

# IEEE PUBLISHING TECHNOLOGY

## METADATA DESCRIPTION AND XML DOCUMENTATION

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*PREPARED BY:*  
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## Document Status Record

Release Date	Status	Version	Amendment / Purpose
18 March 2004	Revision	4.1	Document name change Added data dictionary for IEEE metadata fields (MARC record)
1 July 2006	New	5.0	Metadata provided in XML format; documentation of all XML elements and attributes
8 September 2006	Revision	5.1	Updated XML fields
17 October 2006	Revision	5.2	Updated "Links to Xplore" and added "Naming convention for Article PDFs"
02 November 2007	Revision	5.3	DTD Change. New elements added: lccn, tcn, conference_name, conference_acronym, ePub date. Modified definition of Multimedia element.
26 September 2008	Revision	5.4	DTD change. New elements added: pubtopicalbrowse, pubmedid, pubsponsoringcommittee, meshheading.
19 Feb. 2010	Revision	5.5	Version for single article delivery
17 July 2012	Revision	5.6	DTD Change: Added copyright group and altered copyright element. Added: rapidpostdate, preprintdate, pubapprovaldate, Removed several attributes and elements- refer to DTD.
6 August 2013	Revision	5.7	Version for single article delivery with updates
21 November 2013	Revision	5.7a	Added new elements: standard_relationship, csarticlesortorder, articleshowflag, csarticlehtmlflag, articlereferenceflag, articlepeerreviewflag, authororder, csarticleid
21 March 2014	Revision	5.8	DTD Change. Added new elements to support graphical abstract, fundrefgrp, standard_bundle, publicationdoi, issue_complete_date, conference_type, doi_permission, publicationopenaccess, article_quality, standardsfamilytitle, Updated: articlecopyright element, attributes for productnumber/@pubtype, author data Removed several attributes and elements- refer to DTD.
25 September 2015	Revision	5.9	DTD Change. Added new elements: parent_title, standard_subtype, standardmodifierset, standard_root, standard_root_title, standardtopicset, icscodes, codeterm, articleopenaccess, articleplagiarizedflag, articlenodoiflag, article_copyright_statement, article_license_uri, articlestdscope, articleimpactstatement, authoridset, authorbio, articlejournaltopicset. Updated elements: publicationsubtype, standard_status, standard_relationship, authorgroup
29 September 2017	Revisions	5.10	DTD Change. Added new elements supplement_group, articlefreetoread with attributes, articlelicense, POD to Media type attributes, publication_ieee_sponsored. Elements added for internal use only- conference_stage, special_section_group, filetype="Epub", componentpdfink, authoringgoldidset, publication_display_name, pubfeedset, funding_deposit_grp, articlescigenflag
28 March 2019	Revisions	5.11	DTD Change. Added new elements to supplement_group including widgeget_url, keyword, badges. Updated standards model, adding "superseded" to standard status, removed 'superseded' from standard modifier, added fields 'N' and 'G' and removed 'Y' from standard relationship. Updated Author and Affiliation, adding amsid to each author and adding amsid, orgname, orgdept and address to affiliation. Updated associated article with new elements. Added Article Suppression Element.
29 May 2020	Revisions	5.12	DTD Change. Added visionary statement. Added article publication date. Added section society. Updated associated article element. Updated author. Relaxed ieemegrade. Upated articlefreetoread.

## I Metadata Description

This document is a technical description of IEEE Publications content metadata records. It is intended for use by IEEE data customers. This includes customers who host IEEE metadata locally and those who link to IEEE Xplore via the metadata records. Customers of INSPEC can also use the URL information in the metadata records to link to IEEE content in IEEE Xplore.

### 1.1 Scope

This document refers to the content that is hosted on the IEEE Xplore website. It includes several classes of content:

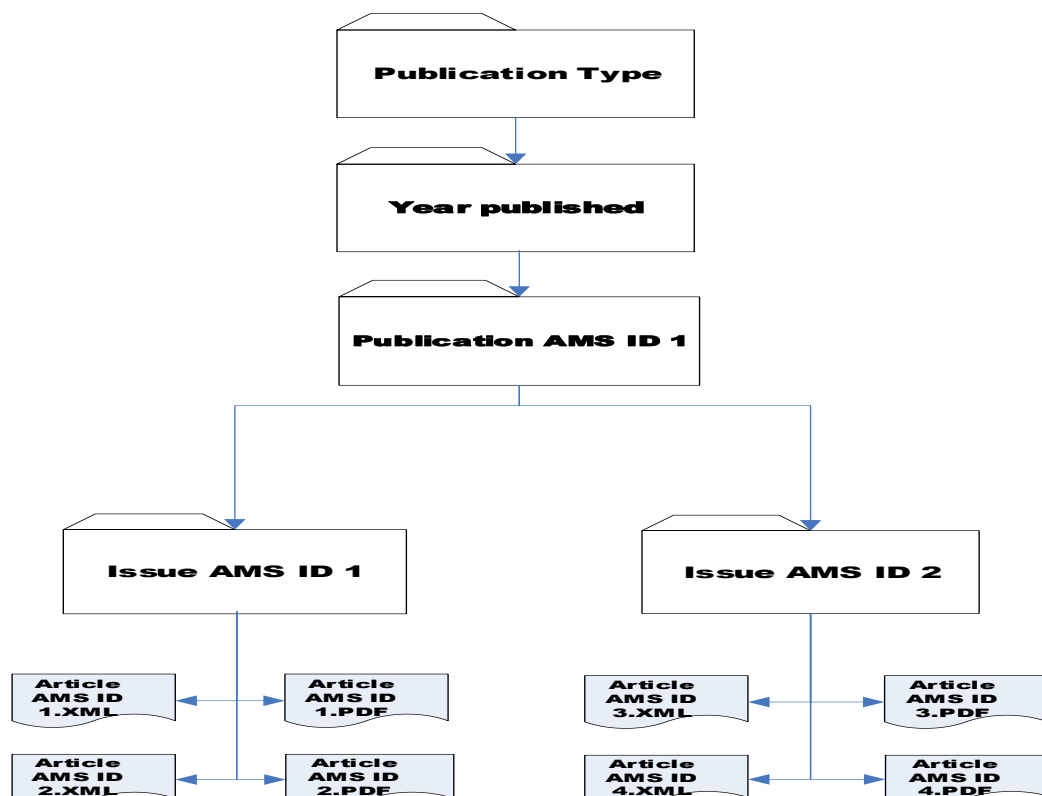
- IEEE and IET copyrighted material published 1988 through the present.
- Legacy (pre-1988) data for selected publications that was added to the collections.
- Third party content such as SMPTE, IBM, MIT, etc.

All of the content hosted in IEEE Xplore is part of the IEEE/IET Electronic Library (IEL). Subset subscriptions are also available. This document is applicable to data customers who subscribe to the IEL or any other subsets.

Bibliographic metadata will be provided in XML format. Please refer to XML Documentation for more details. For the Data Delivery DTD (iee\_idams\_exchange.dtd), please visit <https://www.ieee.org/publications/services/services-resources.html#Data-distribution-from-IEEE>

### 1.2 Backfiles

At the outset of a data license subscription, if the contract includes backfiles, customers will receive a shipment consisting of the backfile of content requested. The initial content sent will contain article records from the oldest content through the present. For subscribers who wish to host the PDF data locally, the initial shipment will be in USB/thumb drives. Our archives are encrypted and are based on the following directory structure:



### 1.3 Data Delivery Procedure

Files will be sent to data customers twice every week, which coincides with the update to IEEE Xplore. Content will be available from a secure IEEE FTP site. Customer login and password information will be provided after the contract has been signed. An email will be sent to customers notifying them that new content is ready for pickup at the FTP site. Folder structure of the update directory is included in this specification.

### 1.4 PDF Files

PDF files may be made available to customers who wish to host them locally. Alternatively, customers may choose to link to the PDF files on the IEEE Xplore website. Full-page images are created in Adobe PDF format, which are organized by article. Earlier PDFs have been created in Acrobat version 4.0 and the PDFs since 2005 have been created in Acrobat version 7.0. These are optimized for byte serving.

## 1.5 Publication Type and Groups of Metadata on FTP

IEEE Data is offered by publication type. Currently files are delivered pertaining to the following publication types:

<b>Publication Type</b>
▪ IEEE Conferences
▪ IEEE Periodicals
▪ IET Conferences
▪ IET Periodicals
▪ IEEE Standards
▪ Early Access Periodicals
▪ IEEE Draft Standards
▪ IBM Periodicals
▪ SMPTE Conferences
▪ SMPTE Periodicals
▪ SMPTE Standards
▪ BIAI, TUP, CSEE, CPSS, CMP, CES (China Periodicals)
▪ MIT Periodicals
▪ URSI Periodicals
▪ VDE Conferences

The customer will always receive the new content and deleted content. Depending on the subscription, updates to existing metadata is also available. Content delivery consists of the following groups of metadata:

### 1.5.1 New content

These are the newly published articles, accompanied with corresponding PDF, if included in the subscription (XML only or XML + PDF).

### 1.5.2 IEEE Updates

These are corrections or updates to existing metadata (XML only, no corresponding PDF).

### 1.5.3 Inspec Updates

These are Inspec citation added to existing IEEE metadata (XML only, no corresponding PDF).

#### 1.5.4 Deleted Updates

These are the deleted material, which could be due to plagiarized content, duplicates or production errors. The volume is very small and insignificant. This feed is automatically added to the content which the user is subscribed to (e.g. If you are subscribed to IEEE conferences, you should automatically be subscribed to the deleted feed for IEEE conferences as well). It is best to handle the deleted updates first before the new content.

#### 1.5.5 Extended Objects/ Multimedia

These are the ancillary material, which are present for select conference and journals articles for which the author submitted the additional content and are available as updates. These can be a presentation, executable program, source code, data, or similar material. If present, these files will be placed in an article folder, the name of which will correspond to the article PDF filename. Only subscribers that get IEEE Updates will receive this feed automatically.

#### 1.5.6 Early Access Articles

These are new content made available in advance of the final electronic or print versions, resulting from IEEE's Preprint or Rapid Post processes. This feed will include both new and updated articles. The PDF and XML will always be supplied together. The volume number will always be 'PP' and the issue will always be '99' (pp:99). Once the early access article becomes a regular article, this will then be part of the IEEE periodicals feed. At this time, the issue will be supplied with a volume and issue number. The customer will need to replace the XML metadata once it becomes part of the regular feed. Only the issue amsid will change; publication and article amsid will remain the same.

Below is an example:

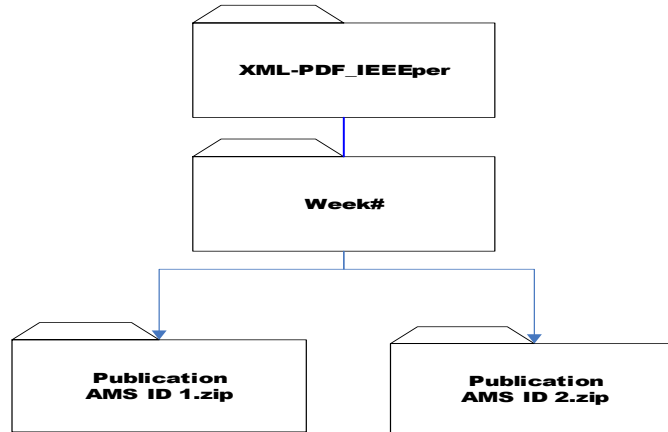
Early Access Article XML Metadata: /10/678543/0876456.xml

Published Article XML Metadata: 10/854321/0876456.xml

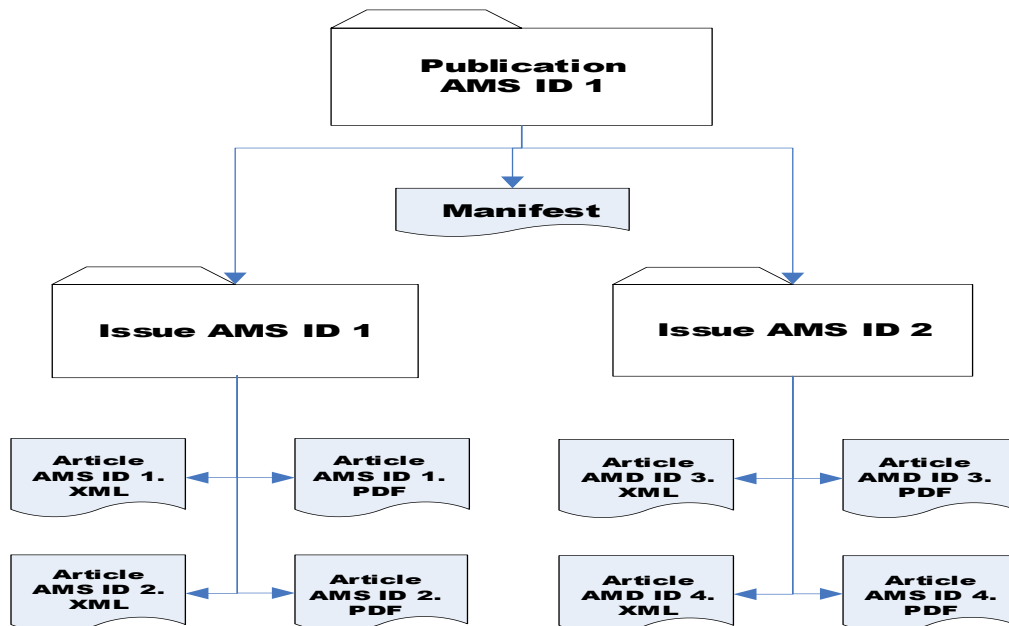
In this case, the user will have to replace "/10/678543/876456.xml" with "10/854321/876456.xml" based on the article number "876456".

