IFRA Track 4.1

Object Classes

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Technical Specification

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1 IFRA Track Standard Documentation

1.1 Document Status and Copyright.

This is the Approved Specification of the IFRA Track 4.1. (NOTE: version 4.0 was not officially published).

Information in this document is made available for the public good, may be used by third parties and may be reproduced and distributed, in whole and in part, provided acknowledgement is made to IFRA and provided it is accepted that IFRA rejects any liability for any loss of revenue, business or goodwill or indirect, special, consequential, incidental or punitive damages or expense arising from use of the information.

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1.2 Purpose and Audience

This document describes the object model of IFRA Track 4.1 standard.

The intended audience for this document is primarily user and vendor organizations who seek to implement the IFRA Track standard in their workflows, advertising systems, or software products. Those assessing the conformance of vendor products to the standard may also use the document.

Comments on this specification should be addressed to ifratrack@ifra.com.

1.3 Accompanying documents

An overview and an introduction to the IFRA Track standard including technical architecture, use of XML Schemas etc is available in [1]. A detailed specification of the XML message format [2] is also available.

Descriptions of the earlier version IFRA Track 3.0 published as IFRA Special Reports [3] includes sections that provide industrial background, scope and context. These sections are still valid for the new version 4.1.

[1] IFRA Track 4.1 Overview, 2008

[2] IFRA Track 4.1 Message Format, 2008

[3] IFRA Track 3.0, Special Report 6.21.3, 2002

1.4 Definitions of key words used in the specification

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are used as described in IETF RFC 2119.(S. Bradner. *Key words for use*

in RFCs to Indicate Requirement Levels. Internet Engineering Task Force (IETF), Request for Comments: 2119, March 1997, http://www.ietf.org/rfc/rfc2119.txt)

When any of these words do not appear in upper case as above, then they are being used with their usual English language sense and meaning.

1.5 Document Revision History

See list of a revisions at the end of this document.

1.6 Acknowledgements

IFRA Track 4.1 and this document is a product of IFRA. It is based on a proposal from the PRIME NETWORK (www.prime-network.com), an association of suppliers of newspaper production systems.

IFRA Track 4.1 is heavily based on earlier versions of the standard, and IFRA thanks all contributors that have participated in the development of IFRA Track since its origin back in 1994.

Primary authorship and editing of this document was performed by:

- Roman Schönbächler (ABB)
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- Andreas Dau (EAE)
- Ulf Wingstedt (CNet Svenska)

IFRA also thanks the AdsML Consortium (www.adsml.org) whose technical approach and documentation model have served as inspiration for IFRA Track.

1.7 Known Issues

This specification has the following known issues:

- Ito and ipo object models can be further refactored to use common components from the isd. This has not been fully analyzed in this version.
- Use of XMLText as alternative to CSVText in AddressType has not been documented.

2 Introduction

2.1 Notation

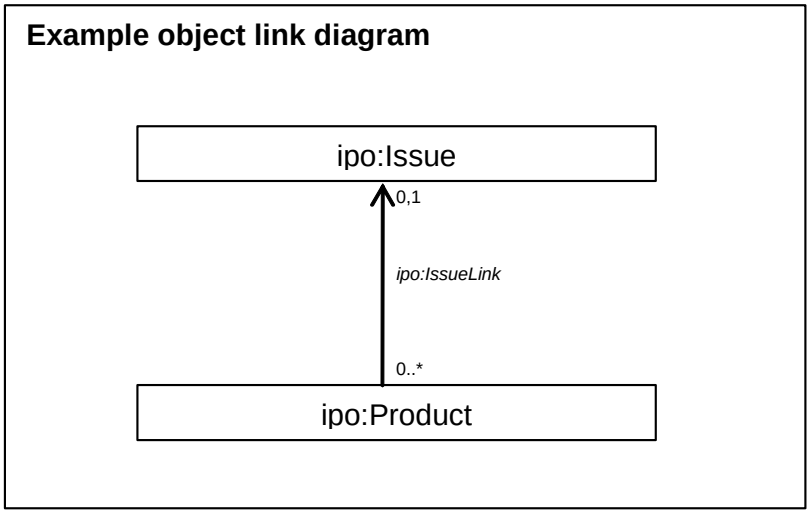
The object link diagram in this document is based on the UML 2.0 standard. They show the object classes with the links between the object classes. The arrow points to the object the link is pointing to. The object on the link end without the arrow holds the link. The link name is marked in italic.

In UML 2.0 the multiplicity on an association is defined as follows:

- 1 : exactly one (must be one)
- 0,1 : either zero of one (optional one)
- 0..* : zero or several (optional one or several)
- 1..* : one or several (must be one or several)

Example:

The object class ipo:Product is linked to the object class ipo:Issue with the link named ipo:IssueLink. The ipo:Product contains the ipo:IssueLink zero or one times.



2.2 Function

The IFRA Track Object Classes specification provides the definitions of standard object classes. The object classes are defined in the planning and the tracking context. The object classes for planning and tracking differ in the required attributes.

The ObjectUID for a specific object, for example an EditionVersion is used to identify the object and to link the objects together. The planning object classes are

referenced with their ObjectUID by the tracking object classes. The tracking systems always generate a new ObjectUID for their tracking objects.

2.3 XML Implementation

The IFRA Track Object Classes specification has been implemented using XML Schema technology resulting in a set of reusable components in a framework architecture. As such, the objects can be extended, packaged and transmitted in the standardized IFRA Track Message Format [2] as part of an Interface specification.

For details about how the object model has been divided into schema files and use of namespaces, see the IFRA Track Overview [1].

The XML names used in the implementation of objects and properties has been taken “as is” from the specification given in this document.

The data types specified this document has been translated to the closest equivalent XML Schema type, e.g. properties specified as String or Date have been implemented as xs:string and xs:date respectively.

3 Generic object model

Notes on the following tables:

- The column **Ap** (appearance), the notation *min-max* defines the minimum and maximum use of the element. The letter **n** signifies unlimited.

All IFRA Track objects are defined according to the following generic model:

element name	Description	Ap
'object_class'	This is the class of the object concerned. An examples of the IFRA Track object classes are: ▪ ipo:Issue ▪ ipo:Edition ▪ ipo:EditionVersion ▪ ipo:PrintingJob ▪ etc. The object classes are defined as XML complex types derived from the type "isd:AbstractObject". In an XML document instance, the type of the object has to be specified for each object using the XML attribute xsi:type.	1-1
'object_id'	Globally unique identification of the object, generated by the application that first creates the object.	1-1
Attributes	This section describes the attributes of an object. Attributes are defined as XML elements within the object. Sometimes, strings are used to identify physical elements such as press folders or print couplings. Within a pressline or printing plant, the identifiers are intended to uniquely identify the physical elements by a human understandable string. All identifiers of physical elements are defined as a string based type in the type library, named isd:PhysicalIElementDType.	0-n

element name	Description	Ap
Links	Defines the dependencies of the object to others. In this way an object can be included in a hierarchy. For example an edition can be assigned to an issue. Links are defined as xml elements within an object class. The XML elements are named as follows with the name of the object_class the link is pointing to and the suffix “Link”. <object_class name> + “Link” The type of these elements has to be set to isd:LinkType. Please note that links are based on unique object identifiers (see section about isd:ObjectUIDType below).	0-n
Activities	An activity contains information regarding the status of an object within a given process or workflow Activities are defined as xml elements within an object class. The XML elements are named with an activity name and the suffix “Activity”. <activity name> + “Activity” The type of these elements has to be set to isd:ActivityType.	0-n

4 IFRA Track Planning Object Class Definitions (ipo)

4.1 Object class diagram

The object class diagram shows the derivation of the objects classes.

