

WIPO
OMPI



PCT/EF/PFC 02/005

STATUS AT: July 01, 2002

SITUATION AU : 01 juillet 2002

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

ADMINISTRATIVE INSTRUCTIONS UNDER THE
PATENT COOPERATION TREATY (PCT)
STANDARD FOR THE ELECTRONIC FILING AND PROCESSING
OF INTERNATIONAL APPLICATIONS

INSTRUCTIONS ADMINISTRATIVES DU
TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)
NORME CONCERNANT LE DÉPÔT ET LE TRAITEMENT ÉLECTRONIQUES
DES DEMANDES INTERNATIONALES

PROPOSAL FOR CHANGE FILE
DOSSIER RELATIF À LA PROPOSITION DE MODIFICATION

SUBJECT: DTDs for new PCT applications (E-PCT) (Annex F, Appendix I, section 3)		PROPOSED BY: US	
SUJET : DTDs pour les nouvelles demandes PCT (E-PCT) (Annexe F, Appendice I, section 3)		PROPOSÉE PAR :	
HANDLING: Annual cycle	PROPOSED DATE OF ENTRY INTO FORCE:	03.03	
TRAITEMENT : Cycle annuel			
ANNEX/ ANNEXE	CONTENT/CONTENU	ORIGIN/ ORIGINE	DATE
1	Proposal/Proposition	US	28.02.02
2	Circular C. PCT 830/Circulaire C. PCT 830	IB	04.04.02
3	Comments/Commentaires	AU	09.05.02
4	Comments/Commentaires	KR	17.05.02
5	Comments/Commentaires	EP, JP, US	01.07.02

[Annex 1 follows/
L'annexe 1 suit]

NEXT ACTION:	Promulgation	BY:	March 2003
PROCHAINE ACTION :	Promulgation	POUR LE :	Mars 2003

PROPOSAL BY THE UNITED STATES PATENT AND TRADE MARK OFFICE

Stand-alone table for the ePCT DTDs

Description:

Often applicants produce large tables of data that they want to be part of disclosure from test results or to communicate complex atomic structures. It is easier to deal with these tables from a processing standpoint by having them stand-alone from the application (e.g. application-body.xml). The accompanying m-table.dtd has the same content model as the table element inside the application-body.dtd and it is requested that this dtd is included in Annex F as a filing dtd.

The DTD for the stand-alone tables in CALS format is presented as a "referenced document" under the category of "other-documents" as indicated in the DTD for package-data. Conceptually, see the Figure 2 on page 29 of the printed Annex F (section 3.2), 27 December 2001 Special Issue of the *PCT Gazette*, wherein the "other-documents" are shown to be part of the international application; and in more detail, see the package data DTD in Appendix I of Annex F, page 71 (top) and the ELEMENT on page 75), both referring to "other-documents".

```

<!--override OASIS Exchange <entry> model-->
<!ENTITY % tbl.entry.mdl "(#PCDATA | b | i | u | sup | sub | smallcaps |
br |
        patcit | nplcit | bio-deposit | crossref | img | dl | ul |
ol |
        chemistry | maths)*" >

<!ENTITY % MathExpression "(mi | mn | mo | mtext | ms | mspace | mrow |
mfrac |
        msqrt | mroot | menclose | mstyle | merror | mpadded |
mphantom |
        mfenced | msub | msup | msubsup | munder | mover |
munderover |
        mmultiscripts | mtable | mtr | mlabeledtr | mtd |
maligngroup |
        alignmark | maction | ci | csymbol | cn | apply | fn |
lambda |
        reln | interval | list | matrix | matrixrow | set | vector |
semantics | declare)*" >

<!ENTITY % PresExpression "(mi | mn | mo | mtext | ms | mspace |
mprescripts |
        none | mrow | mfrac | msqrt | mroot | menclose | mstyle |
merror |
        mpadded | mphantom | mfenced | msub | msup | msubsup |
munder |
        mover | munderover | mmultiscripts | mtable | mtr |
mlabeledtr | mtd |
        aligngroup | alignmark | maction | ci | csymbol | cn |
apply | fn |
        lambda | reln | interval | list | matrix | matrixrow | set |
vector |
        semantics | declare)*" >

<!--.....
Recursive definition for content of expressions. Include
presentation constructs at lowest level so presentation
layout schemata hold presentation or content elements.
Include content constructs at lowest level so content
elements hold PCDATA or presentation elements at leaf
level (for permitted substitutable elements in context)
-->
<!ENTITY % ContentExpression "(csymbol | ci | cn | apply | reln | lambda |
        condition | declare | sep | semantics | annotation |
annotation-xml |
        integers | reals | rationals | naturalnumbers | complexes |
primes |
        exponentiale | imaginaryi | notanumber | true | false |
emptyset |
        pi | eulergamma | infinity | interval | list | matrix |
matrixrow |
        set | vector | lowlimit | uplimit | bvar | degree | logbase
|
        inverse | ident | abs | conjugate | exp | factorial | arg |
real |
        imaginary | not | ln | sin | cos | tan | sec | csc | cot |
sinh |
        cosh | tanh | sech | csch | coth | arcsin | arccos | arctan
|

