify the name of the country in which the address is located.
<b>CIP4_CountryCode ?</b>	string	any	<b>CIP4_CountryCode</b> SHALL specify the ISO 3166-1 code of the country in which the address is located
<b>CIP4_PostalCode ?</b>	string	any	<b>CIP4_PostalCode</b> SHALL specify the the postal code of the address (may include the routing code).
<b>CIP4_PostBox ?</b>	string	any	<b>CIP4_PostBox</b> SHALL specify the postal box number.
<b>CIP4_Region ?</b>	string	any	<b>CIP4_Region</b> SHALL specify the name of the region (e.g. state, province, etc.) in which the address is located.
<b>CIP4_Street ?</b>	string	any	<b>CIP4_Street</b> SHALL specify contains the complete street address which is a combination of the values of the <i>StreetName</i> and <i>CivicNumber</i> when they are not available separately.
<b>CIP4_StreetName ?</b>	string	any	<b>CIP4_StreetName</b> SHALL specify the name or number of the street where the address is located.

## 5.5. CIP4\_Contact/CIP4\_ComChannel

The **CIP4\_ComChannel** property SHALL have a value of type array of dictionary. The value of each array element of this property SHALL identify means of contacting the recipient within the PDL data. Each dictionary value may contain the following keys:

### 5.5.1. CIP4\_ComChannel

Name	Data Type	Scope	Description
<b>CIP4_ChannelType</b>	name	any	<b>CIP4_ChannelType</b> : SHALL specify the type of the communication channel to use to contact the recipient. One of the following name values SHALL be specified:  <i>Phone</i>  <i>Mobile</i>  <i>Email</i>  <i>Fax</i>  <i>InstantMessaging</i>
<b>CIP4_ChannelUsage ?</b>	array of Name	any	<b>CIP4_ChannelUsage</b> SHALL specify the purpose of the communication channel. Each array entry SHALL use one of the following name values:  <i>Business</i>  <i>Private</i>  <i>DayTime</i>  <i>NightTime</i>  <i>Weekend</i> .
<b>CIP4_DescriptiveName ?</b>	string	any	Human readable description of the communication channel.
<b>CIP4_Locator</b>	string	any	<b>CIP4_Locator</b> SHALL specify the locator of the communication channel such as the telephone number or email address. Where possible URL syntax SHOULD be used for the value of this key.
<b>CIP4_ElementName ?</b>	name	any	The value of <b>CIP4_ElementName</b> SHALL be CIP4_ComChannel.

## 6. PDF Metadata Encoding Examples

Examples using PDF encoding using DPM in ISO PDF/VT (please refer to Annex C of the ISO PDF/VT standard for additional examples):

### 6.1. Example metadata for a single recipient

```
/DPM <<
  /CIP4_Root <<
    /CIP4_Metadata <<
      /CIP4_Conformance (CIP4_IntentBase-1.5) /CIP4_Creator (ACME)
    /CIP4_ModificationDate (20140923T111423+01:00) /ACME_ProductVersion (1.1.2)
    /ACME_Status (Softproof)
    >>
  >>
>>
/DPM <<
  /CIP4_Root <<
    /CIP4_Recipient <<
      /CIP4_UniqueId (123456) /CIP4_Contact <<
        /CIP4_Person <<
          /CIP4_FirstName (Stefan) /CIP4_LastName (Daun) /CIP4_Organization (Fraunhofer
IGD) /CIP4_Department (A3)
          >>
        /CIP4_Address <<
          /CIP4_AddressLines [ (Fraunhoferstr. 5) (64284 Darmstadt) (Germany) ]
          /CIP4_StreetName (Fraunhoferstr.) /CIP4_CivicNumber (5)/CIP4_PostalCode (64283)
        /CIP4_City (Darmstadt)/CIP4_Country (Germany)
          >>
        /CIP4_ComChannel [
          <<
            /CIP4_ChannelType /Phone
            /CIP4_Locator (tel:+1.234.567.8910)
          >>
          <<
            /CIP4_ChannelType /EMail
            /CIP4_Locator (mailto:foo@bar.com)
          >>
        ]
      >>
      /ACME_Gender /Male /ACME_Offer (Discount10)
    >>
  >>
>>
```

### 6.2. Example metadata for multiple recipients

The following example is the Metadata structure of a PDF file for two recipients.  
Each document is made of two parts:

- The first part is a C5 envelope, which is not printed but represented as a C5 page in the PDF file.
- The second part is the content of the envelope, which is printed.
  - The content has variable content and length according to the recipient, so the structure is not uniform.
  - The content is printed as a letter on A4 paper, then corner stapled, then half-folded to have an A5 finished size that can be inserted into the C5 envelope.
  - As there are two finishing steps (stapling and folding) to be processed in the correct order, they are defined in a hierarchy of