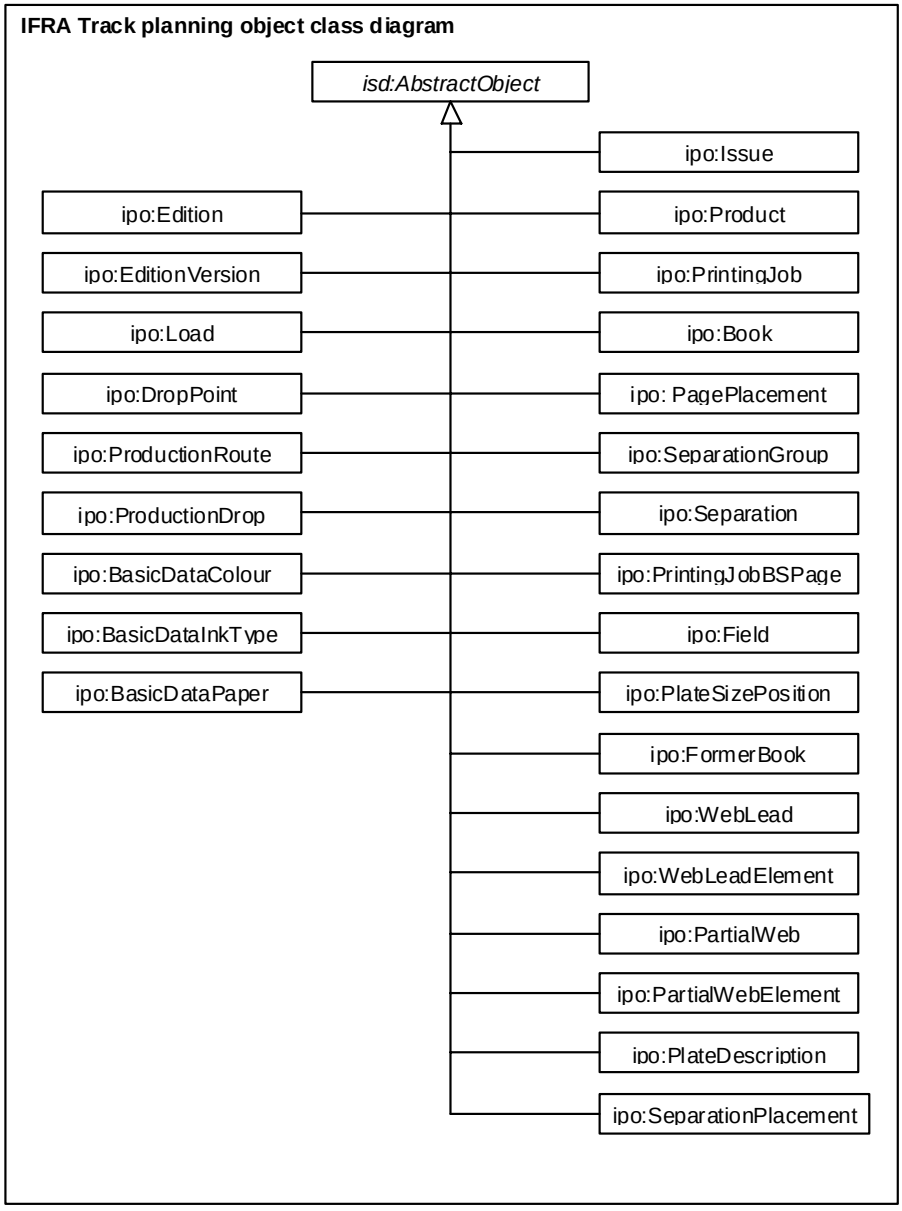


Figure 1: IFRA Track planning object class diagram

4.2 Object class link diagram

The object class link diagram shows the links between object classes in the planning context of IFRA Track.

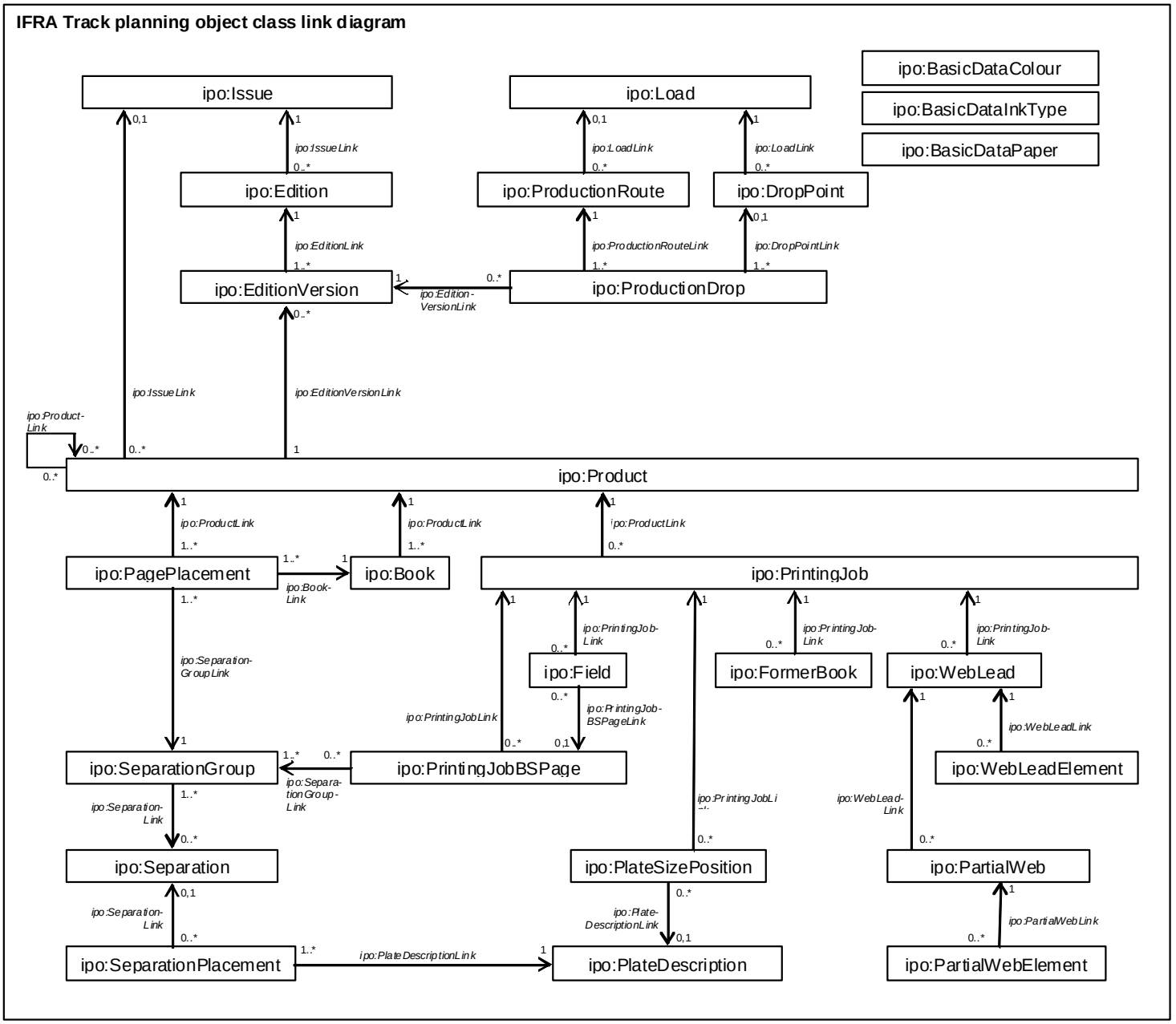


Figure 2: IFRA Track planning object class link diagram

4.3 Object class: ipo:Issue

An issue is the top-level object class of a publication for a single publishing date.

ATTRIBUTES:

attribute name	*type*	*description*	*Example*	*Ap*
ipo:Name	String	Name of the issue (publication)	News	1-1
ipo:ShortLabel	String	Short name of the issue	News	0-1
ipo:Date	Date	Date of the issue	2007-12-20	1-1

LINKS:

None

ACTIVITIES:

None

4.4 Object class: ipo:Edition

An issue may be divided into different editions, for example a morning edition and an evening edition. Also a newspaper is usually made of different local editions.

ATTRIBUTES:

attribute name	*type*	*description*	*Example*	*Ap*
ipo:Name	String	Name of the edition	City	1-1
ipo:ShortLabel	String	Short name of the edition	CT	0-1
ipo:PlannedCopies	NonNegativeInteger	Planned copies of this edition 0→ value not defined	25000	1-1

LINKS:

link name	*type*	*Description*	*Ap*
ipo:IssueLink	isd:LinkType	Link to the issue this edition belongs to	1-1

ACTIVITIES:

None

4.5 Object class: ipo:EditionVersion

The typical use of the edition version classes if for zoning. For example, an advertiser decides to distribute an insert in the newspaper to the readers living in a particular city or area only. These readers will get the same main product of the newspaper as other readers living outside this area, but the inserts will differ. They get the same edition but different edition versions of the newspaper.

Exactly how to divide a newspaper into editions and edition versions depend on how the newspaper is organized and is up to each implementation to make the distinction.

ATTRIBUTES:

attribute name	***type***	***description***	***Example***	***Ap***
ipo:Name	String	Name of the edition version	City-0	1-1
ipo:ShortLabel	String	Short name of the edition	CT-0	0-1
ipo:PlannedCopies	NonNegativeInteger	Planned copies of this editionversion 0 → value not defined	10000	1-1

LINKS:

link name	***type***	***Description***	***Ap***
ipo:EditionLink	isd:LinkType	Link to the edition this edition version belongs to	1-1

ACTIVITIES:

None

4.6 Object class: ipo:Product

A product is a collection of printed pages. It can be a newspaper, a section of the newspaper, a supplement that has been pre-printed or an insert that has been printed externally.