```

```

determinant | transpose | card | quotient | divide | power |
rem |
implies | vectorproduct | scalarproduct | outerproduct |
setdiff |
fn | compose | plus | times | max | min | gcd | lcm | and |
or | xor |
union | intersect | mean | sdev | variance | median | mode |
selector | root | minus | log | int | diff | partialdiff |
divergence | grad | curl | laplacian | sum | product | limit
|
moment | exists | forall | neq | in | notin | notsubset |
notprsubset | tendsto | eq | leq | lt | geq | gt |
equivalent |
approx | subset | prsubset | mi | mn | mo | mtext | ms |
mspace |
mrow | mfrac | msqrt | mroot | menclose | mstyle | merror |
mpadded |
mphantom | mfenced | msub | msup | msubsup | munder | mover
|
munderover | mmultiscripts | mtable | mtr | mlabeledtr | mtd
|
maligngroup | malignmark | maction)*" >
<!ENTITY % Annotation.content "#PCDATA" >
<!ELEMENT m-table (title?,tgroup+) >
<!ELEMENT title (#PCDATA | b | i | u | sup | sub | smallcaps)* >
<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % tbl.tgroup.mdl "colspec*,thead?,tbody"
ENTITY % tbl.tgroup.att ""
-->
<!ELEMENT tgroup (colspec*,thead?,tbody) >
<!ATTLIST tgroup
      cols NMTOKEN #REQUIRED
      colsep NMTOKEN #IMPLIED
      rowsep NMTOKEN #IMPLIED
      align (left | right | center | justify | char) #IMPLIED >
<!--bold formatting for text
-->
<!ELEMENT b (#PCDATA | i | u | smallcaps | br)* >
<!--italic formatting for text
-->
<!ELEMENT i (#PCDATA | b | u | smallcaps | br)* >
<!--underline: style - single is default
-->
<!ELEMENT u (#PCDATA | b | i | smallcaps)* >
<!ATTLIST u
      style (single | double | dash | dots) "single" >
<!--superscripted text
-->
<!ELEMENT sup (#PCDATA | b | u | i)* >
<!--subscripted text

```

```
-->
<!ELEMENT sub  (#PCDATA | b | u | i)* >

<!--small capitals
-->
<!ELEMENT smallcaps  (#PCDATA | b | u | i | br)* >

<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % tbl.colspec.att ""
-->
<!ELEMENT colspec    EMPTY >

<!ATTLIST colspec
      colnum  NMTOKEN      #IMPLIED
      colname  NMTOKEN      #IMPLIED
      colwidth CDATA        #IMPLIED
      colsep   NMTOKEN      #IMPLIED
      rowsep   NMTOKEN      #IMPLIED
      align   (left | right | center | justify | char)  #IMPLIED
      char    CDATA        #IMPLIED
      charoff  NMTOKEN      #IMPLIED >

<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % tbl.thead.att ""
-->
<!ELEMENT thead  (row+) >

<!ATTLIST thead
      valign (top | middle | bottom)  #IMPLIED >

<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % tbl.tbody.att ""
-->
<!ELEMENT tbody  (row+) >

<!ATTLIST tbody
      valign (top | middle | bottom)  #IMPLIED >

<!--br - break, line break within a paragraph
-->
<!ELEMENT br      EMPTY >

<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % tbl.row.mdl "entry+"
ENTITY % tbl.row.att ""
-->
<!ELEMENT row  (entry+) >

<!ATTLIST row
      rowsep  NMTOKEN      #IMPLIED
      valign  (top | middle | bottom)  #IMPLIED >

<!--Default declarations previously defined in this entity and
referenced below include:
ENTITY % paracon "#PCDATA"
ENTITY % tbl.entry.mdl "(%paracon;)*"
ENTITY % tbl.entry.att ""
-->
```

```
<!ELEMENT entry %tbl.entry.mdl; >

<!--PATENT CITATIONS:
Patent Citation within abstract, description or claims.
For patent citations within Search Report see Search Report DTD
Notes:
Tags arranged according to WIPO ST.14 order.
This can be free text data without any structure (text).

Example:
<patcit id="pcit1" dnum="US4793675A">
<document-id><country>US</country>
<doc-number>4793675</doc-number><kind>A</kind>
<name>Handa</name>
<date>19881227</date></document-id>
</patcit>

Note: it is NOT expected that the applicant will create the
tagged data - it could be generated from a 'pull down'
data entry form or generated from internal SR databases

Attributes (recommended):
id - pcit01, pcit02, etc.
num - 001, 002, etc.
dnum - use full number as one string, eg, "US5401234A";
url - where possible give full web link to patent
file - file name eg. if stored on local systems
-->
<!ELEMENT patcit (text | (document-id,rel-passage*)) >

<!--
Non-Patent Literature (NPL) CITation;
Notes:
This can be free text data without any structure (#PCDATA)
which is NOT recommended
or it can be highly structured data which is marked up
according to ST.14 and ISO 690 layout;

This part of the DTD has used many different sources
for element names and DTD structure and reference:
AACR2 / MARC
ISO 12083 - Electronic manuscript prep. and markup. DTD
Association of American Publishers (AAP) Z39.59 DTD
```