DPart elements, the lower one being the first executed (it contains the media and stapling intent) and the higher one the second (it contains the folding intent).

```
/DPartRoot<<
/DPartRootNode<<
<!-- Root metadata: conformance, sender, summary ... -->
/DPM<<
  /CIP4_Root<<
    /CIP4_Metadata<<
      /CIP4_Conformance(CIP4_IntentBase_1.5)
      /CIP4_Creator(OSL-VTE | PDF/VT Editor)
      /CIP4_JobID(JobIdentifier\\(\))
      /CIP4_ModificationDate(D:2015-05-13T08:19:39+02:00)
      /CIP4_Sender<<
        /CIP4_ComChannel[
          <<
            /CIP4_ChannelType/Email
            /CIP4_Locator(mailto:sender@example.com)
          >>
        ]
      /CIP4_Person<<
        /CIP4_LastName(Sender)
      >>
    >>
  /CIP4_Summary<<
    /CIP4_PageCount 12
    /CIP4_RecipientCount 2
    /CIP4_UniformRecipientStructure false
  >>
>>
>>
<!-- List of Documents -->
/Dparts[
  <!-- Document 1 -->
  /DPart<<
    <!-- Document 1 information: Recipient, InsertingIntent -->
    /DPM<<
      /CIP4_Root<<
        /CIP4_Intent<<
          /CIP4_InsertingIntent<<>>
        >>
        /CIP4_Recipient<<
          /CIP4_Contact<<
            /CIP4_ComChannel[
              <<
                /CIP4_ChannelType/Email
                /CIP4_Locator(mailto:recipient1@example.com)
              >>
            ]
          /CIP4_Person<<
            /CIP4_FirstName(Recipient)
            /CIP4_LastName(One)
          >>
        >>
        /CIP4_UniqueId(Recipient0)
      >>
    >>
  >>
>>
```

```

<!-- Document 1 has two parts: the static envelope and the content -->
/DParts[
  <!-- Document 1 DPart 1: Static content (C5 envelope) -->
  /Dpart<<
    /Start <!-- Point to PDF page 1 -->
    /DPM<<
      /CIP4_Root<<
        /CIP4_Summary<<
          /CIP4_Content<<
            /CIP4_StaticID/Envelope
          >>
        >>
      >>
    >>
  >>
  <!-- Document 1 DPart 2 higher level: The content described in lower level is
half-folded and inserted in the envelope -->
  /Dpart<<
    /DPM<<
      /CIP4_Root<<
        /CIP4_Intent<<
          /CIP4_FoldingIntent<<
            /CIP4_FoldingCatalog/F4-1
          >>
        >>
      >>
    >>
  /DParts[
    <!-- Document 1 DPart 2 lower level: Variable content: 4 A4 pages are printed
and corner stitched -->
    /Dpart<<
      /Start <!-- Point to PDF page 2 -->
      /End <!-- Point to PDF page 5 -->
      /DPM<<
        /CIP4_Root<<
          /CIP4_Intent<<
            /CIP4_BindingIntent<<
              /CIP4_BindingSide/Left
              /CIP4_BindingType/CornerStitch
            >>
            /CIP4_MediaIntent<<
              /CIP4_MediaColor/White
              /CIP4_MediaWeight 80
            >>
            /CIP4_ProductType/Letter
          >>
        >>
      >>
    >>
  ]
  >>
]
<!-- Document 2 -->
/DPart<<
  <!-- Document 2 information: Recipient, InsertingIntent -->
  /DPM<<
    /CIP4_Root<<
      /CIP4_Intent<<

```



```

        /CIP4_InsertingIntent<<>>
    >>
    /CIP4_Recipient<<
        /CIP4_Contact<<
            /CIP4_ComChannel[
                <<
                    /CIP4_ChannelType/Email
                    /CIP4_Locator(mailto:recipient2@example.com)
                >>
            ]
        /CIP4_Person<<
            /CIP4_FirstName(Recipient)
            /CIP4_LastName(Two)
        >>
    >>
    /CIP4_UniqueId(Recipient0)
>>
>>
>>
<!-- Document 2 has two parts: the static envelope and the content -->
/DParts[
    <!-- Document 2 DPart 1: Static content (C5 envelope) -->
    /Dpart<<
        /Start <!-- Point to PDF page 6 -->
        /DPM<<
            /CIP4_Root<<
                /CIP4_Summary<<
                    /CIP4_Content<<
                        /CIP4_StaticID/Envelope
                    >>
                >>
            >>
        >>
    >>
    <!-- Document 2 DPart 2 higher level: The content described in lower level is
    half-folded and inserted in the envelope -->
    /Dpart<<
        /DPM<<
            /CIP4_Root<<
                /CIP4_Intent<<
                    /CIP4_FoldingIntent<<
                        /CIP4_FoldingCatalog/F4-1
                    >>
                >>
            >>
        >>
    >>
    <!-- Document 2 DPart 2 lower level: Variable content: 6 A4 pages are printed
    and corner stiched -->
    /Dpart<<
        /Start <!-- Point to PDF page 7 -->
        /End <!-- Point to PDF page 12 -->
        /DPM<<
            /CIP4_Root<<
                /CIP4_Intent<<
                    /CIP4_BindingIntent<<
                        /CIP4_BindingSide/Left
                        /CIP4_BindingType/CornerStitch
                    >>
                >>
            >>
        >>
    >>