Once logged in to the FTP account, under each folder (named after metadata group and publication type) will be the usual week# directory. Under the week # directory there will be zip files. Each zip file pertains to

a publication title. Zip files are named as Publication AMS ID.zip. Sample directory structure for a newly published periodical is illustrated below:



The zip file will contain folders for issues and a manifest file. Issue folders are named by Issue ID. The manifest file will contain information about the publication such as the ISSN and/or ISBN, publication title, publication date, article count and filename. Under each issue folder, XML files and PDF files (if subscribed to) for each article will be present. Both XML and PDF have the same filename which is Article AMS ID. For example, files will be named 12355888.xml and 12355888.pdf. Article AMS ID is a unique ID that IEEE generates for the article. Sample folder structure is shown below:



### 1.6 Naming Convention for Article PDFs and Linking to IEEE Xplore

Article PDFs are named with the Article AMS ID <amsid>. For subscribers linking to IEEE Xplore (with the proper credentials), the record syntax for constructing the url is as follows:

<https://ieeexplore.ieee.org/document/<article>>

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7167233>

<https://ieeexplore.ieee.org/document/7167233>

### 1.7 FTP Updates

Updates to the initial shipment are issued on a twice weekly basis via FTP with accompanying email alerts. A directory listing and week number comprising an update will be part of the email notification.

Updates to existing metadata records are sent in the following situations:

- The record has been upgraded to a full INSPEC citation record.
- Maintenance has been done on the record.
- Extended object/ multimedia is available.

When there is an INSPEC update or maintenance has been done on the record, only the existing metadata record will need to be replaced in your system with the updated record.

### 1.8 Contact Information

Contact IEEE Customer Service as follows:

Email: [onlinesupport@ieee.org](mailto:onlinesupport@ieee.org)

Telephone:

+1 800 678 4333 (U.S. and Canada)

+1 732 981 0060 (worldwide)

## II XML Documentation

This section contains a full description of the sub-field tags within the IEEE data. Note that not all sub-fields will be present in every record.

Each XML metadata contains three groups in the following hierarchical structure:

- Publication
- Volume
- Article

### 2 Publication <publication>

*Definition:* This section contains all the Publication level attributes.

#### 2.1 Publication Full Title <title>

*Definition:* Full (original) title of a publication or conference.

*Data Type:* string

*Length:* 255

*Example:* <title>IEEE Transactions on Biomedical Engineering</title>

#### 2.2 Publication Abbreviated Title <titleabbrev>

*Definition:* Abbreviated title of a publication or conference.

*Data type:* string

*Length:* 255

*Example:* <titleabbrev>IEEE Trans. Biomed. Eng.</titleabbrev>

#### 2.3 Publication Normalized Title <normtitle>

*Definition:* Normalized title of a publication or conference. A 'normalized' title means that the title is in a specific format: subject matter, followed by year and/or IEEE, and other words.

*Data type:* string

*Length:* 255

*Example:* <normtitle>Biomedical Engineering, IEEE Transactions on</normtitle>

#### 2.4 Publication Parent Title <parent\_title>

*Definition:* The title of the parent which the publication belongs to.

*Data type:* string



*Length:* 255

*Example:* <parent\_title> Data Engineering, International Conference on </parent\_title >

## 2.5 Publication Conference Name <conference\_name>

*Definition:* The name of the meeting (conference) and not the proceeding title.

*Data type:* string

*Length:* 500

*Example:* <conference\_name>2004 Automation Conference </ conference\_name >

## 2.6 Publication Standards Family Title <standardsfamilytitle>

*Definition:* Display title of the standards family on Xplore. This is for internal use only.

*Data type:* string

*Length:* 150

*Example:* <standardsfamilytitle>IEEE Standard for All-Dielectric Self-Supporting Fiber Optic Cable </ standardsfamilytitle >

## 2.7 Publication Information <publicationinfo>

*Definition:* Information about the publication.

### 2.7.1 Publication IDAMS<sup>1</sup> ID <idamsid>

*Definition:* System generated unique ID automatically assigned at the publication level when import is run.

*Data type:* string

*Length:* 16

*Example:* <idamsid>0b0000798000a06a</idamsid>

### 2.7.2 Publication DOI <publicationdoi>

*Definition:* The Digital Object Identifier (DOI) number assigned to the publication. The DOI is registered with Crossref to provide a single unique global identifier for the publication.

*Data type:* string

*Length:* 50

*Example:* <publicationdoi>10.1109/LSP.97</publicationdoi>

### 2.7.3 Publication IEEE Catalog Number <invpartnumber>

*Definition:* IEEE catalog number of a publication.

---

<sup>1</sup> IDAMS- IEEE Digital Asset Management System

*Data type:* string

*Length:* 100

*Example:* `<invpartnumber>93CH3249-0</invpartnumber>`

#### **2.7.4 Publication IEEE Standard Number <stdnumber>**

*Definition:* IEEE /ANSI number of a publication specifying an IEEE standard.

*Data type:* string

*Length:* 100

*Example:* `<stdnumber>IEEE Std 1488-2000</stdnumber>`

#### **2.7.5 Publication Type <publicationtype>**

*Definition:* General type of a publication.

*Data type:* string

*Length:* 50

*Enumerated value list:* Periodical, Conference, Standard

*Example:* `<publicationtype>Periodical</publicationtype>`

#### **2.7.6 Publication Subtype <publicationsubtype>**

*Definition:* Specific type of a publication; indicates whether the publication is an IEEE publication, an IEE publication or another type.

*Data type:* string

*Length:* 50

*Enumerated value list:* ACM Conference, ACM Periodical, AIP, AVS, BIAI, Bell Periodical, CSEE, Engineering Reports, IBM, IEE Conference, IEE Periodical, IEEE Conference, IEEE Journal, IEEE Letter, IEEE Newsletter, IEEE Magazine, IEEE Transaction, MIT Periodical, Registered Disclosure Docs, Research Documents, SIAM, SMPTE Conference, SMPTE Periodical, Standard Docs, TUP, Test Specifications, VDE Conference, Whitepapers

*Example:* `<publicationsubtype>IEEE Transaction</publicationsubtype>`

#### **2.7.7 Publication Standard Subtype <standard\_subtype>**

*Definition:* The subtype of a standard document. This is only present if the publication subtype is "Standard Docs".

*Data type:* string

*Length:* 32

*Enumerated value list:* IEEE Standard, SMPTE Standard, SMPTE Amendment, SMPTE Engineering Guideline, SMPTE Overview Documents, SMPTE Recommended Practice

*Example:* `<standard_subtype> IEEE Standard</ standard_subtype>`

### 2.7.8 Publication IEEE Abbreviation `<ieeeabbrev>`

*Definition:* The IEEE abbreviation for a journal or conference. This is used in file name specification for all content imported from the journal or conference.

*Data type:* string

*Length:* 20

*Example:* `<ieeeabbrev>T-BME</ieeeabbrev>`

### 2.7.9 Publication Conference Acronym `<acronym>`

*Definition:* Type of acronym used for a conference or journal.

*Attribute:* acronymtype

*Enumerated value list:* CONFERENCE\_ACRONYM

*Definition:* The acronym used by the conference, which may be different from the IEEE assigned acronym.

*Data type:* string

*Length:* 50

*Example:* `<acronym acronymtype="CONFERENCE_ACRONYM">ESSCIR</acronym>`

*Enumerated value list:* PIMS<sup>2</sup>

*Definition:* The PIMS acronym for a journal.

*Data type:* string

*Length:* 40

*Example:* `<acronym acronymtype="PIMS">TBME</acronym>`

### 2.7.10 Publication Status `<pubstatus>`

*Definition:* The current status of a publication or conference.

*Data type:* string

*Length:* 20

*Enumerated value list:* Active, Inactive

*Example:* `<pubstatus>Active</pubstatus>`

### 2.7.11 Publication Open Access `<publicationopenaccess>`

*Definition:* A flag that indicates whether all the research articles in the publication are available for free or not.

*Data type:* boolean

*Enumerated value list:* T= True, F= False

*Example:* `<publicationopenaccess>T</publicationopenaccess>`

<sup>2</sup> PIMS- Internal IEEE journal tracking database

**2.7.12 Publication Standard ID <standard\_id>**

*Definition:* The unique key for specifying an IEEE standard used for tracking purposes. This is for internal use only.

*Data type:* integer

*Length:* 15

*Example:* <standard\_id>12346746</standard\_id>

**2.7.13 Publication Standard Associated PU Number <associated\_punumber>**

*Definition:* The Xplore PU number for the Active standard which the Redline standard is associated with. This is for internal use only.

*Data type:* string

*Length:* 12

*Example:* <associated\_punumber>6145279</associated\_punumber>

**2.7.14 Publication Standard Status <standard\_status>**

*Definition:* The current status of a standard.

*Data type:* integer

*Length:* 32

*Enumerated value list:* Active, Inactive, Superseded

*Example:* <standard\_status>Active</standard\_status>

**2.7.15 Publication Standard Modifier Set <standardmodifierset>**

*Definition:* Information about publication standard modifier.

**2.7.15.1 Publication Standard Modifier <standardmodifier>**

*Definition:* The current modifier that is linked to the standard status.

*Data type:* string

*Length:* 100

*Enumerated value list:* Approved, Draft, Unapproved, Amended, Withdrawn, Redline, Reserved, Stable, Under Review

*Example:* <standardmodifier>Approved</standardmodifier>

**2.7.16 Publication Standard Bundle <standard\_bundle>**

*Definition:* Information about the standard bundle. This is for internal use only.

**2.7.16.1 Publication Standard Bundle Name <bundle\_name>**

*Definition:* The name of the grouping of standards to be sold.

*Data type:* string

*Length:* 400

*Example:* `<bundle_name>`American National Standard Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices - Redline`</bundle_name>`

### **2.7.16.2 Publication Standard Bundle Type `<bundle_type>`**

*Definition:* The name of the standards bundle- can be of type “Mandatory” which requires a base standard or “Suggested” which does not require a base standard.

*Data type:* string

*Length:* 20

*Enumerated value list:* Mandatory, Suggested

*Example:* `<bundle_type>`Suggested`</bundle_type>`

### **2.7.16.3 Publication Base Standard Product Number**

**`<base_standard_product_number>`**

*Definition:* The product number that is required if the standard bundle type is “Mandatory”.

*Data type:* string

*Length:* 25

*Example:* `<base_standard_product_number>`STDSU95983`</base_standard_product_number>`

### **2.7.16.4 Publication Standard Bundle Product Number**

**`<bundle_product_number>`**

*Definition:* The product number of the standard bundle.

*Data type:* string

*Length:* 25

*Example:* `<bundle_product_number>`STDRL95983`</bundle_product_number>`

### **2.7.17 Publication Standard Relationship `<standard_relationship>`**

*Definition:* The relationship for the standard.