European Working Group for SGML (EWS) MAJOUR DTD
SuperJournal Full Article DTD www.superjournal.ac.uk/sj
Elsevier DTD
Medline DTD (NLM)

Attributes (recommended):

id - ncit1, ncit2, etc

num - 0001, 0002

The TYPE of citation is office specific:
(recommended):;

A - Abstract citation of no specific kind

B - Book citation

I - Biological abstract citation

C - Chemical abstracts citation

E - Database citation

D - Derwent citation

P - Patent cited within NPL group

J - Patent Abstracts of Japan citation (REC 067)

S - Serial / Journal / Periodical citation

W - World Wide Web / Internet search citation

medium - the type of medium eg.

CD (CD-ROM), MT (Magnetic Tape), DISK, ONLINE

file - file name on local systems eg. XP number in EPO

url - where possible give full web link to document

-->

<!ELEMENT nplcit (text | (article | book | online | othercit)*) >

<!ATTLIST nplcit

| | | |
|----------|-------|-----------|
| id | ID | #IMPLIED |
| num | CDATA | #REQUIRED |
| npl-type | CDATA | #IMPLIED |
| medium | CDATA | #IMPLIED |
| file | CDATA | #IMPLIED |
| url | CDATA | #IMPLIED |

>

<!--biological deposit citation

(US EFS: biological-deposit)

According to PCT Rule 13bis, EPC Rule 28

This covers all bio data references long and short
within the description and/or claims

Recommended id = biod01, biod02, etc.

-->

<!ELEMENT bio-deposit (depository,bio-accno,date?,term?,dtext?) >

<!ATTLIST bio-deposit

| | | |
|------|-------|-----------|
| id | ID | #IMPLIED |
| num | CDATA | #REQUIRED |
| url | CDATA | #IMPLIED |
| dnum | CDATA | #IMPLIED |

>

<!--Cross reference to any other element with an identifier (id)

-->

<!ELEMENT crossref (#PCDATA) >

<!ATTLIST crossref

| | | |
|-------|-------|-----------|
| idref | CDATA | #REQUIRED |
|-------|-------|-----------|