ATTRIBUTES:

attribute name	***type***	***description***	***Example***	***Ap***
ipo:Name	String	Name of the product (edition group)	City	1-1
ipo:ShortLabel	String	Short name of the product	CT	0-1
ipo:ProductType	String	Name of the part product “main product”, “pre-print”	main product	1-1

attribute name	*type*	*description*	*Example*	*Ap*
ipo:ShortProductType	String	Short name of the part product “MP”, “PP”	MP	0-1
ipo:PlannedCopies	NonNegativeInteger	Planned circulation of the product 0 ➔ value not defined	40000	1-1
ipo:Remark	String	Remark to the product. This is any string without structure.		0-1

LINKS:

link name	*type*	*Description*	*Ap*	
ipo:IssueLink	isd:LinkType	Link to the issue this product belongs to	1-1	Choice:
ipo:EditionVersionLink	isd:LinkType	Link to the edition version this product belongs to	1-n	
ipo:ProductLink	isd:LinkType	Link to the product this product belongs to	1-n	

ACTIVITIES:

None

4.7 Object class: ipo:Book

The book describes the logical book structure of the print product.

ATTRIBUTES:

attribute name	*type*	*description*	*Example*	*Ap*
ipo:BookPos	PositiveInteger	Position of the book inside the product	1	1-1
ipo:NoOfPages	PositiveInteger	Page count of the book	16	1-1
ipo:PageFormat	icv:AbstractPageFormatType	Format of the pages inside the book	Broadsheet	1-1
ipo:Stitched	Boolean	Indicates whether the book is stitched	True	0-1

LINKS:

link name	*type*	*Description*	*Ap*
ipo:ProductLink	isd:LinkType	Link to the product this book belongs to	1-1

ACTIVITIES:

None

4.8 Object class: ipo:PagePlacement

The page placement describes the position of a page within a product.

ATTRIBUTES:

attribute name	*type*	*description*	*Example*	*Ap*
ipo:PageNumber	PositiveInteger	Numerical page index (1..n)	1	1-1

LINKS:

link name	*type*	*Description*	*Ap*
ipo:ProductLink	isd:LinkType	Link to the product this page placement belongs to	1-1
ipo:BookLink	isd:LinkType	Link to the book this page placement belongs to	1-1
ipo:SeparationGroupLink	isd:LinkType	Link to the separation group which is part of this page placement	1-1

ACTIVITIES:

None

4.9 Object class: ipo:SeparationGroup

The separation group represents the page from the editorial view.

ATTRIBUTES:

attribute name	*type*	*description*	*Example*	*Ap*
ipo:Name	String	Title of the page	Sport1	1-1
ipo:PageFormat	icv:AbstractPageFormat	Format of the related editorial page(s).	broadsheet	1-1

attribute name	*type*	*description*	*Example*	*Ap*
	Type			
ipo:Paging	String	Alphanumerical pagination	A1	1-1
ipo:Remark	String	Remarks to the separation group. This is any string without structure.		0-1

LINKS:

link name	*type*	*description*	*Ap*
ipo:SeparationLink	isd:LinkType	Link to the separations which are part of this separation group	0-n

ACTIVITIES:

None

4.10 Object class: ipo:Separation

With a separation a printing colour is defined for the page, i.e. a colour hue that can also be a spot colour. To reuse the same separation in different pages, the same separation object will be used (linked) by different separation groups. The object uid of the separation has to be independent from any context information.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ipo:ColourShortLabel	String	Short name of the color Only colour names known to the production system may be used. Unknown colour names are forbidden. The colours of the page planning system and those of the production system must be synchronized.	Cyan	1-1
ipo:RealPanoRequired	Boolean	This separation requires to be printed as real panorama.	false	0-1
ipo:Panorama	Boolean	Indicates that this separation size is panorama.	false	0-1

LINKS:

None

ACTIVITIES:

None

4.10.1 Example: Simple broadsheet product

This case shows the simple broadsheet product “City” with two books:

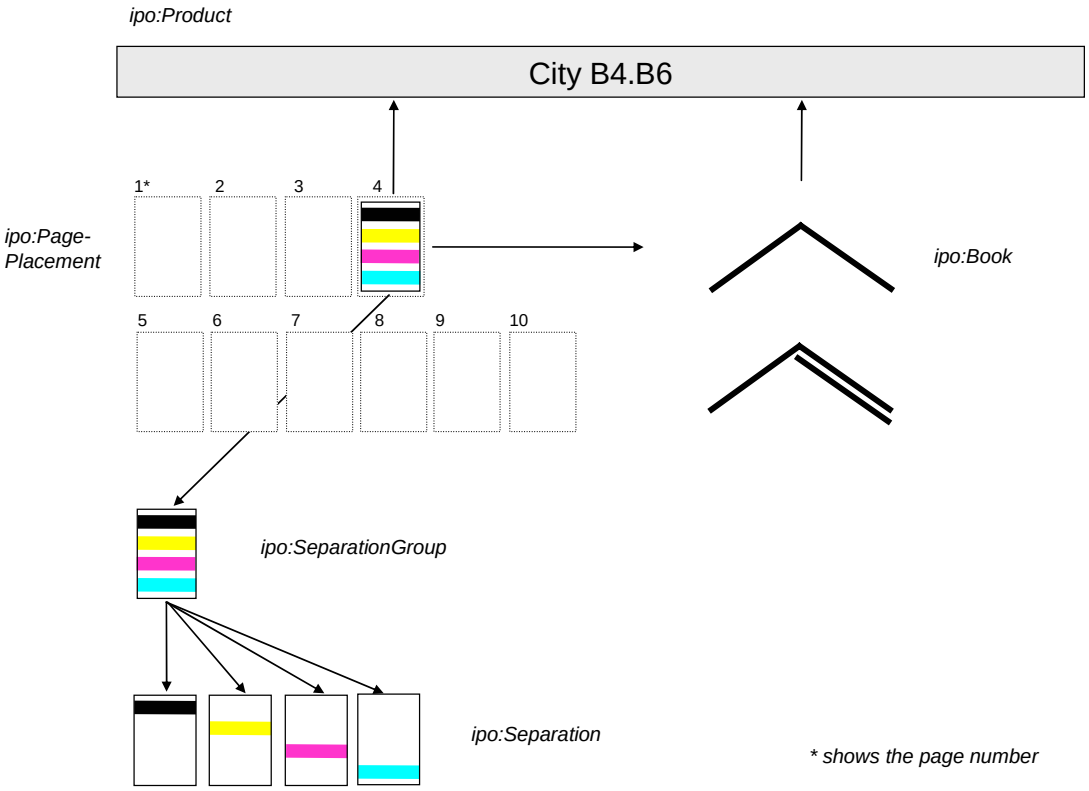


Figure 3: ipo:PagePlacement has to be understood like a grid with possible page positions

4.11 Object class: ipo:PrintingJob

A printing job is defined as one run on the press.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ipo:Name	String	Name of the PrintingJob	FA_1	1-1
ipo:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	1-n
ipo:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	FA	1-1
ipo:ProductionDate	Date	Date of the planned production	2004-06-11	0-1
ipo:PlannedCopies	NonNegaitveInteger	Planned circulation of the printing job	40000	1-1
ipo:PlannedAllowance	NonNegaitveInteger	Planned allowance of the printing job	500	1-1
ipo:PlannedProductionStart	DateTime	Planned date time of the production start	2004-06-11T20:00:00	1-1
ipo:PlannedPrintingStart	DateTime	Planned date time of the printing start At this time the first copies are transferred to the mailroom. ➔ This is more or less the printing start time.	2004-06-11T20:00:00	1-1
ipo:PlannedPrintingEnd	DateTime	Planned date time of the printing end At this time the last copies are transferred to the mailroom.	2004-06-11T20:00:00	1-1
ipo:PlannedProductionEnd	DateTime	Planned date time of the production end At this time no more copies are transferred to the mailroom. ➔ This is more or less the printing end time	2004-06-11T22:00:00	1-1
ipo:NumberOfCopies	PositiveInteger	Number of copies per rotation Allowed values: 1 = single (collect) 2= double (straight) 4 = fourfold	1	1-1
ipo:Remark	String	Remark to printing job.		0-1

attribute name	*type*	*description*	*example*	*Ap*
ipo:NextPrintingJob	isd:ObjectUIDType	Reference to the next printing job, if the production sequence is automatically (APS Automatic Plate Change Unit).	12903	0-1

LINKS:

link name	*type*	*description*	*Ap*
ipo:ProductLink	isd:LinkType	Link to the product this printing job belongs to	1-1

ACTIVITIES:

None

4.12 Object class: ipo:PrintingJobBSPage

The printing job broadsheet page describes the broadsheet allocation on the press.