*Attribute:* prodnumber

*Definition:* The product number for the related standard.

*Data type:* string

*Length:* 30

*Attribute:* relationship\_date

*Definition:* The date that the relationship with other standard was established.

*Attribute:* type

*Definition:* The relationship for the standard with 12 type values.

*Data type:* string

*Length:* 2

*Enumerated value list:* See table below

*Example:* `<standard_relationship prodnum="23565" relationship_date="12/31/1969 7:00:00 PM" type="V">4509</standard_relationship>`

A	Administratively Withdrawn
C	Corrigendum to
D	Stabilized
E	An Errata is available
F	Reaffirmed
I	An interpretation is available
O	Adoption of
P	Supplement to
R	Replaced by
S	Superseded by
T	Amendment to
V	Revision of
W	Withdrawn
X	Active: Reserved
Z	Inactive: Reserved
B	Inactive: Withdrawn
N	Translation of
G	Adopted by

### 2.7.18 Publication Package Member Set <packagememberset>

*Definition:* Information about publication package member set.

#### 2.7.18.1 Publication Output Package Member <packagemember>

*Definition:* The package membership of a journal or conference, used for grouping publications into specific products sold through Xplore. A publication must belong to at least one output package, but can belong to multiple output packages.

*Data type:* string

*Length:* 20

*Enumerated value list:* BTSDL, APSDL, CASDL, CESDL, CIP, CPES, CSCDL, CSDL, CSMDL, EDMCDL, EMBS, EMCSDL, GRSDL, IACDL, IELL, ITEL, ITSCDL, LEOS, MTTSDL, NPSSDL, None, OESDL, PELDL, PES, PESCDL, POP, POP2005,

POPALL, POPALL2005, RASDL, RSCDL, SMCSDL, SSCS,  
STDSELECT, UFFCCDL

*Example:* `<packagemember>POPALL</packagemember>`

### 2.7.19 Publication ISBN `<isbn>`

*Definition:* The standard ISBN (International Standard Book Number) for a publication, if available.

*Data type:* string

*Length:* 30

*Attribute:* mediatype

*Definition:* Type of publication media that the ISBN number grouped with the media type applies to.

*Data type:* string

*Length:* 20

*Enumerated value list:* Paper, CD, Online, Microfiche, Electronic, DVD, USB, POD

*Attribute:* isbntype

*Definition:* This value describes which version of the ISBN number the ISBN record contains. This could be ISBN-13 (New) 13 digit ISBN or ISBN-10 (Historical) 10 digit ISBN.

*Data type:* string

*Length:* 20

*Enumerated value list:* New, Historical

*Example:* `<isbn mediatype="POD" isbntype="Historical">0-7803-9137-3</isbn>`

### 2.7.20 Publication ISSN `<issn>`

*Definition:* The standard ISSN (International Standard Serial Number) for a publication, if available.

*Data type:* string

*Length:* 20

*Attribute:* mediatype

*Definition:* Type of publication media that the ISSN number grouped with the media type applies to.

*Enumerated value list:* CD, DVD, Electronic, Microfiche, Online, POD, Paper, USB

*Data type:* string

*Length:* 20

*Example:* `<issn mediatype="Paper">0018-9294</issn>`

**2.7.21 Publication BMS Product Number <bms\_product\_number>**

*Definition:* The BMS product number for the publication.

*Data type:* string

*Length:* 20

*Attribute:* mediatype

*Definition:* Type of publication media that the BMS product number grouped with the media type applies to.

*Enumerated value list:* Paper, CD, Online, Microfiche, Electronic, DVD, USB, POD

*Example:* <bms\_product\_number mediatype="Electronic">CFP1202R-ART</bms\_product\_number>

**2.7.22 Publication Library of Congress Control Number <lccn>**

*Definition:* The control number for the Library of Congress.

*Data type:* string

*Length:* 50

*Example:* <lccn>C12349999</lccn>

**2.7.23 Publication TAB<sup>3</sup> Conference Control Number <tcn>**

*Definition:* The TAB assigned conference number. This will not be part of the XML output. This is for internal use only.

*Data type:* string

*Length:* 20

*Example:* <tcn>456667-23</tcn>

**2.7.24 Publication Keyword Set <keyworsdet>**

*Definition:* Information about the set of publication keywords.

*Attribute:* keywordtype

*Enumerated value list:* CPD

*Data type:* string

*Length:* 500

*Example:*

```
<keywordset keywordtype="CPD">
  <keyword>
    <keywordterm>multimedia</keywordterm>
  </keyword>
  <keyword>
    <keywordterm>information</keywordterm>
  </keyword>
  <keyword>
    <keywordterm>networking</keywordterm>
  </keyword>
```

<sup>3</sup> TAB- Technical Activities Board



```
<keyword>
  <keywordterm>security</keywordterm>
</keyword>
<keyword>
  <keywordterm>mines</keywordterm>
</keyword>
<keyword>
  <keywordterm>network</keywordterm>
</keyword>
<keyword>
  <keywordterm>services</keywordterm>
</keyword>
<keyword>
  <keywordterm>information systems</keywordterm>
</keyword>
</keywordset>
```

### 2.7.25 Publication IEEE-Sponsored Flag

#### <publication\_ieee\_sponsored>

*Definition:* A flag that indicates whether or not the publication/conference is sponsored by IEEE.

*Data type:* string

*Length:* 50

*Enumerated value List:* Yes, No

*Example:* <publication\_ieee\_sponsored>No</publication\_ieee\_sponsored>

### 2.7.26 Publication Sponsor <pubsponsor>

*Definition:* Information about the sponsor for the publication.

#### 2.7.26.1 Publication Sponsoring Society <society>

*Definition:* The technical society that is the sponsor of a journal or conference. Multiple technical societies can sponsor either a journal or a conference. Journal sponsors typically do not change over time, but conference sponsors may frequently change.

*Data type:* string

*Length:* 200

*Example:* <pubsponsor>  
 <society>Computer Society</society>  
</pubsponsor>

### 2.7.27 Publication Standard Family <standard\_family>

*Definition:* The parent (root standard) of a given standard. This is for internal use only.

*Data type:* string

*Length:* 150

*Example:* <standard\_family>1044</standard\_family>

**2.7.28 Publication Standard Root <standard\_root>**

*Definition:* The root of the standard.

*Data type:* string

*Length:* 100

*Example:* <standard\_root>432</standard\_root>

**2.7.29 Publication Standard Root Title <standard\_root\_title>**

*Definition:* The title of the root standard.

*Data type:* string

*Length:* 400

*Example:* <standard\_root\_title> D-Cinema Signal Processing</standard\_root\_title>

**2.7.30 Publication Standard Package Set <standardpackageset>**

*Definition:* Information about publication standard package set.

**2.7.30.1 Publication Standard Package <standard\_package>**

*Definition:* The package membership of a standard, used for standards products sold through Xplore. A standard must belong to at least one output package, but can belong to multiple output packages.

*Data type:* string

*Length:* 500

*Enumerated value list:* All Inclusive, All Inclusive Information Technology, All Inclusive Power and Energy, All Inclusive Telecommunications, Aerospace Electronics, ArcFlash Hazard, BusArchitecture/Microprocessor/Microcomputer, ColorBooks and Industrial Power Pack, Communications, Design Automation, Electric Machinery, Electromagnetic Compatibility, etc.

*Example:* <standardpackageset>  
    <standard\_package>Software</standard\_package>  
    <standard\_package>Security</standard\_package>  
</standardpackageset>

**2.7.31 Publication Standard Topic Set <standardtopicset>**

*Definition:* Information about publication standard topic set.

**2.7.31.1 Publication Standard Topic <standard\_topic>**

*Definition:* The topic of a standard.

*Data type:* string

*Length:* 200

*Example:* <standardtopicset>

`<standard_topic>Audio, D-Cinema</standard_topic>`  
`</standardtopicset>`

### 2.7.32 Publication ICS Codes `<icscodes>`

*Definition:* Codes used for storing ICS (International Classification for Standard) that come in the form of a number and a string value.

#### 2.7.32.1 Publication Code Term `<code_term>`

*Definition:* The term for ICS code.

*Data type:* string

*Length:* 255

*Attribute:* codenum

*Definition:* The string value for the ICS code.

*Data type:* string

*Length:* 50

*Example:* `<icscodes>`

`<code_term codenum="33.160.40">Video systems</code_term>`

`<code_term codenum="33.170">Television broadcasting</code_term>`

`</icscodes>`

### 2.7.33 Publication Sponsoring Committee Set `<pubsponsoringcommitteeset>`

*Definition:* Information about the set of sponsoring committee.

#### 2.7.33.1 Publication Sponsoring Committee `<pubsponsoringcommittee>`

*Definition:* The committee that was responsible for sponsoring a standard.

*Data type:* string

*Length:* 500

*Example:* `<pubsponsoringcommittee>Transformers Committee of the IEEE Power Engineering Society</pubsponsoringcommittee>`

### 2.7.34 Publication Topical Browse Set `<pubtopicalbrowseset>`

*Definition:* Information about the set of topical browse for the publication.

#### 2.7.34.1 Publication Topical Browse `< pubtopicalbrowse >`

*Definition:* Subject terms assigned to each publication used by Xplore 3.0 for topical browsing. There are 16 values currently.

*Data type:* string

*Length:* 500

*Enumerated value list:* Aerospace, Bioengineering, Communication, Networking, and Broadcast Technologies, Components, Circuits, Devices and Systems, Computing and Processing, Engineered Materials, Dielectrics and Plasmas, Engineering Profession, Fields, Waves and Electromagnetics, General Topics for Engineers, Geoscience, Nuclear Engineering, Photonics and Electrooptics, Power, Energy and Industry Applications, Robotics and Control Systems, Signal Processing and Analysis and Transportation

*Example:* `<pubtopicalbrowseset>`  
`<pubtopicalbrowse>Aerospace </pubtopicalbrowse>`  
`<pubtopicalbrowse>Nuclear Engineering</pubtopicalbrowse>`  
`</pubtopicalbrowseset>`

### **2.7.35 Publication Copyright Group <copyrightgroup>**

*Definition:* Information about publication copyright group.

#### **2.7.35.1 Publication Copyright <copyright>**

*Definition:* This consists of pairs of values for the copyright holder and copyright year. Publications may have multiple copyright value pairs.

##### **2.7.35.1.1 Publication Copyright Year <year>**

*Definition:* The year or years that a publication was copyrighted.

*Data type:* string

*Length:* 10

*Example:* `<year>2005</year>`

##### **2.7.35.1.2 Publication Copyright Holder <holder>**

*Definition:* The copyright holder for a publication or conference.

*Data type:* string

*Length:* 300

*Example:* `<holder>IEEE</holder>`

### **2.7.36 Publication Publisher <publisher>**

*Definition:* Information about the publisher of a publication.

#### **2.7.36.1 Publisher Name <publishername>**

*Definition:* The name of the publisher of a publication. This is used in conjunction with the publisher's location and address.

*Data type:* string

*Length:* 100

*Example:* `<publishername>IEEE</publishername>`

### **2.7.36.2 Publication Publisher Location <publisherloc>**

*Definition:* The location of the publisher of a publication.

*Data type:* string

*Length:* 200

*Example:* `<publisherloc>Piscataway, NJ, USA</publisherloc>`

### **2.7.36.3 Publication Publisher Address <address>**

*Definition:* The address of the publication publisher. If available, this includes the following:

**<street>** street

**<otheraddr>** other address

**<city>** city

**<state>** state

**<country>** country

**<postcode>** zipcode

*Example:*

```
<publisher>
  <publishername>IEEE</publishername>
  <address>
    <country>USA</country>
  </address>
</publisher>
```

### **2.7.37 Publication Approval Date <PubApprovalDate>**

*Definition:* The date that the standard was approved.

*Data type:* string

*Length:* 300

*Example:* `<PubApprovalDate>5 Dec. 2001</ PubApprovalDate >`

### **2.7.38 Publication Hold Status <holdstatus>**

*Definition:* A flag that indicates whether the publication should be withheld from being published to data clients. This is typically used to indicate that a conference is waiting for publishing approval from TAB.

*Data type:* string

*Length:* 30

*Enumerated value list:* Hold, Publish

*Example:* `<holdstatus>Publish</holdstatus>`

**2.7.39 Publication Conference Group <confgroup>**

*Definition:* Information about the publication conference group.