>

<!--image data

image is used for any kind of image: art work, figures,
complex work units (math, tables, chemistry), etc.

```
Recommended:
id = i01, i02, etc.
he, wi = "11" - millimeters - height, width;
file = file name, location;
label - not used;
alt = alternate text if image not shown;
img-content = drawing is the default;
img-format = common will be tiff, st33 and st35 in for backward
compatibility and, later, publication.
-->
<!ELEMENT img    EMPTY    >

<!ATTLIST img
      id ID          #IMPLIED
      he NMTOKEN      #REQUIRED
      wi NMTOKEN      #REQUIRED
      file CDATA       #REQUIRED
      alt CDATA        #IMPLIED
      img-content (drawing | photograph | character | dna |
undefined)
      "drawing"
      img-format (jpg | tif | st33 | st35)    #REQUIRED    >

<!--definition list

Recommended id = dlis01, dlis02, etc.
-->
<!ELEMENT dl    (dt,dd)+ >

<!ATTLIST dl
      tsize NMTOKEN      #IMPLIED
      compact (compact)    #IMPLIED
      id ID          #IMPLIED    >

<!--Unordered Lists
list-style may be empty for lists with no bullet or other symbol
default list-style is 'bullets'
Recommended id = ulis01, ulis02, etc.
-->
<!ELEMENT ul    (li+) >

<!ATTLIST ul
      id ID          #IMPLIED
      list-style (bullet | dash | none)    "bullet"
      compact (compact)    #IMPLIED    >

<!--ordered lists: for now the default will be
recommended style first level - 1. 2. 3. etc.
For lists within lists -
second level - a. b. c.
third level - i. ii. iii.;
These are stylesheet issues but are recommended for consistency.

Recommended id = olis01, olis02, etc.
-->
<!ELEMENT ol    (li+) >

<!ATTLIST ol
      id ID          #IMPLIED
      compact (compact)    #IMPLIED    >
```

```
<!--chemistry
Chemical formulae, ring structures, Markush structures, etc.
For now treat as image data.
Depending on industry support we may use, e.g., chemML, CML later

Recommended id = chem01, chem02, etc
-->
<!ELEMENT chemistry (img) >

<!ATTLIST chemistry
      id ID      #IMPLIED
      num CDATA  #REQUIRED  >

<!--MATHEMATICS
This is image data or coded according to mathml, version 2

Recommended id = math01, math02, etc.
-->
<!ELEMENT maths (img | math) >

<!ATTLIST maths
      id ID      #IMPLIED
      num CDATA  #REQUIRED  >

<!--if no structure is possible, enter text (without markup)
-->
<!ELEMENT text (#PCDATA) >

<!--Document identification refers to patents (and patent
applications) only. See WIPO ST.14
-->
<!ELEMENT document-id (country,doc-number,kind?,name?,date?) >

<!ATTLIST document-id
      lang CDATA  #IMPLIED  >

<!--Relevant passage group within patent; most used in search
reports - use text in abstract, description and claims
-->
<!ELEMENT rel-passage (text | (passage+,category?,rel-claims?)+) >

<!--article citations within a 'host' document

After patent citations the most common citations are
articles within serials (periodicals, magazines), books and
electronic (eg. internet) sources.
This is a very complex and varied area to standardise.
The tag set below is drawn from a number of sources as is
the order of the tags (which in any case can be changed
depending on the stylesheet used).;

The order of tags is that of WIPO ST.14 / ISO 690 layout
DROP, J.G. Integrated Circuit Personalization at
the Module Level. IBM Tech. Dis. Bull. October 1974,
Vol. 17, No. 5, p. 1344 and 1345.
[XPnnnnnnnnnnnn].

<nplcit id="ncit1" num="0012" type="S" file="XP1234456">
<article>
<author>
<name>DROP, J.G.</name></author>
<atl>Integrated Circuit Personalization at the Module Level</atl>
```

```
<serial>
<sertitle>IBM Tech. Dis. Bull.</sertitle>
<pubdate>19741000</pubdate>
<vid>17</vid>
<ino>5</ino>
</serial>
<location><pp>1344 and 1345</pp></location>
<refno id="XP1">XP1234456</refno>
</article>
</nplcit>
```

Note: it is NOT expected that the applicant will create the tagged data - it can be generated from a 'pull down' data entry form (eg. in Word) or generated from internal SR databases

-->

```
<!ELEMENT article (text | (author*,atl?,subname?,(serial |
book),absno?,location?,
                        class*,keyword*,cpyrt?,artid?,refno*)) >
```

<!--book citation

In the order specified by WIPO ST.14 and ISO 690 and AACR2 rules for layout

WALTON, Herrmann. Microwave quantum theory.
London : Sweet and Maxwell, 1973. ISBN 0123456789.
Vol.2, p. 138 to 192.

```
<nplcit id="ncit12" num="0013" type="b">
<book>
<author>
<name>WALTON, Herrman</name></author>
<book-title>Microwave quantum theory</book-title>
<imprint><address><text>London</text></address>
<name>Sweet and Maxwell</name>
<pubdate>19730000</pubdate></imprint>
<location><pp>138 to 192</pp></location>
<isbn>0-1234-568-9</isbn>
</book>
</nplcit>
```

-->

```
<!ELEMENT book (text | (author*,(book-title+ |
conference),(subtitle?,subname*,
edition?,imprint?,descrip?,series?,absno?,location*,isbn*,pubid?,vid?,
bookno?,notes?,class*,keyword*,cpyrt?,refno*))) >
```

<!--online citation

Revised according to ISO-690-2 - Electronic documents and parts thereof.
Please refer to this standard for definitions and examples.