```

```
        /CIP4_MediaIntent<<
          /CIP4_MediaColor/White
          /CIP4_MediaWeight 80
        >>
        /CIP4_ProductType/Letter
      >>
    >>
  >>
]
>>
]
```

```
>>
>>
```

```
/DPartRoot<<
/DPartRootNode<<
  <!-- Root metadata: conformance, sender, summary ... -->
/DPM<<
  /CIP4_Root<<
    /CIP4_Metadata<<
      /CIP4_Conformance(CIP4_IntentBase_1.5)
      /CIP4_Creator(OSL-VTE | PDF/VT Editor)
      /CIP4_JobID(JobIdentifier\(\))
      /CIP4_ModificationDate(D:2015-05-13T08:19:39+02:00)
      /CIP4_Sender<<
        /CIP4_ComChannel[
          <<
            /CIP4_ChannelType/Email
            /CIP4_Locator(mailto:sender@example.com)
          >>
        ]
        /CIP4_Person<<
          /CIP4_LastName(Sender)
        >>
      >>
    /CIP4_Summary<<
      /CIP4_PageCount 12
      /CIP4_RecipientCount 2
      /CIP4_UniformRecipientStructure false
    >>
  >>
  >>
  >>
  <!-- List of Documents -->
/Dparts[
  <!-- Document 1 -->
/DPart<<
  <!-- Document 1 information: Recipient, InsertingIntent -->
/DPM<<
  /CIP4_Root<<
  /CIP4_Intent<<
    /CIP4_InsertingIntent<<>>
  >>
  /CIP4_Recipient<<
    /CIP4_Contact<<
      /CIP4_ComChannel[
        <<
          /CIP4_ChannelType/Email
          /CIP4_Locator(mailto:recipient1@example.com)
        >>
      ]
    /CIP4_Person<<
      /CIP4_FirstName(Recipient)
      /CIP4_LastName(One)
    >>
  >>
  >>
```

```

        /CIP4_UniqueId(Recipient0)
    >>
    >>
    >>
    <!-- Document 1 has two parts: the static envelope and the booklet -->
    /DParts[
    <!-- Document 1 DPart 1: Static content (A4 envelope) -->
    /Dpart<<
    /Start <!-- Point to PDF page 1 -->
    /DPM<<
        /CIP4_Root<<
            /CIP4_Summary<<
                /CIP4_Content<<
                    /CIP4_StaticID/Envelope
                >>
            >>
        >>
    >>
    >>
    >>
    <!-- Document 1 DPart 2 booklet to be inserted in the envelope -->
    /Dpart<<
    /Start <!-- Point to PDF page 2 -->
    /End <!-- Point to PDF page 5 -->
    /DPM<<
        /CIP4_Root<<
            /CIP4_Intent<<
                /CIP4_BindingIntent<<
                    /CIP4_BindingType/SaddleStitch
                /CIP4_BindingSide/Left
            >>
        >>
    >>
    >>
    >>
    ]
    >>
    <!-- Document 2 -->
    /DPart<<
    <!-- Document 2 information: Recipient, InsertingIntent -->
    /DPM<<
        /CIP4_Root<<
        /CIP4_Intent<<
            /CIP4_InsertingIntent<<>>
        >>
        /CIP4_Recipient<<
            /CIP4_Contact<<
                /CIP4_ComChannel[
                    <<
                        /CIP4_ChannelType/Email
                        /CIP4_Locator(mailto:recipient2@example.com)
                    >>
                ]
            /CIP4_Person<<
                /CIP4_FirstName(Recipient)
                /CIP4_LastName(Two)
            >>
        >>
        /CIP4_UniqueId(Recipient0)
    >>
    >>

```

```
>>
>>
<!-- Document 2 has two parts: the static envelope and the booklet content -->
/DParts[
  <!-- Document 2 DPart 1: Static content (A4 envelope) -->
  /Dpart<<
    /Start <!-- Point to PDF page 6 -->
    /DPM<<
      /CIP4_Root<<
        /CIP4_Summary<<
          /CIP4_Content<<
            /CIP4_StaticID/Envelope
          >>
        >>
      >>
    >>
  >>
  <!-- Document 2 DPart 2 the booklet to be inserted in the envelope -->
  /Dpart<<
    /Start <!-- Point to PDF page 7 -->
    /End <!-- Point to PDF page 12 -->
    /DPM<<
      /CIP4_Root<<
        /CIP4_Intent<<
          /CIP4_BindingIntent<<
            /CIP4_BindingType/SaddleStitch
          /CIP4_BindingSide/Left
        >>
      >>
    >>
  >>
]
>>
]
```

>>  
>>