**2.7.39.1 Publication Conference Title <conftitle>**

*Definition:* The name of the conference.

*Data type:* string

*Length:* 500

*Example:* <conftitle>2005 International Conference on Control and Automation (ICCA)</conftitle>

**2.7.39.2 Publication Conference Date <confdate>**

*Definition:* The year, month and day that the conference started and ended.

*Attribute:* confdatetype

*Enumerated value list:* Start, End

*Example:* <confdate confdatetype="Start">  
    <year>2005</year>  
    <month/>  
    <day>29</day>  
</confdate>  
<confdate confdatetype="End">  
    <year>2005</year>  
    <month/>  
    <day>29</day>  
</confdate>

**2.7.39.3 Publication Conference Location <conflocation>**

*Definition:* The location where the conference was held.

*Data type:* string

*Length:* 200

*Example:* <conflocation>Budapest, Hungary</conflocation>

**2.7.39.4 Publication Conference Country <confcountry>**

*Definition:* The country that the conference was held.

*Data type:* string

*Length:* 50

*Example:* <country> Hungary</country>

**2.7.39.5 Publication Conference Type <conference\_type>**

*Definition:* The type of conference and sponsorship information provided by TAB.

*Data type:* string

*Length:* 50

*Enumerated Value List:* See table

S	Conf with IEEE Financial Sponsor
T	Conf without IEEE Financial Sponsor (only IEEE Technical Sponsor(s))
E	Non IEEE Sponsored Conference
B	Board Meeting
C	Committee Meeting
N/A	If a sponsor is not found in our sponsor database, the conference temporarily set to N/A until the Operations staff resolves the sponsor issue

*Example:* `<conference_type>S</conference_type >`

#### **2.7.39.6 Publication DOI Permission <doi\_permission>**

*Definition:* A flag that indicates whether the publication is permitted to be deposited to Crossref or not. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T, F

*Example:* `<doi_permission>T</doi_permission >`

#### **2.7.40 Publication AMS ID <amsid>**

*Definition:* The unique key for the publication's record in the data converted from the IEEE AMS database.

*Data type:* string

*Length:* 50

*Example:* `<amsid>10234</amsid>`

#### **2.7.41 Publication CODEN <coden>**

*Definition:* Six character code for a publication.

*Data type:* string

*Length:* 6

*Example:* `<coden>IEBEAX</coden>`

### **3 Volume <volume>**

*Definition:* This section contains all the Volume attributes.

#### **3.1 Volume Information <volumeinfo>**

*Definition:* Information about the volume.

**3.1.1 Volume Publication Year <year>**

*Definition:* The publication year of the volume.

*Data type:* integer

*Example:* <year>2005</year>

**3.1.2 Volume Number <volumenum>**

*Definition:* The optional volume number of a volume for a journal or other publication; can sometimes contain additional information aside from just a number.

*Data type:* string

*Length:* 20

*Example:* <volumenum>52</volumenum>

**3.1.3 Volume IDAMS ID <idamsid>**

*Definition:* System generated unique ID automatically assigned at the volume level when import is run.

*Data type:* string

*Length:* 16

*Example:* <idamsid>0b0000798000b2f9</idamsid>

**3.1.4 Volume Status <volumestatus>**

*Definition:* The current status of a publication volume.

*Data type:* string

*Length:* 50

*Enumerated value list:* Active, Inactive

*Example:* <volumestatus>Active</volumestatus>

**3.1.5 Volume Number of Issues <numissues>**

*Definition:* The number of issues present (publication frequency) for a particular volume of a publication. If the issues for a volume are not complete (volume is current and in progress), the number of issues will be incremented over time.

*Data type:* integer

*Length:* 10

*Example:* <numissues>12</numissues>

**3.1.6 Volume Issue <issue>**

*Definition:* Information about volume issue.



**3.1.6.1 Volume Issue Number <issuenum>**

*Definition:* An issue number that belongs to the volume. Multiple issue number records are allowed, to specify the complete list of issues that were published for a volume.

*Data type:* string

*Length:* 50

*Example:* <issuenum>12</issuenum>

**3.1.6.2 Volume Issue Part <issuepart>**

*Definition:* The issue part number of the volume.

*Data type:* string

*Length:* 50

*Example:* <issuepart>1</issuepart>

**3.1.6.3 Volume Issue AMS Issue ID <amsid>**

*Definition:* The list of primary keys for issue records present in the AMS database relating to the list of issues present for this volume in IDAMS.

*Data type:* string

*Length:* 50

*Example:* <amsid>18517</amsid>

**3.1.6.4 Volume Issue Status <issuestatus>**

*Definition:* Contains the processing status for the entire issue; values can be Open or Complete depending on whether there are still articles being processed to complete the full issue or not.

*Data type:* string

*Length:* 50

*Enumerated value list:* Open, Complete

*Example:* <issuestatus>Complete</issuestatus>

**3.1.6.5 Volume Issue Complete Date <issue\_complete\_date>**

*Definition:* The date that the issue was completed.

*Example:* <isuse\_complete\_date>

<year>2006</year>

<month>6</month>

<day>21</day>

</isuse\_complete\_date >

**3.1.6.6 Volume Issue Number of Pages <numpages>**

*Definition:* The number of pages in a conference proceedings or a standard publication.

*Data type:* string

*Length:* 10

*Example:* <numpages>vi+37</numpages>

**3.1.6.7 Volume Issue Special Issue <specialissue>**

*Definition:* Special topic for an issue.

*Data type:* string

*Length:* 2000

**3.1.6.8 Volume Issue Filename <filename>**

*Definition:* The current name of the issue stored in our IDAMS repository.

*Attribute:* docpartition

*Definition:* The partition where the file resides. This is for internal use only.

*Data type:* string

*Length:* 16

*Attribute:* filetype

*Definition:* The name of the PDF for the issue.

*Data type:* string

*Length:* 500

*Enumerated value list:* IssuePDF

*Example:* <filename docpartition="7" filetype="IssuePDF">11012721.pdf</filename>

**4 Article <article>**

*Definition:* This section contains all the article attributes.

**4.1 Article Title <title>**

*Definition:* Full (original) title of an article.

*Data type:* string

*Length:* 2000

*Example:* <title>IEEE Trial-Use Standard for Message Set Template for Intelligent Transportation Systems</title>

**4.2 Article Information <articleinfo>**

*Definition:* Information about the article.

**4.2.1 Article Sequence Number in Publication <articleseqnum>**

*Definition:* Contains the sequence number of the article relative to the other articles abstracted in a particular publication.

*Data type:* integer

*Length:* 100

*Example:* <articleseqnum>1</articleseqnum>

**4.2.2 Article Digital Object Identifier <articledoi>**

*Definition:* The Digital Object Identifier (DOI) number assigned to the article. The DOI is registered with Crossref to provide a single unique global identifier for the article.

*Data type:* string

*Length:* 100

*Example:* <articledoi>10.1109/TBME.2005.860856</articledoi>

**4.2.3 Article Pub Med ID <articlepubmedid>**

*Definition:* The Pubmed ID for the article. It is a unique number assigned by PubMed to each biomedical journal article.

*Data type:* string

*Length:* 300

*Example:* <articlepubmedid>18390331</articlepubmedid>

**4.2.4 Article IDAMS ID <idamsid>**

*Definition:* System generated unique ID automatically assigned at the publication level when import is run.

*Data type:* string

*Length:* 16

*Example:* <idamsid>0b0000798000b2fb</idamsid>

**4.2.5 Article Status <articlestatus>**

*Definition:* The current status of an article.

*Data type:* string

*Length:* 20

*Enumerated value list:* Active, Inactive

*Example:* <articlestatus>Active</articlestatus>

**4.2.6 Article Content Type <contenttype>**

*Definition:* Identifies the editorial content of an article.

*Data type:* string

*Length:* 40

*Enumerated value list:* Please see appendix for list of content types

*Example:* `<contenttype>orig-research</contenttype>`

#### **4.2.7 Article Open Access <articleopenaccess>**

*Definition:* A flag that indicates whether the article is available for free or not.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Attribute:* end\_date

*Definition:* The date when the article ended open access.

*Attribute:* start\_date

*Definition:* The date when the article became open access.

*Example:* `<articleopenaccess end_date=" 4/20/2016" start_date=" 4/20/2015">T</articleopenaccess>`

#### **4.2.8 Article Show Flag <articleshowflag>**

*Definition:* A flag that indicates whether the author presented in-person at the conference or not. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articleshowflag>T</articleshowflag>`

#### **4.2.9 Article Plagiarized Flag <articleplagiarizedflag>**

*Definition:* A flag that indicates whether or not the article is plagiarized. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articleplagiarizedflag>F</ articleplagiarizedflag >`

#### **4.2.10 Article No DOI Flag <articlenodoiflag>**

*Definition:* A flag that indicates whether or not article DOIs will be assigned. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articlenodoiflag>F</articlenodoiflag >`

#### **4.2.11 Article Scope/Quality <article\_quality>**

*Definition:* A flag that indicates the scope/quality of the conference article. This is for internal use only.

*Data type:* string

*Length:* 5

*Enumerated Value List:* Y, X, N

*Example:* `<article_quality>Y</article_quality>`

#### **4.2.12 Article Cover Image Flag <articlecoverimageflag>**

*Definition:* A flag that indicates whether an article contains a cover image or not. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articlecoverimageflag>F</articlecoverimageflag>`

#### **4.2.13 Article CS HTML Flag <csarticlehtmlflag>**

*Definition:* A flag that indicates whether or not the article has HTML in CSDL. This is used only by Computer Society.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<csarticlehtmlflag>T</csarticlehtmlflag>`

#### **4.2.14 Article Reference Flag <articlereferenceflag>**

*Definition:* A flag that indicates whether or not an article has references. This is for internal use only.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articlereferenceflag>F</articlereferenceflag>`

#### **4.2.15 Article Peer Review Flag <articlereferenceflag>**

*Definition:* A flag that indicates whether or not an article has been peer reviewed.

*Data type:* boolean

*Enumerated Value List:* T= True, F= False

*Example:* `<articlepeerreviewflag>F</articlepeerreviewflag>`

#### **4.2.16 Article Free To Read <articlefreetoread>**

*Definition:* This indicates if an article is available for free on IEEE Xplore.

*Data type:* string

*Enumerated Value List:* PROMO = free promotion period, DOA= free for delayed open access

*Attribute:* start\_date

*Definition:* The date when the article is available for free to read.

*Attribute:* end\_date

*Definition:* The date when the article is no longer for free to read.

*Example:* `<articlefreetoread PROMO_TYPE="COVID-19" end_date="5/5/2020 3:49:04 PM" specific_use="PROMO" start_date="54/5/2020 5:49:04 PM" />`

#### **4.2.17 Article Hold Status <holdstatus>**

*Definition:* The current status of an article. This is for internal use only.

*Data type:* string

*Length:* 20

*Enumerated value list:* Publish, Preprint, Rapid Post, Skeletal, Conference

*Example:* `<holdstatus>Publish</holdstatus>`

#### **4.2.18 Article Issue Number <issuenum>**

*Definition:* The issue number of the journal in which the article was originally published, if available.

*Data type:* string

*Length:* 50

*Example:* `<issuenum>12</issuenum>`

#### **4.2.19 Article Issue Part <issuepart>**

*Definition:* The issue part number of the issue where the article was originally published if the issue was published in more than one part. If the issue was published in one part, this attribute will be left null.

*Data type:* string

*Length:* 50

*Example:* `<issuepart>2</issuepart>`

#### **4.2.20 Article Issue Title <articleissuetitle>**

*Definition:* Theme or special title of the journal.

*Data type:* string

*Length:* 2000

#### **4.2.21 Article Issue Subtitle <articleissuesubtitle>**

*Definition:* The subtitle of the issue.

*Data type:* string

*Length:* 2000

#### **4.2.22 Article Issue Summary <articleissuesummary>**

*Definition:* Short description of an issue.

*Data type:* string

*Length:* 4000

*Example:* <articleissuesummary>Special issue on phased-array technology </articleissuesummary>

#### **4.2.23 Article Copyright <articlecopyright>**

*Definition:* Copyright for the article.

*Data type:* string

*Length:* 50

*Attribute:* holderisiee

*Definition:* Specifies whether or not the IEEE is the copyright holder for the article.