See: <http://www.nlc-bnc.ca/iso/tc46sc9/standard/690-2e.htm#Contents>

The tagging in fact is a mixture of article and book tags
together with specific electronic source tags

'Online' is taken to mean any kind of electronic documentation:
databases, internet, CD-Roms, DVD, email, etc

EXAMPLES;;

Kirk-Othmer Encyclopedia of Chemical Technology [online].
3rd ed. New York : John Wiley, 1984 [cited 3 January 1990].
Available from: DIALOG Information Services, Palo Alto (Calif.).

```
<nplcit id="ncit1" num="0001" type="E" medium="online">
<online>
<online-title>Kirk-Othmer Encyclopedia of Chemical Technology
</online-title>
<edition>3rd ed.</edition>
<imprint><address><text>New York</text>
</address>
<name>John Wiley</name>
<pubdate>19840000</pubdate></imprint>
<avail>dialog information services, palo alto (calif.).</avail>
<datecit><date>19900103</date></datecit>
</online>
</nplcit>
```

* Article on Internet:

Clark, Carol. On the Threshold of a Brave New World.
In Blueprint of the Body [online]. CNN.com, 2000. [cited 24 August 2000;
10:25 EST]. In-depth specials.
Available from: [<http://www.cnn.com/SPECIALS/2000/genome/story/overview/>]

```
<nplcit id="ncit1" num="0002" type="E" medium="online">
<online>
<author><name>Clark, Carol</name></author>
<online-title>On the Threshold of a Brave New World</online-title>
<imprint><name>CNN.com, 2000</name></imprint>
<series><text>In-depth specials</text></series>
<avail>http://www.cnn.com/SPECIALS/2000/genome/story/</avail>
<datecit><date>20000824; 10:25 est</date></datecit>
</online>
</nplcit>
```

* Personal communication (e-mail)

Thacker, Jane. MPEG-21 project stream on digital item identification
[online].
Message to: [iso.tc46.sc9@nlc-bnc.ca]. 3 October 2000; 13:33 EST [cited 6
October 2000; 13:10 EST].
Message-ID: [002f01c02d60\$051a64a0\$22a2580c@vaio]. Personal communication.

```
<nplcit id="ncit3" num="0003" type="E" medium="online">
<online>
<author><name>Thacker, Jane</name></author>
<online-title>MPEG-21 project stream on digital item identification
</online-title>
<subname><name>Message to: <iso.tc46.sc9@nlc-bnc.ca>
</name></subname>
<pubdate>3 October 2000; 13:33 EST</pubdate>
<notes>Personal communication</notes>
<avail>Message-ID: <002f01c02d60$051a64a0$22a2580c@vaio>
</avail>
<datecit><date>6 october 2000; 13:10 EST</date></datecit>
</online>
</nplcit>
-->
<!ELEMENT online (text | (author*,online-
title*,hosttitle?,subname?,edition?,(
serial |
book)?,imprint?,pubdate?,history?,series?,hostno?,location?,
notes?,avail,class*,keyword*,cpyrt?,issn?,isbn?,datecit?,srchterm*,
```

```

                srchdate?,refno*)) >

<!--other citations - free form
-->
<!ELEMENT othercit  (#PCDATA) >

<!--information regarding the facility storing the biological deposit
-->
<!ELEMENT depository  (#PCDATA | address)* >

<!--biological accession number: the identification assigned
to the biological material by the depository
-->
<!ELEMENT bio-accno  (#PCDATA) >

<!--date: components of a date. Format: YYYYMMDD
-->
<!ELEMENT date  (#PCDATA) >

<!--identifies the period of time during which the depository must
be able to furnish samples of the biological material.
-->
<!ELEMENT term  (#PCDATA) >

<!--author
Prime responsibility for the work
there is no distinguishing between personal and corporate authors
<author> followed by name or addressbook information
use the ID attribute if, for example, there is a need to
distinguish between multiple authors. Can also include
affiliation details

Recommended id = auth01, auth02, etc.
Descriptive text
-->
<!ELEMENT dtext  (#PCDATA) >

<!--term to be defined

Recommended id = dtrm01, dtrm02, etc.
-->
<!ELEMENT dt  (#PCDATA | b | i | u | sup | sub | smallcaps)* >

<!ATTLIST dt
                id  ID      #IMPLIED >

<!--definition description
-->
<!ELEMENT dd  (#PCDATA | b | i | u | sup | sub | smallcaps | br | patcit |
nplcit |
                bio-deposit | crossref | img | ul | ol | chemistry | maths)*
>

<!--list item
Recommended id = list01, list02, etc.
-->
<!ELEMENT li  (#PCDATA | b | i | u | sup | sub | smallcaps | br | patcit |
nplcit |
                bio-deposit | crossref | img | dl | ul | ol | chemistry |
maths)* >

<!ATTLIST li