To describe the imposition schema the object PrintingJobBSPage and Field are used. Because the broadsheet plate is the smallest available plate on the press, two tabloid pages have to be grouped to one broadsheet page.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ipo:Name	String	Title of the page	Sport1	1-1
ipo:PageNumber	PositiveInteger	Numerical page index	1	1-1
ipo:Paging	String	Alphanumerical pagination. Combination of all editorial pages. Examples: ▪ Broadsheet: A1 ▪ Tabloid: A1/A16 ▪ HalfTabloid: 1/16/17/32	A1	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:PrintingJobLink	isd:LinkType	Link to the printing job this printing job BS page belongs to	1-1

link name	*Type*	*Description*	*Ap*
ipo:SeparationGroupLink	isd:LinkType	Link to the separation group this printing job BS page belongs to	1-n

ACTIVITIES:

None

4.13 Object class: ipo:Field

The Field is used to describe the whole printing field allocation. There is one record for each printing field, including dummy plate, image plate (colour separation) and also all positions with no allocation on it.

ATTRIBUTES:

attribute name	*Type*	*description*	*example*	*Ap*
ipo:FieldDestination	ipo:FieldDestinationType	Location of the field inside the press		1-1
ipo:FieldAllocation	icv:AbstractFieldAllocationType	Code for the plate type.	image_plate	1-1
ipo:ColourShortLabel	String	Short colour name of the image plate	C	0-1
ipo:BasicDataColour	isd:ObjectUIDType	Reference to the BasicData Colour		0-1
ipo:BasicDataInkType	isd:ObjectUIDType	Reference to the BasicData InkType		0-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:PrintingJobLink	isd:LinkType	Link to the printing job this field belongs to	1-1
ipo:PrintingJobBSPageLink	isd:LinkType	Link to the printing job BS page this field belongs to	0-1

ACTIVITIES:

None

4.13.1 Type: FieldDestinationType

attribute name	*Type*	*description*	*example*	*Ap*
ipo:PrintingCoupleID	isd:PhysicalElementIDType	Human readable physical element ID of the printing couple.	T13PC8	1-1
ipo:Field	Integer	field number: 1..n. The fields are numbered from drive to operator side, 1..4 for a 4/2 press, 1..6 for a 6/2 press, etc.	2	1-1
ipo:PlatePosition	Integer	plate position: 1 = low (first plate), 2=high (second plate)	1	1-1

4.14 Object class: ipo:PlateSizePosition

The plate size position describes the physical plate size and position on the press. The code of “ipo:X” and “ipo:Y” defines the lower number of the plate position if the plate format is larger than broadsheet.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:CoupleDestinationID	isd:PhysicalElementIDType	Press element ID of the plate cylinder (couple) inside the press		1-1
ipo:X	Positive Integer	X position of plate on cylinder measured in XUnit. Value ranges from 1 to n from drive to operator side.	1	1-1
ipo:Y	Positive Integer	Y position of plate on cylinder measured in YUnit. Value ranges from 1 (first plate) to n.	1	1-1
ipo:Width	Positive Integer	Plate’s width measured in XUnit	4	1-1
ipo:Height	Positive Integer	Plate’s height measured in YUnit	2	1-1
ipo:XUnit	Positive Integer	Unit in [1/10 mm] to be used with attributes ipo:X and ipo:Width	3300	1-1
ipo:YUnit	Positive Integer	Unit in [1/10 mm] to be used with attributes ipo:Y and ipo:Height	5300	1-1

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:ToProduce	Integer	Number of plates to be produced for this ipo:PlateSizePosition: >1: Produce this number of plates 0: Produce no plates -1: Plate production has to determine number of plates itself.	2	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:PrintingJobLink	isd:LinkType	Link to the printing job this plate size position belongs to	1-1
ipo:PlateDescriptionLink	isd:LinkType	Link to the plate description this plate size position belongs to	0-1

ACTIVITIES:

None

4.15 Object class: ipo:WebLead

ATTRIBUTES:

attribute name	*Type*	*description*	*example*	*Ap*
ipo:WebLeadID	isd:PhysicalElementIDType	Web lead name	T13-4/4-1	1-1
ipo:WebNo	PositiveInteger	Number of the web.	1	1-1

attribute name	*Type*	*description*	*example*	*Ap*
ipo:WebPosition	String	Web width and position in printing fields. Example: DCBA = one full web DC = half web on operating side (,if plate positions are named from drive side) or CD = half web on drive side (,if named from operator side to drive side). Supporting half segments: To support half segments “small letters” are used. Example: dCBA = 7/8 web	dCBA	1-1
ipo:BasicDataPaper	isd:ObjectUIDType	Reference to the BasicData Paper used for this web		1-1
ipo:Width	NonNegativeInteger	Width of a full web in [1/10 mm]	12600	1-1
ipo:WebWidth	NonNegativeInteger	Real width of the web in [1/10 mm]	9450	1-1
ipo:DriveSideMargin	NonNegativeInteger	The drive side margin in [1/10 mm]. (Distance from the middle of press plus ½ max. reel width (to press drive side) to planned reel edge.)		1-1
ipo:OperatorSideMargin	NonNegativeInteger	The operator side margin in [1/10 mm]. (Distance from the middle of press plus ½ max. reel width (to press operator side) to planned reel edge.)		1-1

LINKS:

link name	*type*	*description*	*Ap*
ipo:PrintingJobLink	isd:LinkType	Link to the printing job this web lead belongs to	1-1

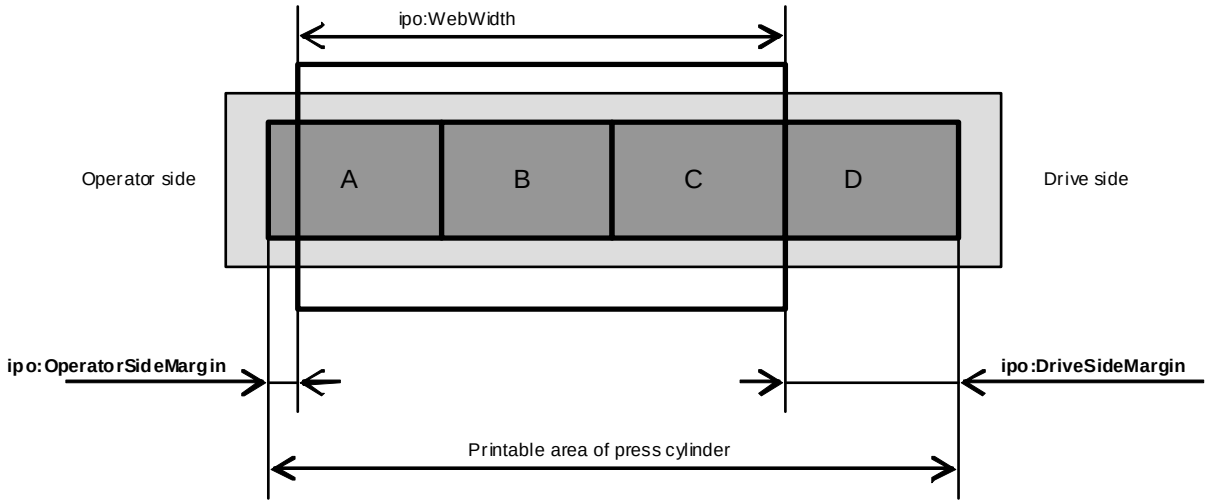
ACTIVITIES:

None

Notes:

Definition of the ipo:DriveSideMargin and the ipo:OperatorSideMargin.

ipo:DriveSideMargin / ipo:OperatorSideMargin



4.16 Object class: ipo:WebLeadElement

Reference to the press element used for related web lead.

ATTRIBUTES:

attribute name	***type***	***Description***	***example***	***Ap***
ipo:No	PositiveInteger	Number of the web lead element	2	1-1
ipo:PressElement	icv:AbstractPressWebElementType	Type of press element. The supported types depend on the press management system.	reelstand	1-1
ipo:PressElementID	isd:PhysicalElementIDType	Unique human readable Physical Element ID of the press element		1-1
ipo:WebSide	icv:AbstractWebSideType	Concerned side of the web	left	1-1
ipo:Active	Boolean	For automatic production sequence true = printing couple used false = printing couple not used	true	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:WebLeadLink	isd:LinkType	Link to the web lead this web lead element belongs to	1-1

ACTIVITIES:

None

4.17 Object class: ipo:PartialWeb

Web lead description inside the superstructure until former nose.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:No	PositiveInteger	Number of the ribbon, stared at 1 without gap.	1	1-1
ipo:SourceWebPosition	String	Partial web width and position before turning	12	1-1
ipo:DestWebPosition	String	Partial web width and position after turning. ipo:StartWebPosition and ipo:DestWebPosition are identical when no turning is requested. Remark: To get information about overturned segments, the PartialWebElements concerning "baywindow" and "deturning_roller have to be checked.	34	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:WebLeadLink	isd:LinkType	Link to the web lead this partial web belongs to	1-1

ACTIVITIES:

None

4.18 Object class: ipo:PartialWebElement

Reference to the press element used for related partial web.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:No	PositiveInteger	Number of the partial web element	2	1-1
ipo:PressElement	icv:AbstractPressPartialWebElementType	Type of press element	inlet	1-1
ipo:PressElementID	isd:PhysicalElementIDType	Unique human readable Physical Element ID of the press element		1-1
ipo:WebSide	icv:AbstractWebSideType	Concerned side of the web	left	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:PartialWebLink	isd:LinkType	Link to the partial web this partial web element belongs to	1-1

ACTIVITIES:

None

4.19 Object class: ipo:FormerBook

Physical books on the former.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:BookPos	PositiveInteger	Position of the book inside the product.	1	1-1
ipo:NoOfPages	PositiveInteger	Broadsheet page count of the book.	16	1-1
ipo:PageFormat	icv:Abstract	Format of the pages inside the	broadsheet	1-1

attribute name	*Type*	*Description*	*example*	*Ap*
	PageFormat Type	book.		
ipo:FormerID	isd:Physical ElementIDType	Physical Element ID of the former used by this book. The former is only available if the export file is related to one printing job. The string represents the press element ID of the related former.	3FATR12	1-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:PrintingJobLink	isd:LinkType	Link to the printing job this former book belongs to	1-1

ACTIVITIES:

None

4.20 Object class: ipo:PlateDescription

The plate description is used to define the image of a plate to be produced. To reuse the same PlateDescription in different PlateSizePosition, the same PlateDescription object will be used (linked) by different PlateSizePosition. The object uid of the PlateDescription has to be independent from any context information.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:Width	Positive Integer	Plate width; number of pages of size “unit” on plate in X direction (1..n)	2	1-1
ipo:Height	Positive Integer	Plate height; number of pages of size “unit” on plate in Y direction	1	1-1
ipo:Unit	icv:Abstract PageFormat Type	Page format such as ‘broadsheet’. Default: broadsheet.	broadsheet	0-1
ipo:RIPSetup	String	Description of the rip setup. This is any string without structure.		0-1

Notes:

Width and height define a grid on the plate that is used by the "SeparationPlacement". The grid's unit is defined by the smallest separation either broadsheet or tabloid or half tabloid.

The grid may differ from the (physical) grid of the press to offer more flexibility. It is possible to define a 3x2 broadsheet grid on a "PlateDescription" that will be mounted on a press with a broadsheet base grid of 2x2.

LINKS:

None

ACTIVITIES:

None

4.21 Object class: ipo:SeparationPlacement

The SeparationPlacement is used to define the position and orientation of a separation on a plate.

ATTRIBUTES:

attribute name	***Type***	***Description***	***example***	***Ap***
ipo:X	PositiveInteger	X position on plate. Value ranges from 1 to X scale factor of associated PlateDescription object. Origin is plate's upper left corner.		1-1
ipo:Y	PositiveInteger	Y position on plate. Value ranges from 1 to Y scale factor of associated PlateDescription object. Origin is plate's upper left corner.		1-1
ipo:Rotation	isd:RotationType	Rotation of separation on plate. A separation with an angle of ' degrees is placed head-up on plate. Supported angles are: 0 90 180 270		0-1

Notes:

X and Y positions are related to a grid that is defined by PlateDescription's attributes. Even if a separation covers more than one grid segment, only one separation placement is needed. The position is related to the upper left corner of

the separation. If the value of Rotation is not 0, the position relates to the upper left corner of the rotation's result.

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:SeparationLink	isd:LinkType	Link to the separation this separation placement belongs to	0-1
ipo:PlateDescriptionLink	isd:LinkType	Link to the plate description this separation placement belongs to	1-1

ACTIVITIES:

None

4.22 Object class: ipo:Load

A load defines the combination of drop points for a vehicle in one trip. A load consists of one or several production routes.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:Name	String	Name of the load object should be unique in a day		1-1
ipo:Description	String	Description of the Load		0-1
ipo:PlannedArrival	DateTime	Planned arrival of the truck		0-1
ipo:PlannedDeparture	DateTime	Planned departure of the truck		0-1
ipo:LoadSheet	isd:SheetType	Text for the load- and driver paper		0-1

LINKS:

None

ACTIVITIES:

None

4.23 Object class: ipo:DropPoint

A drop point describes an address at which products are unloaded from a vehicle.

ATTRIBUTES:

attribute name	*type*	*Description*	*example*	*Ap*
ipo:Name	String	Name of the drop point		1-1
ipo:SequenceIndex	NonNegativeInteger	Sequence index of the drop point within ipo:Load		1-1
ipo:DropPointData	String	Text objects to describe the drop point Example: Address data of the drop point The string has to follow a certain format such as: <BeginDelimiter>TextObjectID<Delimiter>TextObjectText Begindelimiter: "/" ASCII ($5C_{Hex}$) Delimiter: ";" ASCII ($3B_{Hex}$) **Restrictions:** o A ID cannot contain a ";" o A Text cannot contain "\"	\IDAddress;Hauptstrasse 15\IDRemark;Watch out for the dogs!	0-1
ipo:Description	String	Description of the drop point		0-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:LoadLink	isd:LinkType	Link to the load this drop point belongs to	1-1

ACTIVITIES:

None

4.24 Object class: ipo:ProductionRoute

Production routes are transport routes for the delivery of newspaper products. Production routes consist of a sequence of production drops.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:Name	String	Name of the ProductionRoute		1-1
ipo:SequenceIndex	NonNegativeInteger	Sequence for the production Route within the issue	100	1-1
ipo:BundleParameter	isd:BundleParameterType	Bundle parameters Specifiy preferred on ProductionRoute level If not defined on ProductionDrop level, the settings on the ProductionRoute level will be taken.		0-1

LINKS:

link name	*Type*	*description*	*Ap*
ipo:LoadLink	isd:LinkType	Link to the load this production route belongs to	0-1

ACTIVITIES:

None

4.25 Object class: ipo:ProductionDrop

The production drop (PD) is the smallest production unit. A total number of newspaper copies are allocated to a production drop.

ATTRIBUTES:

attribute name	*type*	*Description*	*example*	*Ap*
ipo:Name	String	Name of the drop		1-1
ipo:SequenceIndex	NonNegativeInteger	Drop sequence within ProductionRoute	10	1-1
ipo:PlannedVersion	String	Version of the production drop. The Version increase, if the production drop is changed	2	0-1
ipo:PlannedCopies	NonNegativeInteger	Planned number of copies	250	1-1
ipo:DropProductionType	icv:AbstractDropProductionTypeType	This production drop should produce. Default = `bundles`	bundles	0-1

attribute name	*type*	*Description*	*example*	*Ap*
ipo:PushOutDirection	icv:AbstractPushOutDirectionType	Push out direction of the stacker to pushout the ProductionDrop. Default = `acc_mailroom_settings`	mailroom	0-1
ipo:CopyAddress	isd:AddressType	Addresses for inkjet		0-n
ipo:Bundleparameters	isd:BundleParameterType	Bundle parameters Specifiy preferred on ProductionRoute level If not defined on ProductionDrop level, the settings on the ProductionRoute level will be taken.		0-1
ipo:TopsheetStdBundle	isd:SheetType	Topsheet on standard bundles		0-1
ipo:TopsheetKeyBundle	isd:SheetType	Topsheet on key bundles		0-1
ipo:Labelsheet	isd:SheetType	Label for the mail bag		0-1
ipo:Infosheet	isd:SheetType	Information sheet		0-1

LINKS:

link name	*Type*	*Description*	*Ap*
ipo:EditionVersionLink	isd:LinkType	Link to the edition version this production drop belongs to	1-1
ipo:ProductionRouteLink	isd:LinkType	Link to the production route this production drop belongs to	1-1
ipo:DropPointLink	isd:LinkType	Link to the drop point this production drop belongs to	0-1

ACTIVITIES:

None

4.26 Object class: ipo:BasicDataColour

List of all colours defined in the press management system.

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
ipo:ColourShortLabel	String	Short name of the colour.	C	1-1
ipo:ColourLabel	String	Long name of the colour.	Cyan	1-1
ipo:DisplayColour	String	Display colour in RGB Code	255-255-255	1-1

LINKS:

None

ACTIVITIES:

None

4.27 Object class: ipo:BasicDataInkType

List of all ink types defined in the press management system.

ATTRIBUTES:

attribute name	*Type*	*description*	*example*	*Ap*
ipo:InkType	String	InkType name.	offset ink	1-1
ipo:InkManufacturer	String	Name of the ink manufacturer.	BASF	1-1

LINKS:

None

ACTIVITIES:

None

4.28 Object class: ipo:BasicDataPaper

List of all paper types defined in the press management system.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*

attribute name	*type*	*description*	*example*	*Ap*
ipo:PaperType	String	Name of paper type.	Haindl 48	1-1
ipo:PaperManufacturer	String	Name of the paper manufacturer.	Haindl	1-1
ipo:PaperSupplier	String	Name of the supplier.	Maier und Söhne	0-1
ipo:PaperGrammage	NonNegativeInteger	Grammage of the paper (1/100 gr/qm) 48,2 = 4820	4820	1-1
ipo:PaperColour	String	Colour name of the paper.	White paper	1-1

LINKS:

None

ACTIVITIES:

None

5 IFRA Track Tracking Object Class Definitions (ito)

A new object ID has to be created by the tracking system every time the object is sent. To match the tracking objects with the planning objects, the tracking objects have a link to the planning objects.