*Data type:* string

*Length:* 50

*Enumerated value List:* Yes, No

*Attribute:* year

*Definition:* Specifies the copyright year for the article.

*Data type:* integer

*Example:* <articlecopyright holderisiee="Yes" year="2014">IEEE</articlecopyright>

#### **4.2.24 Article Copyright Statement <article\_copyright\_statement>**

*Definition:* The copyright statement for an article.

*Data type:* string

*Length:* 250

*Example:* <article\_copyright\_statement>Copyright © 1921 by the Society of Motion Picture and Television Engineers, Inc.</article\_copyright\_statement>

#### **4.2.25 Article License <articlelicense>**

*Definition:* The license of an article.

*Data type:* string

*Length:* 50

*Enumerated Value List:* CCBY, OAPA, Open Access, Traditional

*Example:* <articlelicense>CCBY</articlelicense>

#### **4.2.26 Article License URI <article\_license\_uri>**

*Definition:* The URI for license of the article.

*Data type:* string

*Length:* 255

*Example:* <article\_license\_uri>https://www.smpte.org/subscribe</article\_license\_uri>

#### **4.2.27 Article abstract <abstract>**

*Definition:* Contains the abstract for the article.

*Data type:* string

*Length:* 2000

*Attribute:* abstracttype

*Definition:* Type of article abstract.

*Enumerated value list:* Regular

*Definition:* Contains the primary (short) abstract for the article.

*Example:* `<abstract abstracttype="Regular">`In this paper, expression methods of fuzzy dynamical model on discrete system are presented, based on which a kind of design method on fuzzy state feedback controller is also given and its stability is discussed. In addition, a kind of design method on fuzzy state observer is also given and its stability is discussed.`</abstract>`

*Enumerated value list:* Long

*Definition:* Contains the complete (long version) abstract for the article.

*Example:* `<abstract abstracttype="Long">`A novel algorithm for high-precision edge location based on human visual properties is proposed considering characteristics of cannon barrel images, which improves the observation effect of spying bore images and diminishes the target image ambiguity caused by background and noise. The variable gray scale area method is applied according to the image feature diversity between the target and background/noise.`</abstract>`

`<abstract abstracttype="Long">`The accuracy of edge detection and location is higher than 0.01 pixel when being applied for engineering. The imperfect images are correspondingly enhanced, and the target is thus shown clearly, which is convenient for observation by human eyes and actual measurement. The algorithm is more general-purpose and adaptive to different barrel image processing, and it can significantly inhibit noise for its glossy and enhanced effect.`</abstract>`

*Enumerated value list:* Violation

*Definition:* Contains the abstract that should be displayed if a notice of violation is filed against a published article.

*Example:* `<abstract abstracttype="Violation">`Notice of Violation of IEEE Publication Principles`<BR>`Internal model control based on locally linear model tree (LOLIMOT) model with application to a PH neutralization process.`</abstract>`

*Enumerated value list:* Standard

*Definition:* Contains the full text of the abstract for IEEE/ANSI standards.

*Example:* `<abstract abstracttype="Standard">` The expanding use of digital communications among subsystems of the transportation infrastructure has spawned the development of message sets for the communications between these subsystems. A format for Intelligent Transportation System (ITS) message sets, including common terms (e.g., object identifier), as well as attributes necessary to document ITS data messages, is addressed in this standard.`</abstract>`

#### **4.2.28 Article Standard Scope <articlestdscope>**

*Definition:* The scope of the standard.

*Data type:* string

*Length:* 2000



*Example:* `<articlestdscope>`This guideline specifies the purpose, format, and usage of a television picture monitor alignment color bar test signal with chroma set and black set signals.`</articlestdscope>`

#### **4.2.29 Article Standard Purpose `<articlestdpurpose >`**

*Definition:* The purpose of the standard.

*Data type:* string

*Length:* 2000

*Example:* `<articlestdscope>`This guideline describes three feasible examples of mechanical designs and test conditions for achieving the record dimensions specified in SMPTE 224M. The parameters are for reference purposes only.`</articlestdscope>`

#### **4.2.30 Article Impact Statement `<articleimpactstatement>`**

*Definition:* The description of the importance of the paper and how it compares to existing understanding of phenomenon or to existing devices, systems, or applications. The impact statement makes clear how the paper advances knowledge in a significant way.

*Data type:* string

*Length:* 1000

*Example:* `<articleimpactstatement>` We report a novel, inexpensive, and real-time non-invasive wearable optical sensor prototype to determine the glucose level of human blood. This sensor is unique, low-cost, and robust and can monitor glucose in the blood in real time. It has significant impact on personal health monitoring, in particular, on diabetic patients, as well as on non-patients, to prevent them from becoming diabetic. To the best of our knowledge, there is no such device reported in the literature.`</articleimpactstatement>`

#### **4.2.31 Article Visionary Statement `<articlevisionarystatement>`**

*Definition:* The statement is designed for seasoned researchers or technical committees to share their visions of significant trends facing the power industry or to present highly innovative ideas that may produce a wide range of impacts.

##### **4.2.31.1 Article Vision Title `<visiontitle>`**

*Definition:* The title of the visionary statement.

*Data type:* string

*Length:* 2000

##### **4.2.31.2 Article Vision Statement `<visionstatement>`**

*Definition:* The visionary statement about the article.

*Data type:* string

*Length:* 2000

*Example:*

`<articlevisionarystatement>`

`<visiontitle>`Visionary Paper Series for Power Delivery Technologies`</visiontitle>`

`<visionstatement>`This paper is published under the title of Visionary Paper Series of the IEEE Transactions on Power Delivery. The Visionary Paper Series is designed for seasoned researchers or technical committees to share their visions on significant trends facing the power industry or to present highly innovative ideas that may produce a wide range of impacts. A paper in this series is intended to promote, influence, or lead the research activities in the subject area. It also serves as an archive and recognition of the authors' technical leadership.`</visionstatement>`  
`</articlevisionarystatement>`

#### 4.2.32 Article Author Group `<authorgroup>`

*Definition:* Information about article author group.

*Attribute:* source

*Enumerated value list:* IEEE, Inspec, Author Network

*Example:* `<authorgroup source="IEEE">`

##### 4.2.32.1 Article Author `<author>`

*Definition:* The author of the article.

*Attribute:* role

*Definition:* The role of the author.

*Data type:* string

*Length:* 50

*Enumerated value list:* primary-corresponding, corresponding, primary, coauthor

*Example:* `<author role="primary-corresponding">`

##### 4.2.32.1.1 Article Author AMS ID `<amsid>`

*Definition:* The unique key for the author's record within the article. This is for internal use only.

*Data type:* string

*Length:* 50

*Example:* `<amsid>100010964</amsid>`

##### 4.2.32.1.2 Article Author Order `<authororder>`

*Definition:* Designates the order of the author.

*Data type:* string

*Length:* 30

*Example:* `<authororder>1</authororder>`

##### 4.2.32.1.3 Article Article Author ID `<authorid>`

*Definition:* Unique identifier for the author assigned by IEEE. This is for internal use only.

*Data type:* string

*Length:* 100

*Example:* `<authorid>37274458000</authorid>`

#### **4.2.32.1.4 Article Corporate Author <corp\_author>**

*Definition:* A corporation or group of individuals authoring a paper.

*Data type:* string

*Length:* 50

*Example:* `<corp_author>National Museum of Science</corp_author>`

#### **4.2.32.1.5 Article Author Proximity ID Set <authorproximityidset>**

*Definition:* The set of the author proximity ID. This is for internal use only.

##### **4.2.32.1.5.1 Article Author Proximity ID Set <authorproximityid>**

*Definition:* This is for internal use only.

*Data type:* string

*Length:* 100

*Example:*

```
<authorproximityidset>
  <authorproximityid>37840251400</authorproximityid>
  <authorproximityid>38191927400</authorproximityid>
</authorproximityidset>
```

#### **4.2.32.1.6 Article Author Orcid <orcid>**

*Definition:* The unique identifier linkable to an author's research output. Orcid stands for Open Research and Contributor ID.

*Data type:* string

*Length:* 50

*Example:* `<orcid>1234567890123456</orcid>`

#### **4.2.32.1.7 Article Author Normalized Name <normname>**

*Definition:* The normalized name of an author of the article. A 'normalized' author name means that the name is in a specific format: surname, initials, suffix (if any) for non-Asian names, exactly as published for Asian names where the family name can't be determined.

*Data type:* string

*Length:* 300

*Example:* `<normname>Yu, X.</normname>`

#### **4.2.32.1.8 Article Author Non-Normalized Name**

**<nonnormname>**

*Definition:* The non-normalized name of an author of the article. The non-normalized name is the original format of the name captured from metadata prior to any attempt at normalization.

*Data type:* string

*Length:* 300

*Example:* `<nonnormname>Xinghuo Yu</nonnormname>`

#### **4.2.32.1.9 Article Author Reference Number <authorrefid>**

*Definition:* The primary key of the record in the Inspec master author database for the author.

*Data type:* string

*Length:* 30

*Example:* `<authorrefid>3</authorrefid>`

#### **4.2.32.1.10 Article Author Lineage <lineage>**

*Definition:* The portion of a person's name indicating a relationship to ancestors. This is for legacy data only and will not be populated going forward.

*Data type:* string

*Length:* 20

*Example:* `<lineage>Jr.</lineage>`

#### **4.2.32.1.11 Article Author First Name <firstname>**

*Definition:* The first name of an author for the article.

*Data type:* string

*Length:* 50

*Example:* `<firstname>Xinghuo</firstname>`

#### **4.2.32.1.12 Article Author Unicode First Name**

**<unicodefirstname>**

*Definition:* The first name of an author for the article.

*Data type:* string

*Length:* 50

*Example:* <surname>Xinghuo</surname>

#### **4.2.32.1.12 Article Author Last Name <surname>**

*Definition:* The last name of an author for the article.

*Data type:* string

*Length:* 100

*Example:* <surname>Yu</surname>

#### **4.2.32.1.12 Article Author Unicode Last Name <unicodesurname>**

*Definition:* The last name of an author for the article.

*Data type:* string

*Length:* 200

*Example:* <surname> Yu</surname>

#### **4.2.32.1.12 Article Author Alternate Last Name <altsurname>**

*Definition:* The alternate last name of an author for the article.

*Data type:* string

*Length:* 200

*Example:* <surname>Gao</surname>

#### **4.2.32.1.13 Article Author Native Name <nativename>**

*Definition:* The name of the author in his or her native/foreign language using Unicode character set.

*Data type:* string

*Length:* 300

*Example:* <nativename>&#x306a;Sel&#xe9;snick &#x306a; &#x307f;</nativename>

#### **4.2.32.1.14 Article Author Affiliation <affiliation>**

*Definition:* The institutional affiliation for the author.

*Data type:* string

*Length:* 1800

*Example:* <affiliation>Northeastern Univ., Hebei, China</affiliation>

#### **4.2.32.1.15 Article Author Biography <authorbio>**

*Definition:* The author biography.

*Data type:* string

*Length:* 4000

*Example:* <authorbio> Adam J. Wilt is now with Borland International, Scotts Valley, CA 95066. At the time of the work described in the article, he was with Abekas Video Systems, Redwood City, CA 94063.</authorbio>

#### **4.2.32.1.16 Article Author IEEE Member Grade <ieememgrade>**

*Definition:* IEEE grants "Member grade" to those members who have satisfied IEEE-specified educational requirements and/or who have demonstrated professional competence in IEEE-designated fields of interest.

*Data type:* string

*Length:* 25

*Example:* <ieememgrade>"SM"</ieememgrade>

#### **4.2.32.1.16 Article Author Email <email>**

*Definition:* The email address of the author.

*Data type:* string

*Length:* 500

*Example:* <email>chb.hust@gmail.com</email>

#### **4.2.32.1.17 Article Author Affiliation Group <affgrp>**

*Definition:* Information about the group of author affiliation.

##### **4.2.32.1.17.1 Article Author Affiliation <affn>**

*Definition:* Affiliation for the author.

##### **4.2.32.1.17.1.1 Article Author Affiliation AMS ID <amsid>**

*Definition:* The unique key for the author's affiliation record within the article. This is for internal use only.