```

```
id ID #IMPLIED >

<!--.....
The top-level element "math" contains MathML encoded
mathematics. The "math" element has the browser info
attributes iff it is also the browser interface element.
-->
<!ELEMENT math %MathExpression; >

<!ATTLIST math
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    macros CDATA #IMPLIED
    mode CDATA #IMPLIED
    display CDATA #IMPLIED
    type CDATA #IMPLIED
    name CDATA #IMPLIED
    height CDATA #IMPLIED
    width CDATA #IMPLIED
    baseline CDATA #IMPLIED
    overflow (scroll | elide | truncate | scale) "scroll"

    alting CDATA #IMPLIED
    alttext CDATA #IMPLIED >

<!--Country: use ST.3 country code, e.g. DE, FR, GB, NL, etc.
Also includes EP, WO
-->
<!ELEMENT country (#PCDATA) >

<!--the number of the referenced patent (or application) document
-->
<!ELEMENT doc-number (#PCDATA) >

<!--document kind code; e.g. A1
-->
<!ELEMENT kind (#PCDATA) >

<!--name: if no distinction or detail can be given.
Also to be used for: personal (natural person) and corporate
(legal entity) names
-->
<!ELEMENT name (#PCDATA) >

<!ATTLIST name
    name-type (legal | natural) #IMPLIED >

<!--passage within the cited patent literature
-->
<!ELEMENT passage (#PCDATA) >

<!ELEMENT category (#PCDATA) >

<!--relevant claims
-->
```

```
<!ELEMENT rel-claims (#PCDATA) >

<!ELEMENT author (((name | (prefix?,last-name,first-name,middle-
name?,suffix?,iid?,
                role?,orgname?,department?,synonym*)),registered-number?) |
                addressbook) >

<!ATTLIST author
                id ID #IMPLIED >

<!--article title
-->
<!ELEMENT atl (#PCDATA) >

<!--Subordinate responsibility, e.g. editor, translator, etc.
-->
<!ELEMENT subname (((name | (prefix?,last-name,first-name,middle-
name?,suffix?,iid?,
                role?,orgname?,department?,synonym*)),registered-number?) |
                addressbook) >

<!--serial citation data:
this describes the volume or issue as a whole and not a
particular article within it.
-->
<!ELEMENT serial
(sertitle,alttitle?,subname?,issue?,imprint?,pubdate?,descrip?,
                notes?,issn?,isbn?,pubid?,vid?,ino?,cpyrt?) >

<!--Abstract number
-->
<!ELEMENT absno (#PCDATA) >

<!--location within the cited work
-->
<!ELEMENT location (text |
(serpart?,sersect?,chapter?,pp?,column?,para?,line?)) >

<!--classification code; e.g. ipc, dewey etc.
-->
<!ELEMENT class (#PCDATA) >

<!--Keyword; e.g., from a Thesaurus or class. scheme
-->
<!ELEMENT keyword (#PCDATA)>

<!--copyright info. Copyright of publisher of serial
-->
<!ELEMENT cpyrt (#PCDATA) >

<!--Article unique ID - assigned by a publisher to an article
-->
<!ELEMENT artid (#PCDATA) >

<!--Reference number (general); for the EPO this is the XP number
-->
<!ELEMENT refno (#PCDATA) >

<!ATTLIST refno
                id ID #IMPLIED >

<!--the title of the cited book
```

```
-->
<!ELEMENT book-title  (#PCDATA) >

<!--CONFERENCE GROUP / CITATION
There is no standard way of citing conference proceedings;
date of the conf. may come before or after place, for example.
The tags are specified in a set order where it is not possible
or correct then simply use <text>
-->
<!ELEMENT conference  (text |
(conftitle,date?,confno?,confplace?,confsponsor*)) >

<!--book subtitle
-->
<!ELEMENT subtitle  (#PCDATA) >

<!--edition statement
-->
<!ELEMENT edition  (#PCDATA) >

<!--imprint:
Publication / creation data
Place of publication : publisher, date(s) of publication
usually only date of publication is used for journal citations
-->
<!ELEMENT imprint  (text | (address?,name,pubdate*)) >

<!--Physical description - generally NOT used in citations in pats.
eg. v., 27cm
-->
<!ELEMENT descrip  (#PCDATA) >

<!--series statement
-->
<!ELEMENT series  (text | (mst,msn?,issn?)) >

<!--International standard book number
-->
<!ELEMENT isbn  (#PCDATA) >

<!--Publisher's unique id
-->
<!ELEMENT pubid  (#PCDATA) >

<!--Volume id/number
-->
<!ELEMENT vid  (#PCDATA) >

<!--book number
-->
<!ELEMENT bookno  (#PCDATA) >

<!--notes about the journal; e.g. Continues Journal of XYZ 1910-1998,
published in French and English, etc.