5.1 Object class diagram

Objects that are defined in the planning context are not shown. The object class diagram shows the derivation of the tracking objects.

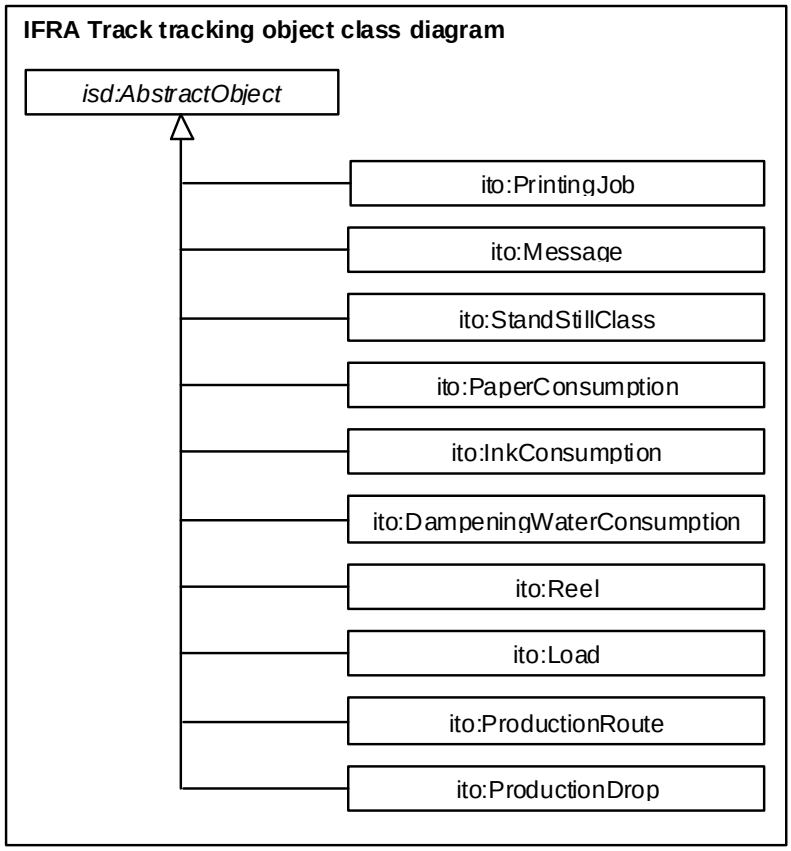


Figure 4: IFRA Track tracking object class diagram

5.2 Object class link diagram

The object class link diagram shows the links between object classes in the tracking context of IFRA Track.

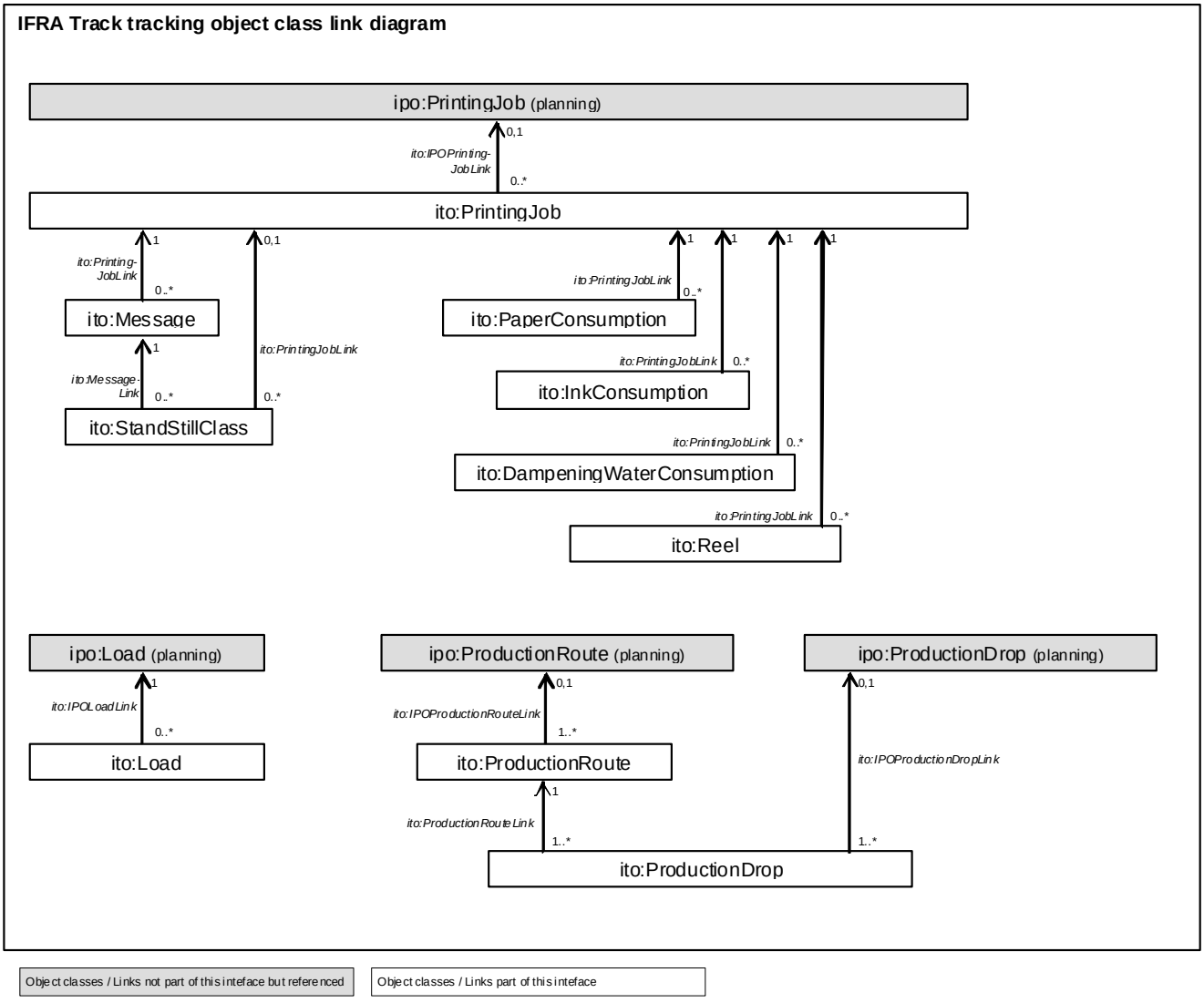


Figure 5: IFRA Track tracking object class link diagram

5.3 Object class: ito:PrintingJob

The object ID is a new object ID when the object was created by the tracking system.

ATTRIBUTES:

attribute name	*type*	*Description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	1-n
ito:PlannedCopies	Integer	Planned good copies, eventually modified on desk	60000	0-1
ito:PlannedAllowance	Integer	Planned allowance	1500	0-1
ito:ActualCopies	Integer	Count of net copies	55789	1-1
ito:Waste	Integer	Count of waste copies	3179	1-1
ito:StartUpWaste	Integer	Start-up waste (until first good copy)	846	0-1
ito:PressSpeed	Integer	Steed of the rotary machine in [rotations per hour]	28500	1-1
ito:RealPrintingTime	Integer	Number of seconds the impression is on.	53456	0-1
ito:MaxSpeed	Integer	Max. spedd of machine in [rotations per hour]	32000	0-1
ito:MaxSpeedDuration	Integer	Duration of max. speed in [seconds]	1472	0-1
ito:SpecialWaste	ito:SpecialWasteType	e.g. Proof copies, incomplete copies, checking copies, etc.		0-n

LINKS:

link name	*type*	*Description*	*Ap*
ito:IPOPrintingJobLink	isd:LinkType	Link to the planned object class printing job this tracking object class printing job belongs to	0-1

ACTIVITIES:

activity name	*type*	*Description*	*example*	*Ap*
ito:ProductionAct	ito:ProductionActivityTyp	Used to track the current state of		1-1

activity name	*type*	*Description*	*example*	*Ap*
ivity	e	the printing job. ▪ not_started: Not started is the first message when a job is activated on the press. ▪ in_progress: Press is running (speed > 0). ▪ on_hold: Press is stopped (speed = 0). ▪ completed: Printing job is finished. ▪ aborted: The printing job was aborted on desk.		