*Data type:* string

*Length:* 50

*Example:* <amsid>100010964</amsid>

**4.2.32.1.17.1.2 Article Author Affiliation Organization <orgname>**

*Definition:* Name of the organization of the author affiliation.

*Data type:* string

*Length:* 50

*Example:* <orgname><![CDATA[KFUPM]]></orgname>

**4.2.32.1.17.1.3 Article Author Affiliation Organization Department <orgdept>**

*Definition:* Department of the author affiliation organization.

*Data type:* string

*Length:* 50

*Example:* <orgdept>Systems Engineering Department</orgdept>

**4.2.32.1.17.1.4 Article Author Affiliation Address <address>**

*Definition:* The address of the article author affiliation. If available, this includes the following:

<street> street

<state> state

<country> country

<postcode> zipcode

*Example:*

```
<address>
  <street><![CDATA[Main Street]]></street>
  <city><![CDATA[Orlando]]></city>
  <state><![CDATA[Florida]]></state>
  <country><![CDATA[USA]]></country>
  <postcode>32816</postcode>
</address>
```

**4.2.32.1.18 Article Author Type <authortype>**

*Definition:* The role that the author contributed towards the article.

*Data type:* string

*Length:* 50

*Enumerated value list:* Author, Editor

*Example:* <authortype>Editor</authortype>

### 4.2.33 Article Date <date>

*Definition:* Information about the article date.

*Attribute:* datatype

*Enumerated value list:* LastEdit

*Definition:* The date that the information for the article record was last edited.

*Example:* `<date datatype="LastEdit">  
<year>2006</year>  
<month>6</month>  
<day>21</day>  
</date>`

*Enumerated value list:* LastInspecUpd

*Definition:* The date that the information for the article record was last edited by Inspec.

*Example:* `<date datatype="LastInspecUpd">  
<year>2006</year>  
<month>6</month>  
<day>21</day>  
</date>`

*Enumerated value list:* OriginalPub

*Definition:* The original publication date of the article in its original media, if available.

*Example:* `<date datatype="OriginalPub">  
<year>2004</year>  
<month>1</month>  
<day>12</day>  
</date>`

*Enumerated value list:* preprintdate

*Definition:* The date when the preprint version of the article was received in IDAMS/IEEE Xplore.

*Example:* `<date datatype="preprintdate">  
<year>2005</year>  
<month>1</month>  
<day>12</day>  
</date>`

*Enumerated value list:* rapidpostdate

*Definition:* The date when the rapidpost version of the article was received in IDAMS/IEEE Xplore.

*Example:* `<date datatype="rapidpostdate">  
<year>2006</year>  
<month>1</month>  
<day>12</day>  
</date>`

*Enumerated value list:* ePub



*Definition:* The date that the final article was published in Xplore.

*Example:* `<date datatype="ePub">  
<year>2007</year>  
<month>1</month>  
<day>12</day>  
</date>`

#### 4.2.34 Article Publication Date `<article_publication_date>`

*Definition:* For journals, the date is when the journal was first published in Xplore. For conferences, the date is when the conference paper was first handed out to conference attendees. For standards, the date is when the standard was officially published.

*Data type:* string

*Example:* `<article_publication_date>4/3/2020 12:00:00 AM</article_publication_date>`

#### 4.2.35 Article PDF Size `<size>`

*Definition:* The size of a PDF article in bytes.

*Data type:* integer

*Example:* `<size>1325941</size>`

#### 4.2.36 Article Filename `<filename>`

*Definition:* The current name of the article stored in our IDAMS repository. It may not match the PDF filename in Xplore.

*Attribute:* docpartition

*Definition:* The partition where the file resides. This is for internal use only.

*Data type:* string

*Length:* 32

*Attribute:* filetype

*Definition:* The type of the file.

*Data type:* string

*Length:* 32

*Enumerated value list:* MainPDF

*Definition:* The name of the article PDF, which may or may not match the PDF filename in Xplore.

*Example:* `<filename docpartition="5" filetype="MainPDF">01528200.pdf</filename>`

*Enumerated value list:* SourcePDFName

*Definition:* The source name of the article PDF.

*Example:* `<filename filetype="SourcePDFName">ICCA-2-1.pdf</filename>`

*Enumerated value list:* Graphical-Abstract-Cover-Image

*Definition:* The cover image of the graphical abstract.

*Example:* `<filename filetype="Graphical-Abstract-Cover-Image">2260813_gabstract.jpg</filename>`

*Enumerated value list:* Graphical-Abstract-Filename

*Definition:* The filename of the graphical abstract.

*Example:* `<filename filetype="Graphical-Abstract-Filename">2260813_mm.mp4</filename>`

*Enumerated value list:* AAMPDF

*Definition:* The author accepted manuscript PDF. This is for internal use only.

*Data type:* string

*Length:* 500

*Example:* `<filename filetype="AAMPDF">tnn-aam-2354712.pdf</filename>`

*Enumerated value list:* REFXML

*Definition:* The XML references. This is for internal use only.

*Data type:* string

*Length:* 500

*Example:* `<filename filetype="REFXML">tnn-aam-2354712.pdf</filename>`

#### 4.2.37 Article Page Numbers `<artpagenums>`

*Definition:* The page numbers or designators of the start page of an article and the end page of an article.

*Data type:* string

*Length:* 2000

*Attribute:* endpage

*Definition:* The page number or designator for the end page of an article if there is a single end page. Page numbers provided in metadata and by Inspec may need to be parsed in order to obtain the end page value to use.

*Data type:* string

*Length:* 40

*Attribute:* startpage

*Definition:* The page number or designator for the start page of an article if there is a single start page. Page numbers provided in metadata and by Inspec may need to be parsed in order to obtain the first page value to use.

*Data type:* string

*Length:* 40

*Example:* `<artpagenums endpage="1257 Vol. 2" startpage="1254">1254-1257 Vol. 2</artpagenums>`

**4.2.38 Article Graphical Abstract <article-graphical-abstract>**

*Definition:* Information about the article graphical abstract.

**4.2.38.1 Article Graphical Abstract Summary <graphical-abstract-summary>**

*Definition:* Short description of the graphical abstract.

*Data type:* string

*Length:* 1800

*Example:* <graphical-abstract-summary>Millimeter wave mobile communications for 5G cellular: It will work!</ graphical-abstract-summary>

**4.2.38.2 Article Graphical Abstract Type <graphical abstract-type>**

*Definition:* The media format of the graphical abstract.

*Data type:* string

*Length:* 50

*Example:* <graphical-abstract-type>video</graphical-abstract-type>

**4.2.38.3 Article Graphical Abstract File Size < graphical abstract-file-size>**

*Definition:* File size of the graphical abstract.

*Data type:* integer

*Length:* 25

*Example:* <graphical-abstract-file-size>232MB</graphical-abstract-file-size>

**4.2.39 Article Pubsnumber <pubsnumber>**

*Definition:* Unique ID assigned to an article.

*Attribute:* pubidtype

*Enumerated value list:* InspecAccession

*Definition:* The Inspec accession number assigned by Inspec to the article. This number is a unique number allocated as bibliographic records are included in the INSPEC Database Tape Service.

*Data type:* string

*Length:* 100

*Example:* <pubsnumber pubidtype="InspecAccession">8681198</pubsnumber>

*Enumerated value list:* InspecSICI

*Definition:* The Inspec SICI code assigned by Inspec to the article. This field contains the Serial Item Contribution Identification (SICI) code as defined in ANSI Standard Z39.56 (1991).

*Data type:* string

*Length:* 200

*Example:* `<pubsnumber pubidtype="InspecSICI">0018-9294(200512)52:12L.2119:MGCI;1-R</pubsnumber>`

*Enumerated value list:* InspecBatch

*Definition:* Contains an internal INSPEC code uniquely identifying the publication issue for serials or simply the publication for non-serials.

*Data type:* string

*Length:* 30

*Example:* `<pubsnumber pubidtype="InspecBatch">XX94-00123</pubsnumber>`

*Enumerated value list:* IEEELog

*Definition:* Contains a variable length alphanumeric string published by IEEE to identify uniquely a published article. This is used for historical data only, not generated in IDAMS.

*Data type:* string

*Length:* 50

*Example:* `<pubsnumber pubidtype="IEEELog">9414446</pubsnumber>`

*Enumerated value list:* CCCCode

*Definition:* Conveys authorizations to photocopy to users of copyrighted material from thousands of copyright owners, mainly publishers.

*Data type:* string

*Length:* 50

*Example:* `<pubsnumber pubidtype="CCCCode">0-7803-9137-3/05/$20.00</pubsnumber>`

*Enumerated value list:* InspecNonStdSICI

*Definition:* Contains a non-standard Inspec 'SICI' code assigned by Inspec to the article.

*Data type:* string

*Length:* 200

*Example:* `<pubsnumber pubidtype="InspecNonStdSICI">0-7803-9137-3(20050626/29)L.1242:ODAW;1</pubsnumber>`

*Enumerated value list:* PublisherItemID

*Definition:* Contains the Publisher Item Identifier assigned to the article by Inspec. This attribute is no longer used, but is stored here for historical reasons.

*Data type:* string

*Length:* 200

*Example:* `<pubsnumber pubidtype="PublisherItemId">1234-5678(96)12345-x</pubsnumber>`

**4.2.40 Article AMS ID <amsid>**

*Definition:* The unique key for the article's record in data converted from the IEEE AMS database. This is used for constructing the url to Xplore PDFs.

*Data type:* string

*Length:* 50

*Example:* <amsid>1542447</amsid>

**4.2.41 Article Serial ID <articleid>**

*Definition:* The unique identifier which some journals use instead of the start page, especially applicable in the physics community.

*Data type:* string

*Length:* 50

*Example:* <articleid>2043727</articleid>

**4.2.42 Article CS Article ID <csarticleid>**

*Definition:* The unique ID assigned by Computer Society to the article.

*Data type:* string

*Length:* 80

*Example:* <csarticleid>mco2013050084</csarticleid>

**4.2.43 Article Multimedia <multimedia>**

*Definition:* Information about the multimedia.

**4.2.43.1 Article Multimedia Summary <summary>**

*Definition:* Summary of the article multimedia.

*Data type:* string

*Length:* 2000

*Example:* <summary>Contains 10 JPEG and 4 MPEG files illustrating the article's main points</summary>

**4.2.43.2 Article Multimedia Compressed <compressed>**

*Definition:* Contains descriptive information that is stored in a downloadable zip package.

**4.2.43.2.1 Article Multimedia Compressed Filename <compressedfilename>**

*Definition:* Compressed file name of the zipped multimedia package.

*Data type:* string

*Length:* 500

*Example:* `<compressedfilename>graphics.zip</compressedfilename>`

#### **4.2.43.2.2 Article Multimedia Compressed File Size** **<compressedfilesize>**

*Definition:* Compressed file size in bytes of the zipped multimedia package.

*Data type:* integer

*Length:* 10

*Example:* `<compressedfilesize>3MB</compressedfilesize>`

#### **4.2.43.2.3 Article Multimedia Compression Type** **<compressiontype>**

*Definition:* Compression type of the zipped multimedia package.

*Data type:* string

*Length:* 256

*Example:* `<compressiontype>zip</compressiontype>`

#### **4.2.43.2.4 Article Multimedia Environment Type** **<environmenttype>**

*Definition:* Environment type of the zipped multimedia package.

*Data type:* string

*Length:* 256

*Example:* `<environmenttype>Windows</environmenttype>`

#### **4.2.43.2.5 Article Multimedia Readme File <readmefile>**

*Definition:* Readme file that is contained in the zipped multimedia package.

*Data type:* string

*Length:* 500

*Example:* `<readmefile>01lgrs02-smith-mm-readme.txt</readmefile>`

#### **4.2.43.3 Article Multimedia Component <component>**

*Definition:* Contains DOI style link to multimedia from the article PDF.

#### 4.2.43.3.1 Article Multimedia Component Filename <componentfilename>

*Definition:* File name of the article multimedia component.

*Data type:* string

*Length:* 500

*Example:* <componentfilename>presen.ppt</componentfilename>

#### 4.2.43.3.2 Article Multimedia Component File Size <componentfilesize>

*Definition:* File size in bytes of the article multimedia component.

*Data type:* integer

*Length:* 10

*Example:* <componentfilesize>3.67MB</componentfilesize>

#### 4.2.43.3.3 Article Multimedia Component Type <componenttype>

*Definition:* Type of the article multimedia component.