-->
<!ELEMENT notes  (#PCDATA) >

<!--the title of the electronic resource
-->
<!ELEMENT online-title  (#PCDATA) >

<!--title of the host document/database
```

```
-->
<!ELEMENT hosttitle  (#PCDATA) >

<!--publication date used in npl citations
-->
<!ELEMENT pubdate  (#PCDATA | sdate | edate | time)* >

<!--history of the article (not serial)
-->
<!ELEMENT history  (text | (received | accepted | revised | misc)) >

<!--numeration within host document
-->
<!ELEMENT hostno  (#PCDATA) >

<!--Availability and access - REQUIRED
use for URL, online database, ftp address, email, etc.;
e.g. Available from Internet: http://www.epoline.org
Available from DIALOG Information Systems, Palo Alto (Calif.)
-->
<!ELEMENT avail  (#PCDATA) >

<!--International standard serial number
-->
<!ELEMENT issn  (#PCDATA) >

<!--date cited - date on which the citation was cited.
May be different from srchdate below
-->
<!ELEMENT datecit  (date) >

<!--Search terms
-->
<!ELEMENT srchterm  (#PCDATA) >

<!--Date of search/retrieval YYYYMMDD
-->
<!ELEMENT srchdate  (date) >

<!--address components:
Address formats differ from country to country
If no structure possible use text
-->
<!ELEMENT address  ((address-1?,address-2?,address-
3?,mailcode?,pobox?,room?,
        address-
floor?,building?,street?,city?,county?,state?,postcode,
        country) | text) >

<!--title: e.g., Mr., Mrs., Dr. etc
-->
<!ELEMENT prefix  (#PCDATA) >

<!--last, family, surname
-->
<!ELEMENT last-name  (#PCDATA) >

<!--First or given name(s), initial(s)
-->
<!ELEMENT first-name  (#PCDATA) >

<!--middle name(s) or initial(s)
```

```
-->
<!ELEMENT middle-name (#PCDATA) >

<!--name suffix (e.g., II, Jr., Dip., Ing., BA, etc.)
-->
<!ELEMENT suffix (#PCDATA) >

<!--individual id
-->
<!ELEMENT iid (#PCDATA) >

<!--role, e.g. President, Chairman, etc.
-->
<!ELEMENT role (#PCDATA) >

<!--organisation name or company name
-->
<!ELEMENT orgname (#PCDATA) >

<!--department, division, section, etc. name
-->
<!ELEMENT department (#PCDATA) >

<!--synonym
-->
<!ELEMENT synonym (#PCDATA) >

<!--registered number
-->
<!ELEMENT registered-number (#PCDATA) >

<!--ADDRESSBOOK GROUP:
Holds name and contact information for individuals/organizations

The LANG attribute is REQUIRED for certain document types, e.g.
the JPO PCT Request where names and addresses may be repeated in
two different languages. If no structure possible use text.
-->
<!ELEMENT addressbook (((name | (prefix?,last-name,first-name,middle-
name?,suffix?,
            iid?,role?,orgname?,department?,synonym*)),registered-
number?),
            address,phone*,fax*,email*,url*,ead*,dtext?) | text) >

<!ATTLIST addressbook
            lang CDATA #IMPLIED >

<!--serial title
-->
<!ELEMENT sertitle (#PCDATA) >

<!--Alternate title for serial eg. BMJ = British Medical Journal
-->
<!ELEMENT alttitle (#PCDATA) >

<!--issue designation; e.g.: Annual, 1971-, 1890-1972
-->
<!ELEMENT issue (#PCDATA) >

<!--issue number
-->
<!ELEMENT ino (#PCDATA) >
```

```
<!--part within a serial
-->
<!ELEMENT serpart (#PCDATA) >

<!--serial section
-->
<!ELEMENT sersect (#PCDATA) >

<!--chapter, e.g., in a book. Example: Chapter 2
-->
<!ELEMENT chapter (#PCDATA) >

<!--cited document page numbers
-->
<!ELEMENT pp (#PCDATA | ppf | ppl)* >

<!--cited document column numbers
-->
<!ELEMENT column (#PCDATA | colf | coll)* >

<!--referenced paragraph within cited work
-->
<!ELEMENT para (#PCDATA | paraf | paral)* >

<!--referenced line within cited work
-->
<!ELEMENT line (#PCDATA | linef | linel)* >

<!--Conference title
-->
<!ELEMENT conftitle (#PCDATA) >

<!--Conference number
-->
<!ELEMENT confno (#PCDATA) >

<!--Conference place
-->
<!ELEMENT confplace (#PCDATA | address)* >

<!--Conference sponsor
-->
<!ELEMENT confsponsor (#PCDATA | addressbook)* >

<!--monographic series title
-->
<!ELEMENT mst (#PCDATA) >

<!--monographic series number
-->
<!ELEMENT msn (#PCDATA) >

<!--start date used in pubdate
-->
<!ELEMENT sdate (#PCDATA) >

<!--end date used in pubdate
-->
<!ELEMENT edate (#PCDATA) >

<!--time; format HHMM
```

```
-->