5.3.1 Type: ito:SpecialWasteType

ATTRIBUTES:

attribute name	*type*	*Description*	*example*	*Ap*
WasteType	String	Type of special waste		1-1
Value	Integer	Value of the special waste		1-1

5.4 Object class: ito:Message

A message is used to log a “web break” or a “reel change” or any other events, warnings or stops which occur in the machine.

For each message which should be logged, the system has to create a new object. If attributes of the message have to be updated the same object ID has to be used.

ATTRIBUTES:

attribute name	*type*	*Description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	0-n

attribute name	*type*	*Description*	*example*	*Ap*
ito:SetDateTime	DateTime	Time when the message occurred	2004-06-12T18:06:43:234	1-1
ito:DelDateTime	DateTime	Time when the message was cancelled		0-1
ito:MessageClass	icv:AbstractMessageClassType	Message class identification.	warning	1-1
ito:MessageNumber	Integer	Message number	3245	1-1
ito:MessageText	String	Human readable message text		1-1
ito:MessageLocation	String	Place where the message occurred	RS11	1-1
ito:ActualCopies	Integer	Number of net copies when this message occurred.		0-1
ito:Waste	Integer	Number of waste copies when this message occurred		0-1
ito:PressSpeed	Integer	Press speed in [rotations per hour] when this message occurred		0-1
ito:SpecialEvent	icv:AbstractSpecialEventType	Additional event to classify the type of the message.		0-1
ito:ReelstandID	isd:PhysicalElementIDType	Unique, human readable, physical element ID of the reelstand		0-1

LINKS:

link name	*type*	*description*	*Ap*
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this Message belongs to	1-1

ACTIVITIES:

None

5.5 Object class: ito:StandStillClass

A stand still class reports the reason of a machine stop. It can be generated automatically from the press control system or manually by the press operator.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	0-n
ito:StandStillClassType	String	Type of stand still class.	MachineStop	1-1
ito:Name	String	Name of the stand still class.	Editorial Department	1-1
ito:StandStillTime	Integer	Number of seconds the impression is on.	670	1-1
ito:Waste	Integer	Count of waste copies occur during stop.	50	0-1

LINKS:

link name	*type*	*description*	*Ap*
ito:MessageLink	isd:LinkType	Link to the message this stand still class belongs to	1-1
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this StandStillClass belongs to	0-1

ACTIVITIES:

None

5.6 Object class: ito:PaperConsumption

With the object PaperConsumption it is possible to register paper consumption

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	0-n
ito:Name	String	Name of the consumption	GrossPaperConsumption	1-1
ito:Consumption	Integer	Paper consumption in [kg]	1352	1-1

LINKS:

link name	*type*	*description*	*Ap*
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this PaperConsumption belongs to	1-1

ACTIVITIES:

None

5.7 Object class: ito:InkConsumption

With the object InkConsumption it is possible to register ink consumption.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	0-n

attribute name	*type*	*description*	*example*	*Ap*
ito:ColourShortLabel	String	Name of the colour	HKS13	1-1
ito:InkType	String	Name of the ink type	BASF1	0-1
ito:Consumption	Integer	Ink consumption in [g]	40	1-1

LINKS:

link name	*type*	*description*	*Ap*
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this InkConsumption belongs to	1-1

ACTIVITIES:

None

5.8 Object class: ito:DampeningWaterConsumption

With the object DampeningWaterConsumption it is possible to register dampening water consumption.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:PressSectionID	isd:PhysicalElementIDType	Physical element ID of the press section	F1	1-1
ito:PressFolderID	isd:PhysicalElementIDType	Physical element IDs of the press folders (Ap = 1 if the job uses only one folder, Ap=2 if the job uses two folders, etc)	F2A	0-n
ito:Name	String	Name of the dampening water	Default	0-1
ito:Consumption	Integer	Dampening water consumption in [litres]	30	1-1

LINKS:

link name	*type*	*description*	*Ap*

link name	*type*	*description*	*Ap*
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this DampeningWaterConsumption belongs to	1-1

ACTIVITIES:

None

5.9 Object class: ito:Reel

With the object Reel it is possible to register reel data.

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:ReelstandID	isd:PhysicalElementIDType	Unique, human readable, physical element ID of the reelstand	RS13	1-1
ito:ReelstandArm	String	Name of the arm on which the reel is running	1	0-1
ito:IfraBarcode	String	Ifra barcode of the reel		0-1
ito:PaperManufacturer	String	Manufacturer of the paper	Stora	0-1
ito:PaperGrammage	NonNegativeInteger	Grammage of the paper in [1/100 g/m^2]	4800	0-1
ito:WebWidth	Integer	Width of the reel in [1/10 mm]	16000	1-1
ito:StartDiameter	Integer	Diameter of reel when it started running in [mm]	1150	1-1
ito:EndDiameter	Integer	Diameter of the reel when it stopped running in [mm]	120	1-1
ito:UnwoundLength	Integer	Length of the unwound paper in [m}	19836	1-1
ito:Consumption	Integer	Paper consumption from this reel in [kg]	1200	0-1
ito:TimeStartDiameter	DateTime	Timestamp of start diameter		0-1
ito:TimeEndDiameter	DateTime	Timestamp of end diameter		0-1
ito:GrossCopies	Integer	Count of actual gross copies when		0-1

attribute name	*type*	*description*	*example*	*Ap*
Start		measuring the start diameter of reel		
ito:GrossCopiesEnd	Integer	Count of actual gross copies when measuring the end diameter of reel		0-1
ito:ReelId	String	Unique reel ID, e.g. from a roll logistic system		0-1

LINKS:

link name	*type*	*description*	*Ap*
ito:PrintingJobLink	isd:LinkType	Link to the tracking object class printing job this Reel belongs to	1-1

ACTIVITIES:

None

5.10 Object class: ito:Load

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:Name	String	Name of the load object should be unique in a day		1-1
ito:ProducedPallets	Integer	Count of produced pallets		0-1
ito:BadgeNumber	String	Identifier on the badge		0-1
ito:PlannedArrival	DateTime	Planned arrival time for the truck		0-1
ito:PlannedDeparture	DateTime	Planned departure time for the truck		0-1
ito:FirstBundle	DateTime	First bundle of the load at the ramp/pallet		0-1
ito:LastBundle	DateTime	Last bundle of the load at the ramp/pallet		0-1
ito:RealArrival	DateTime	Real arrival time for the truck		0-1
ito:RealDeparture	DateTime	Real departure time for the truck		0-1

LINKS:

link name	*type*	*description*	*Ap*
ito:IPOLoadLink	isd:LinkType	Link to the planned object class Load this tracking object class Load belongs to	0-1

ACTIVITIES:

None

5.11 Object class: ito:ProductionRoute

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:Name	String	Production route name		1-1
ito:PlannedCopies	Integer	Planned copies of route		1-1
ito:PlannedStart	DateTime	Planned start time		0-1
ito:PlannedEnd	DateTime	Planned end time		0-1
ito:ProductionRouteData	ito:ProductionRouteDataType	Tracking information for each part of the production route		1-n

LINKS:

link name	*type*	*description*	*Ap*
ito:IPOProductionRouteLink	isd:LinkType	Link to the planned object class ProductionRoute this tracking object class ProductionRoute belongs to	0-1

ACTIVITIES:

None

5.11.1 Type: ito:ProductionRouteDataType

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:LineID	isd:	Physical element ID of the		1-1

attribute name	*type*	*description*	*example*	*Ap*
	PhysicalElementIDType	production line.		
ito:RealStart	DateTime	Actual start of the production route		1-1
ito:RealEnd	DateTime	Actual end of the production route		1-1
ito:ProducedCopies	Integer	Produced copies		1-1
ito:ProducedBundles	Integer	Produced bundles		1-1
ito:LoadedBundles	Integer	Loaded bundles		0-1
ito:PalletizedBundles	Integer	Palletized bundles		0-1

5.12 Object class: ito:ProductionDrop

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:Name	String	Production drop name		1-1
ito:PlannedCopies	Integer	Planned copies of route		1-1
ito:PlannedVersion	Integer	Version of the production drop.		1-1
ito:ChangeVersion	Integer	Change version of this production drop on the mailroom management system		0-1
ito:ProductionDropData	ito:ProductionDropDataType	Tracking information for each part of the production drop		1-n

LINKS:

link name	*type*	*description*	*Ap*
ito:IPOProductionDropLink	isd:LinkType	Link to the planned object class ProductionDrop this tracking object class ProductionDrop belongs to	0-1
ito:ProductionRouteLink	isd:LinkType	Link to the production route this production drop belongs to	1-1

ACTIVITIES:

None

5.12.1 Type: ito:ProductionDropDataType

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
ito:LineID	isd:PhysicalElementIDType	Physical element ID of the production line.		1-1
ito:RealStart	DateTime	Actual start time		0-1
ito:RealEnd	DateTime	Actual end time		0-1
ito:ProducedCopies	Integer	Produced copies		1-1
ito:ProducedBundles	Integer	Produced bundles		1-1
ito:StandardBundles	Integer	Copies in a standard bundle		1-1
ito:NumberOfStacks	Integer	Number of stacks / layer		1-1
ito:MaximumBundle	Integer	Maximum copies in the odd bundle		1-1

6 IFRA Track Shared Definitions (isd)

6.1 Type: isd:AbstractObject

The abstract object consists of an action and a unique identifier of the object and is the base class for all derived objects in the IFRA Track object model.