*Data type:* string

*Length:* 256

*Example:* <componenttype>ppt</componenttype >

#### 4.2.43.3.4 Article Multimedia Component Platform <componentplatform>

*Definition:* Platform of the article multimedia component.

*Data type:* string

*Length:* 256

*Example:* <componentplatform>Windows</componentplatform>

#### 4.2.43.3.5 Article Multimedia Component Description <componentdescription>

*Definition:* Description of the article multimedia component.

*Data type:* string

*Length:* 2000

*Example:* <componentdescription>Summarizes the paper's results and shows why the proposed method is better.</componentdescription>

**4.2.43.3.6 Article Multimedia Component Title****<componenttitle>**

*Definition:* Title of the article multimedia component.

*Data type:* string

*Length:* 1024

*Example:* < componenttitle>Performance enhancement using quadplex encoding</componenttitle>

**4.2.43.3.7 Article Multimedia Component DOI****<component\_doi>**

*Definition:* Digital object identifier of the article multimedia component.

*Data type:* string

*Length:* 100

*Example:* <component\_doi>10.1109/TED.2006.1234566/mm1</component\_doi>

**4.2.43.3.8 Article Multimedia Component Person****<componentperson>**

*Definition:* The author of the article multimedia component.

**4.2.43.3.8.1 Article Multimedia Component First****Name <componentpersonfirstname>**

*Definition:* First name of the author of the article multimedia component.

*Data type:* string

*Length:* 50

*Example:*

<componentpersonfirstname>Bob</componentpersonfirstname>

**4.2.43.3.8.2 Article Multimedia Component****Surname <componentpersonsurname>**

*Definition:* Last name of the author of the article multimedia component.

*Data type:* string

*Length:* 50

*Example:*

<componentpersonsurname>Smith</componentpersonsurname>



**4.2.44 Article Keywordset <keywordset>**

*Definition:* Information about the set of article keywords.

*Attribute:* keywordtype

*Enumerated value list:* Inspec

*Definition:* Contains controlled index terms assigned to the document from the Inspec Thesaurus.

*Data type:* string

*Length:* 500

*Example:* <keywordset keywordtype="Inspec">

```

    <keyword>
      <keywordterm>automated highways</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>IEEE standards</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>transportation</keywordterm>
    </keyword>
  </keywordset>

```

*Enumerated value list:* InspecFree

*Definition:* Contains additional indexing terms assigned to the article by Inspec indexers that are not part of the standard Inspec Thesaurus.

*Data type:* string

*Length:* 500

*Example:* <keywordset keywordtype="InspecFree">

```

    <keyword>
      <keywordterm>digital communications</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>ITS data messages</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>Intelligent Transportation System</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>message sets</keywordterm>
    </keyword>
    <keyword>
      <keywordterm>transportation infrastructure</keywordterm>
    </keyword>
  </keywordset>

```

*Enumerated value list:* IEEE

*Definition:* Contains controlled index terms assigned to the document as per the IEEE Thesaurus.

*Data type:* string

*Length:* 500

*Example:* `<keywordset keywordtype="IEEE">`  
`<keyword>`  
`<keywordterm>Automated highways</keywordterm>`  
`<keywordmodifier>intell. transportation, message set`  
`template</keywordmodifier>`  
`</keyword>`  
`</keywordset>`

*Enumerated value list:* IEEEFree

*Definition:* Contains additional indexing terms assigned to the article by IEEE indexers that are not part of a standard Thesaurus.

*Data type:* string

*Length:* 500

*Example:* `<keywordset keywordtype="IEEEFree">`  
`<keyword>`  
`<keywordterm>Active model initialization</keywordterm>`  
`</keyword>`  
`<keyword>`  
`<keywordterm>phase congruence</keywordterm>`  
`</keyword>`  
`<keyword>`  
`<keywordterm>multiresolution analysis</keywordterm>`  
`</keyword>`  
`<keyword>`  
`<keywordterm>low level representation</keywordterm>`  
`</keyword>`  
`</keywordset>`

*Enumerated value list:* AuthorFree

*Definition:* Contains a list of author specified free-language words or phrases which are assigned by the author, indexers, or may be present as "keywords" in the original paper.

*Data type:* string

*Length:* 500

*Example:* `<keywordset keywordtype="AuthorFree">`  
`<keyword>`  
`<keywordterm>motion analysis</keywordterm>`  
`</keyword>`  
`<keywordterm>shadow remova</keywordterm>`  
`</keywordset>`

*Enumerated value list:* DOE

*Definition:* The Department of Energy classification codes.

*Data type:* string

*Length:* 200

*Example:* `<keywordset keywordtype="DOE">`  
`<keyword>`  
`<keywordterm>laser radiation</keywordterm>`  
`</keyword>`  
`<keywordterm>separation process</keywordterm>`  
`</keywordset>`

*Enumerated value list:* PACS

*Definition:* Stands for Physics and Astronomy Classification Scheme, which is an internationally adopted, hierarchical subject classification scheme, designed by the American Institute of Physics (AIP) to classify and categorize the literature of physics and astronomy.

*Data type:* string

*Length:* 200

*Example:* `<keywordset keywordtype="PACS">`

```

<keyword>
  <keywordterm>8840mg</keywordterm>
</keyword>
  <keywordterm>8245Fk</keywordterm>
</keywordset>

```

#### 4.2.45 Article Mesh Heading List <MeshHeadingList>

*Definition:* List of information regarding mesh heading for the article.

##### 4.2.45.1 Article Mesh Heading <MeshHeading>

*Definition:* Data set pertaining to PubMed Mesh terms. 0 indicates no mesh terms associated and 1 indicates that mesh terms are associated.

*Attribute:* MeshFlag

*Data type:* integer

*Enumerated Value List:* 0, 1

##### 4.2.45.1.1 Article Descriptor Name <DescriptorName>

*Definition:* The actual mesh heading assigned by PubMed to an article.

*Data type:* string

*Length:* 500

*Example:*

```

<MeshHeadingList MeshFlag="1">
  <MeshHeading>
    <DescriptorName>Algorithms</DescriptorName>
  </MeshHeading>
</MeshHeadingList>

```

#### 4.2.46 Article Index Classification Set <indexclassificationset>

*Definition:* Information about the set of index classification code for the article.

**4.2.46.1 Article Index Classification <indexclassification>**

*Definition:* Information about the index classification for the author.

*Attribute:* classificationcode

*Definition:* Contains a list of Inspec indexing codes that specify where the article appears in the current Inspec Classification, and is where the article is cross referenced in Inspec Abstracts Journals if appropriate.

*Data type:* string

*Length:* 10

*Example:* <indexclassificationset>  
                   <indexclassification  
                   classificationcode="">C6110B</indexclassification>  
                   <indexclassification  
                   classificationcode="">C6170</indexclassification>  
                   </indexclassificationset>

**4.2.47 Article Treatment Code Set <treatmentcodeset>**

*Definition:* Information about the set of Inspec treatment code for the article.

**4.2.47.1 Article Treatment Code <treatmentcode>**

*Definition:* This field if present may contain one to nine code letters indicating the type of treatment given by the document. This field may be repeated as often as needed for an individual record. However, no duplications are allowed.

*Data type:* string

*Length:* 100

*Enumerated value list:* Application, Bibliography, Economic, General or Review, New, Development, Practical, Product Review, Theoretical or Mathematical, Experimental

*Example:* <treatmentcodeset>  
                   <treatmentcode>Practical</treatmentcode>  
                   </treatmentcodeset>

**4.2.48 Article Numerical Index Set <numericalindexset>**

*Definition:* Information about the set of Inspec numerical index.

*Attribute:* physicalquantity

*Definition:* The physical quantity of a numerical index term.

*Data type:* string

*Length:* 50

*Attribute:* numericvalue

*Definition:* The single value or start of a range of values for the index term. The two values (Value 1 & Value 2) are stored in ascending order. These are stored in the following floating-point format:

[*-*]N.NNNN...EIII

Where:

N.NNNN	Decimal Number ( $\geq 1$ & $< 10$ )
III	III = Exponent ( $\geq -99$ & $\leq +99$ ) [except for the value 0.0E+00]

The number of significant figures is  $\geq 2$  &  $\leq 12$ .

*Data type:* string

*Length:* 2000

*Attribute:* numericvalue

*Definition:* The optional end value of a range of values for the index term. The two values (Value 1 & Value 2) are stored in ascending order. These are stored in the following floating-point format:

[*-*]N.NNNN...EIII

Where:

N.NNNN	Decimal Number ( $\geq 1$ & $< 10$ )
III	III = Exponent ( $\geq -99$ & $\leq +99$ ) [except for the value 0.0E+00]

The number of significant figures is  $\geq 2$  &  $\leq 12$ .

*Attribute:* standardunit

*Definition:* The standard unit for the index term.

*Data type:* string

*Length:* 2000

*Example:* <numericalindexset>

```

<numericalindex>
  <physicalquantity>wavelength</physicalquantity>
  <numericvalue>7.0E-07</numericvalue>
  <numericvalue>1.0E-06</numericvalue>
  <standardunit>m</standardunit>
</numericalindex>
</numericalindexset>

```

#### 4.2.49 Article Chemical Index Set <chemicalindexset>

*Definition:* Information about the set of Inspec chemical index.

##### 4.2.49.1 Article Chemical Index <chemicalindex>

*Definition:* The substance or material system or the components of the substance or material system. Chemical elements are referred to by their standard one- or two-character symbols.

*Data type:* string

*Length:* 2000

*Attribute:* chemrole

*Definition:* The role that the chemical item plays in the complete substance or material system or to the type of system in the case of the entry for the complete system.

*Data type:* string

*Length:* 2000

*Enumerated value list:* see table below

Value	Notes
el	element
dop	dopant
bin	binary system
int	interface system
ss	system with 3 or more components
sur	surface or substrate

*Example:* `<chemicalindexset>`  
`<chemicalindex chemrole="e1">Xe</chemicalindex>`  
`</chemicalindexset>`

#### 4.2.50 Article Astronomical Index Set `<astronomicalindexset>`

*Definition:* Information about the set of Inspec astronomical index for the article.

##### 4.2.50.1 Article Astronomical Index `<astronomicalidindex>`

*Definition:* Contains the controlled designations for astronomical objects discussed in the bibliographic item.

*Data type:* string

*Length:* 2000

#### 4.2.51 Article Fundref Group `<fundrefgrp>`

*Definition:* Information about the groups of fundref for the article.

##### 4.2.51.1 Article Fundref `<fundref>`

*Definition:* Provides a standard way to report funding sources for published scholarly research.

**4.2.51.1.1 Article Funder Name <funder\_name>**

*Definition:* The name of the funding organization or agency as it appears in the Fundref Registry. This is the authoritative name for the funding organization.

*Data type:* string

*Length:* 500

**4.2.51.1.2 Article Funder Agency Name <agency\_name>**

*Definition:* The author's version of the funding organization name. There may be a slight difference between the agency name and the official funder name.

*Data type:* string

*Length:* 500

**4.2.51.1.3 Article Funder ID <funder\_id>**

*Definition:* The funding agency identifier in the form of a DOI. The fundref ID is derived from the Fundref Registry and cannot be created by the publisher.

*Data type:* string

*Length:* 50

**4.2.51.1.4 Article Grant Number <grant\_number>**

*Definition:* The award number of the funder identifier. There may be multiple grant numbers for one funding organization.

*Data type:* string

*Length:* 1000

*Example:*

```
<fundrefgrp>
  <fundref>
    <funder_name>Ministry of Science and Technology, Taiwan</funder_name>
    <agency_name>Canadian Research Council</agency_name>
    <funder_id>10.13039/501100004663</funder_id>
    <grant_number>MOST 103-2220-E-007-022</grant_number>
  </fundref>
</fundrefgrp>
```

**4.2.52 Article Supplement Group <supplement\_group>**

*Definition:* Information about the article supplement group. An article may reference supplemental material or research data in an article where the supplemental material resides in an external repository or database.

*Attribute:* repository

*Definition:* The central location where the supplemental material resides in. Many research data repositories are in existence such as Dryad, Figshare, Dataverse, Zenodo, Code-Ocean, etc.

*Data type:* string

*Length:* 255

*Attribute:* type

*Definition:* Type of supplementary material.