ATTRIBUTES:

Attribute name	*type*	*description*	*example*	*Ap*
ObjectUID	isd:ObjectUIDType	The ObjectUID is aglobally unique identifier of the object.		1-1

isd:action	isd:ActionType	The action indicates what to do with the object. There are the following actions supported:
		`put`
		`purge`
			put	1-1

6.2 Type: isd:ActionType

This simple enumeration type supports:

- `put`
- `purge`

The actions have to following meaning:

- Put indicates that an object should be created if it does not exist or modified if it does exist.
- Purge indicates that an object should be deleted if it exists. If the object does not exist nothing is done and no error is generated.

6.3 Type: isd:ActivityType

An activity contains information regarding the status of an object within a given process or workflow. In general the activity states should be defined within the interface specifications.

ATTRIBUTES:

Attribute name	*type*	*description*	*example*	*Ap*
ActivityState	icv:AbstractActivityStateType	Activity states defined within the interface specifications		1-1
Reason	String	Text to describe the reason of the activity state change	Web break	0-1

6.4 Type: isd:AddressType

ATTRIBUTES:

attribute name	*type*	*description*	*example*	*Ap*
isd:AddressData	String	Address data as a text object The string has to follow a certain format such as: <BeginDelimiter>TextObjectID<Delimiter>TextObjectText Begindelimiter: "/" ASCII ($5C_{Hex}$) Delimiter: ";" ASCII ($3B_{Hex}$) **Restrictions:** o A ID cannot contain a ";" o A Text cannot contain "\"	\IDName;Hans Müller\IDAddress1;Hauptstrasse 7\IDAddress2;12345 Neustadt	1-1
isd:AddressLayout	Integer	Number of the address layout	101	1-1
isd:SequenceIndex	Integer	Address sequence index within drop or bundle	1	1-1

6.5 Type: isd:BundleParameterType

ATTRIBUTES:

attribute name	*Type*	*Description*	*example*	*Ap*
isd:StdBundleSize	PositiveInteger	Number of copies per bundle	100	1-1
isd:MinBundleSize	PositiveInteger	Min. number of copies per bundle	80	0-1

attribute name	*Type*	*Description*	*example*	*Ap*
isd:MaxBundleSize	PositiveInteger	Max. number of copies per bundle	120	1-1
isd:NoOfStacks	PositiveInteger	Number of stacks per bundle	2	1-1
isd:MaxStackSize	PositiveInteger	Max. number of copies per stack	50	0-1
isd:PositionOfKeyBundle	icv:AbstractPositionOfKeyBundleType	Position of the key bundle within the ProductionDrop Default = `acc_mailroom_seetings`	last_bundle	0-1

6.6 Type: isd:LinkType

The LinkType type is used to specify a link that defines the relationship from one object to another.

ATTRIBUTES:

Attribute name	*type*	*description*	*example*	*Ap*
ObjectUID	isd:ObjectUIDType	The ObjectUID of the object this link is pointing to.		1-1

6.7 Type: isd:ObjectUIDType

The ObjectUIDType holds a globally unique identification of an object. It is used in all objects as the primary identification, and also as a link from one object to another.

It lies within the responsibility if the application creating an object instance to ensure that the identifier given to the object is globally unique, i.e. that the object can coexist with objects of the same type created by other applications without any risk of the same id being used for identification of different objects.

The application creating a GUID is free do so using any available mechanism and format that may be available in the technical infrastructure of the application. It is however **RECOMMENDED** to create a GUID using the following scheme:

PrintinCompany.com:2008-01-01:MyApplication:1234

The ‘1234’ is the local id as used within the application. The ‘MyApplication’ is the name of the application, which must be unique among the application names from the supplier, which in turn is identified by its domain name ‘PrintingCompany.com’ and ‘2008-01-01’, a date when this domain name was registered to the application supplier. All parts concatenated and separated by colon will be a valid GUID.

Below is an example of its XML implementation:

```
<isd:ObjectUID>PrintingCompany.com:2008-01-
01:Print:11</isd:ObjectUID>
```

ATTRIBUTES:

Attribute name	*type*	*description*	*Example*	*Ap*
Supplier	String	Supplier name that can be used to identify the supplier of the application creating the object.		0-1
Application	String	Application name that can be used to identify the application creating the object.		0-1

6.8 Type: isd:PhysicalElementIDType

The isd:PhysicalElementIDType is a simple string type used to record a human readable unique identifier of a physical element.

6.9 Type: isd:RotationType

This simple enumeration type supports:

- `0`
- `90`
- `180`
- `270`

6.10 Type: isd:SheetType

ATTRIBUTES:

attribute name	*Type*	*description*	*example*	*Ap*
isd:SheetText	string	The string has to follow a certain format such as: <BeginDelimiter>TextObjectID<Delimiter>TextObjectText Begindelimiter: “/” ASCII ($5C_{Hex}$) Delimiter: “;” ASCII ($3B_{Hex}$)	\ID01;String 01\ID02;String 02	1-1

attribute name	*Type*	*description*	*example*	*Ap*
		Restrictions: o A ID cannot contain a ";" o A Text cannot contain "\"		
isd:SheetLayout	Integer	Number of the sheet layout used to print the sheet	101	1-1

6.11 Type: isd:SourceType

The source element contains information about a source by means of an application and its supplier (e.g. "Harlekin" as supplier with the applications "ScriptWorks1" and "ScriptWorks2".). The application name has to be unique within the supplier range of application names.

ATTRIBUTES:

Attribute name	*type*	*description*	*example*	*Ap*
Supplier	String	Supplier name	Harlekin	1-1
Application	String	Application name, which has to be unique within the supplier's name range	ScriptWorks 1	1-1

7 IFRA Track Controlled Vocabularies (icv)

This section defines the recommended controlled vocabularies as defined in IFRA Track. Additional Interface specific controlled vocabularies may be defined in an Interface schema, see the IFRA Track Overview [1] for instruction on how to create a CV in an Interface schema.

7.1 Type: icv:DropProductionTypeType

This simple enumeration type supports:

- `bundle`
- `nothing`
- `topsheet_only`

7.2 Type: icv:FieldAllocationType

This simple enumeration type supports:

- `no_plate`
- `dummy_plate`
- `image_plate`

7.3 Type: icv:MessageClassType

This simple enumeration type supports:

- `first_stop`
- `further_stop`
- `warning`
- `event`
- `user`
- `lock`
- `diagnosis`

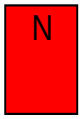
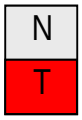
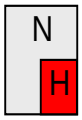
7.4 Type: icv:PageFormatType

This simple enumeration type supports:

- `broadsheet`

- tabloid
- halftabloid

Explanations to the defined page format types:

icv:PageFormatType	**Description**	**Drawing**
broadsheet	Normal page size in newspaper production	
Tabloid	Half broadsheet page	
Halftabloid	Magazine page	

7.5 Type: icv:PositionOfKeyBundleType

This simple enumeration type supports:

- acc_mailroom_settings
- first_bundle
- last_bundle

7.6 Type: icv:PressPartialWebElementType

The press element type is used in the object class ipo:PartialWebElement.

This simple enumeration type supports:

- inlet
- inletlevel
- turnerlevel
- baywindow_out
- baywindow_in
- deturning_roller
- outletlevel

- former
- folder

7.7 Type: icv:PressWebElementType

The press element type is used in the object class ipo:WebLeadElement.

This simple enumeration type supports:

- reelstand
- reelstand_spreadunit
- reelstand_webaligner
- weblead_pu_variant
- printingspot
- dryer
- chillroller
- chillroller_webaligner
- inlet

7.8 Type: icv:PushOutDirectionType

This simple enumeration type supports:

- acc_mailroom_seetings
- to_mailroom
- to_ramp
- alternating

7.9 Type: icv:SpecialEventType

This simple enumeration type supports:

- last_plate
- impression_on
- impression_off
- reel_change
- plate_update
- web_break
- waste_open
- waste_close

- `waste_open_delayed`
- `waste_close_delayed`

7.10 Type: icv:WebSideType

This simple enumeration type supports:

- `left`
- `right`
- `both`
- `undefined`

8 REVISION INDEX

Rev.	Page (P) Section (S)	Description	Involved companies	Date Dept./Initials
A	All	First approved version.	ABB, EAE, CNet, IFRA	2008-12-01/UW