*Data type:* string

#### **4.2.52.1 Article Supplement <supplement>**

*Definition:* Information about the article supplement.

##### **4.2.52.1.1 Article Supplement DOI <doi>**

*Definition:* The Digital Object Identifier (DOI) number assigned to the article supplement.

*Data type:* string

*Length:* 100

##### **4.2.52.1.2 Article Supplement URI <uri>**

*Definition:* The IEEE uniform resource identifier (URL) for the supplemental material.

*Data type:* string

*Length:* 255

##### **4.2.52.1.3 Article Supplement Name <name>**

*Definition:* Title for the supplemental material.

*Data type:* string

*Length:* 2000

##### **4.2.52.1.4 Article Supplement Language <language>**

*Definition:* Programming language (if available) for the supplemental material.

*Data type:* string

*Length:* 255

##### **4.2.52.1.5 Article Supplement Widget URL <widget\_url>**

*Definition:* Used exclusively by Xplore to display code-ocean algorithm. Strictly for internal use only.

*Data type:* string



*Length:* 250

#### 4.2.52.1.6 Article Supplement Keyword Set <keywordset>

*Definition:* Information about the set of article supplement keywords.

*Attribute:* keywordtype

*Enumerated value list:* AuthorFree

*Definition:* Keywords for supplements that are assigned by the author.

*Data type:* string

*Length:* 500

#### 4.2.52.1.7 Article Supplement Badge <badges>

*Definition:* Token of acknowledgment awarded to an article for the presence of code or data supplements, which enables reproducible research.

*Attribute:* type

*Enumerated value list:* Code-Available, Code-Reviewed, Dataset-Available, Dataset-Reviewed

*Data type:* string

*Length:* 25

*Example:*

```
<supplement_group repository="code-ocean" type="algorithm">
  <supplement>
    <doi>10.5072/CO.0ae675d2-46a3-4c20-97de-604cdf719f2c</doi>
    <uri>https://codeocean.com/2018/03/15/test-linked-to-lgrs-2017-2787743</uri>
    <name>Test linked to LGRS.2017.2787743</name>
    <language>Python</language>
    <widget_url>https://codeocean.com/widget.js?id=0ae675d2-46a3-4c20-97de-604cdf719f2c</widget_url>
    <keywordset keywordtype="AuthorFree">
      <keyword>
        <keywordterm>accelerometer</keywordterm>
      </keyword>
      <keyword>
        <keywordterm>acoustics</keywordterm>
      </keyword>
    </keywordset>
    <badges type="Code-Available"/>
  </supplement>
</supplement_group>
```

#### 4.2.53 Associated Article <assocarticle>

*Definition:* The DOI for the article that is related to the current article in some way. This is stored in conjunction with the association type for the article.

*Data type:* string

*Length:* 100

*Attribute:* assoctype

*Definition:* The type of association for a related article.

*Data type:* string

*Length:* 30

*Enumerated value list:* PeerDependent, OtherPeer, ChildErratum, ChildVersion, ChildCorrected, Subcomponent, Parent, Recommended, Preprint

*Example:* `<assocarticle assoctype="Preprint">10.36227/tehrxiv.10296887.v2</assocarticle>`

#### 4.2.54 Article Journal Topic Set `<articlejournaltopicset>`

*Definition:* Information about the set of topics for an article.

##### 4.2.54.1 Article Journal Topic `<articlejournaltopic>`

*Definition:* The select topic for an article.

*Data type:* string

*Length:* 500

*Example:*

```
<articlejournaltopicset>
  <articlejournaltopic><![CDATA[ Vehicular and wireless
  technologies]]></articlejournaltopic>
  <articlejournaltopic><![CDATA[ Intelligent transportation
  systems]]></articlejournaltopic>
</articlejournaltopicset>
```

#### 4.2.55 Article Journal Section `<joursec>`

*Definition:* Grouping of articles into sections within an issue.

*Data type:* string

*Length:* 2000

*Example:* `<joursec>Correspondence</joursec>`

#### 4.2.56 Article Special Section Group `<special_section_group>`

*Definition:* Contains the Section Society for the article.

##### 4.2.56.1 Article Section Society `<section_society>`

*Definition:* A collection of articles that focus on an IEEE Society or Council's field of interest. These Society Sections are published in IEEE Access. Authors may submit their article to a Society Section and have their article processed by a topically focused Associate Editor from that IEEE Society or Council. Society (and Council)

Sections are a permanent feature of IEEE Access and will be open for submissions continuously.

*Data type:* string

*Length:* 255

*Example:*

```
<special_section_group>  
  <section_society>IEEE Power & Energy Society Section</section_society>  
</special_section_group>
```

#### 4.2.57 Article Suppression <article\_suppression>

*Definition:* A flag that indicates that an article needs to be suppressed from the publication.

*Data type:* string

*Length:* 25

*Enumerated value list:* Retracted, Removed, Notice of Violation

Retracted- PDF is replaced with 1 page notice

Removed- PDF is replaced with 1 page notice

Notice of Violation- 1st page is added with notice of violation

*Example:* <article\_suppression>Retracted</article\_suppression>

**APPENDIX: List of Content Types****Conference Content Types**

<b>Content Type</b>	<b>Description</b>
advert	Advertisements
awards	Article & people awards (includes the former list-award)
blank	Blank pages
breaker-page	Pages that contain continuation text, used most often between parts of a conference proceedings. Includes conference copyright page.
bylaws	Society bylaws. Bylaw listings, changes, etc.
commentary	Commentary (includes conference "Keynote Address" and Trans Professional Communication "Interface" articles)
content-announce	Information on future special issues, future articles, future TOCs of other publications, etc.
errata	Corrections to an article
front-cover	Front covers that do not contain TOCs and are not blank.
future-events	Information on future conference locations and topics.
game	Games. Non-technical Magazines content; includes contest information.
index-author	Author index
index-subject	Subject index
info-author	Information for authors
info-society	All Society related material, including society news, Board of Governors meeting minutes, lists of IEEE fellows, etc.
list-contrib	Contributor Listings
list-reviewer	Reviewer and referee listings
list-staff	Staff or Society listings
lit-survey	Survey of the literature
obit	Obituaries, memoriams, or dedications.
opinion	An opinion piece, as in an editorial, forward/opening remarks, or a letter to the editor. In some magazines this type may look like a Section, a Column or Department (e.g. in Spectrum called "FORUM" section).
orig-research	Articles containing original research, published at any point in time. Includes reprinted articles.
panel-discussion	An article containing report of an organized panel discussion.
review	Reviews of current or newly available literature, software,

Content Type	Description
	products, etc. Reviews of one or more of books, software, videos, CDs, DVDs, and other media. Includes reviews of current or newly available literature, software, products, etc.
teaser-abstract	The TEASER-ABSTRACT is the abstract of an article/ paper that is presented elsewhere or in a different format (electronic versus paper). This type can used also be for items noted as 'Extended Abstracts' that do not fall under other categories.
tech-survey	Scanning the technology. Overview article describing an old or new technology.
toc	Table of contents
tutorial	Article aimed at teaching someone about a technical topic.

### Journals Content Types

Content Type	Description
advert	Advertisements
awards	Article & people awards (includes the former list-award)
blank	Blank pages
breaker-page	Pages that contain continuation text, used most often between parts of a conference proceedings. Includes conference copyright page.
call-for-papers	Call for papers. Used for a range of announcements: Calls for Papers; Calendars; Contributions; Misc. fillers.
commentary	Commentary (includes conference "Keynote Address" and Trans Professional Communication "Interface" articles)
comment-reply	Comments / Replies; Discussion/Closure TPWRD, TPWRS have comment-replies
content-announce	Information on future special issues, future articles, future TOCs of other publications, etc.
disting-lecturers	Distinguished lecturers listings.
errata	Corrections to an article
front-cover	Front covers that do not contain TOCs and are not blank.
future-events	Information on future conference locations and topics.
index-author	Author index
index-edics	EDICS (Editor's Information Classification Scheme). Areas of expertise with subcategorized topics.  NOTE: Name changed to INDEX-EDICS for consistency with other index Content Types

Content Type	Description
index-subject	Subject index
info-author	Information for authors
info-society	All Society related material, including society news, Board of Governors meeting minutes, lists of IEEE fellows, etc.
issue-survey	Survey of the articles in this issue. Includes "scanning the issue," "issue summaries," "special issue/special section intros," and "conference highlights"
list-contrib	Contributor Listings
list-reviewer	Reviewer and referee listings
list-staff	Staff or Society listings
lit-survey	Survey of the literature
obit	Obituaries, memoriams, or dedications.
opinion	An opinion piece, as in an editorial, forward/opening remarks, or a letter to the editor. In some magazines this type may look like a Section, a Column or Department (e.g. in Spectrum called "FORUM" section).
orig-research	Articles containing original research, published at any point in time. Includes reprinted articles.
patent-abstract	Patent abstracts.
prolog	Used only for Proceedings of the IEEE. Introductory piece to an article within the issue. A prolog or summary introduction to a full document.
reader-survey	Reader surveys
review	Reviews of current or newly available literature, software, products, etc. Reviews of one or more of books, software, videos, CDs, DVDs, and other media. Includes reviews of current or newly available literature, software, products, etc.
summary-abstract	Summary of abstracts in the current issue
teaser-abstract	The TEASER-ABSTRACT is the abstract of an article/ paper that is presented elsewhere or in a different format (electronic versus paper). This type can used also be for items noted as 'Extended Abstracts' that do not fall under other categories.
tech-survey	Scanning the technology. Overview article describing an old or new technology.
toc	Table of contents
tutorial	Article aimed at teaching someone about a technical topic.

**Magazine Content Types**

<b>Content Type</b>	<b>Description</b>
advert	Advertisements
awards	Article & people awards (includes the former list-award)
blank	Blank pages
breaker-page	Pages that contain continuation text, used most often between parts of a conference proceedings. Includes conference copyright page.
bylaws	Society bylaws. Bylaw listings, changes, etc.
call-for-papers	Call for papers. Used for a range of announcements: Calls for Papers; Calendars; Contributions; Misc. fillers.
cartoon	Cartoons. Non-technical diverting Magazines content.
commentary	Commentary (includes conference "Keynote Address" and Trans Professional Communication "Interface" articles)
comment-reply	Comments / Replies; Discussion/Closure TPWRD, TPWRS have comment-replies
content-announce	Information on future special issues, future articles, future TOCs of other publications, etc.
disting-lecturers	Distinguished lecturers listings.
errata	Corrections to an article
front-cover	Front covers that do not contain TOCs and are not blank.
future-events	Information on future conference locations and topics.
game	Games. Non-technical Magazines content; includes contest information.
index-author	Author index
index-subject	Subject index
info-author	Information for authors
info-society	All Society related material, including society news, Board of Governors meeting minutes, lists of IEEE fellows, etc.
issue-survey	Survey of the articles in this issue. Includes "scanning the issue," "issue summaries," "special issue/special section intros," and "conference highlights"
list-contrib	Contributor Listings
list-dissertation	List of Ph.D. dissertations
list-reviewer	Reviewer and referee listings
list-staff	Staff or Society listings
lit-survey	Survey of the literature
obit	Obituaries, memoriams, or dedications.
opinion	An opinion piece, as in an editorial, forward/opening

	remarks, or a letter to the editor. In some magazines this type may look like a Section, a Column or Department (e.g. in Spectrum called "FORUM" section).
orig-research	Articles containing original research, published at any point in time. Includes reprinted articles.
panel-discussion	An article containing report of an organized panel discussion.
puzzle	Puzzles. Non-technical diverting Magazines content; includes 'brain teasers' and 'crossword puzzles.'
reader-survey	Reader surveys
review	Reviews of one or more of books, software, videos, CDs, DVDs, and other media. Includes reviews of current or newly available literature, software, products, etc.
summary-abstract	Summary of abstracts in the current issue
teaser-abstract	The TEASER-ABSTRACT is the abstract of an article/ paper that is presented elsewhere or in a different format (electronic versus paper). This type can used also be for items noted as 'Extended Abstracts' that do not fall under other categories.
tech-survey	Scanning the technology. Overview article describing an old or new technology.
toc	Table of contents
topical-info	Non-engineering topical information. Includes articles analyzing, for example, 401K laws and options, etc.
tutorial	Article aimed at teaching someone about a technical topic.