<!ELEMENT time (#PCDATA) >

<!--date article was received
-->
<!ELEMENT received (date) >

<!--date article was accepted
-->
<!ELEMENT accepted (date) >

<!--date article was revised
-->
<!ELEMENT revised (date) >

<!--miscellaneous information relating to the history of the article;
see ISO 12083
-->
<!ELEMENT misc (#PCDATA | date)* >

<!--Address, first line
-->
<!ELEMENT address-1 (#PCDATA) >

<!--Address, second line
-->
<!ELEMENT address-2 (#PCDATA) >

<!--Address, third line
-->
<!ELEMENT address-3 (#PCDATA) >

<!--organizational mail code
-->
<!ELEMENT mailcode (#PCDATA) >

<!--Post Office Box number
-->
<!ELEMENT pobox (#PCDATA) >

<!--address room; e.g., Room 55B
-->
<!ELEMENT room (#PCDATA) >

<!--address floor, e.g., 10th
-->
<!ELEMENT address-floor (#PCDATA) >

<!--building information in address, e.g., Hoffman building
-->
<!ELEMENT building (#PCDATA) >

<!--street may contain house number or name
-->
<!ELEMENT street (#PCDATA) >

<!--City or town name
-->
<!ELEMENT city (#PCDATA) >

<!--County, parish, department, etc (mainly UK, USA)
-->
```

```
<!ELEMENT county (#PCDATA) >

<!--Region of country eg. state, province, etc.
-->
<!ELEMENT state (#PCDATA) >

<!--postal code or zip code
-->
<!ELEMENT postcode (#PCDATA) >

<!--Presentation elements contain PCDATA or malignmark constructs.-->
<!ELEMENT mi (#PCDATA | mchar | mglyph | malignmark)* >

<!ATTLIST mi
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
    fontfamily CDATA #IMPLIED
    color CDATA #IMPLIED >

<!ELEMENT mn (#PCDATA | mchar | mglyph | malignmark)* >

<!ATTLIST mn
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
    fontfamily CDATA #IMPLIED
    color CDATA #IMPLIED >

<!ELEMENT mo (#PCDATA | mchar | mglyph | malignmark)* >

<!ATTLIST mo
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
```

```
fontfamily CDATA #IMPLIED
color CDATA #IMPLIED
form (prefix | infix | postfix) #IMPLIED
fence (true | false) #IMPLIED
separator (true | false) #IMPLIED
lspace CDATA #IMPLIED
rspace CDATA #IMPLIED
stretchy (true | false) #IMPLIED
symmetric (true | false) #IMPLIED
maxsize CDATA #IMPLIED
minsize CDATA #IMPLIED
largeop (true | false) #IMPLIED
movablelimits (true | false) #IMPLIED
accent (true | false) #IMPLIED >

<!ELEMENT mtext (#PCDATA | mchar | mglyph | malignmark)* >

<!ATTLIST mtext
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
    fontfamily CDATA #IMPLIED
    color CDATA #IMPLIED >

<!ELEMENT ms (#PCDATA | mchar | mglyph | malignmark)* >

<!ATTLIST ms
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
    fontfamily CDATA #IMPLIED
    color CDATA #IMPLIED
    lquote CDATA #IMPLIED
    rquote CDATA #IMPLIED >

<!ELEMENT mspace EMPTY >

<!ATTLIST mspace
    width CDATA #IMPLIED
    height CDATA #IMPLIED
    depth CDATA #IMPLIED
    linebreak CDATA #IMPLIED
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >

<!ELEMENT mrow %PresExpression; >

<!--
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >
-->

<!ELEMENT mfrac %PresExpression; >

<!--
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
bevelled CDATA #IMPLIED
linethickness CDATA #IMPLIED >
-->

<!ELEMENT msqrt %PresExpression; >

<!--
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >
-->

<!ELEMENT mroot %PresExpression; >

<!--
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >
-->
```

```
<!ELEMENT menclose %PresExpression; >

<!ATTLIST menclose
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    notation CDATA "longdiv" >

<!--.....
Presentation layout schemata contain tokens,
layout and content schemata.
-->
<!ELEMENT mstyle %PresExpression; >

<!ATTLIST mstyle
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    fontsize CDATA #IMPLIED
    fontweight (normal | bold) #IMPLIED
    fontstyle (normal | italic) #IMPLIED
    fontfamily CDATA #IMPLIED
    color CDATA #IMPLIED
    form (prefix | infix | postfix) #IMPLIED
    fence (true | false) #IMPLIED
    separator (true | false) #IMPLIED
    lspace CDATA #IMPLIED
    rspace CDATA #IMPLIED
    stretchy (true | false) #IMPLIED
    symmetric (true | false) #IMPLIED
    maxsize CDATA #IMPLIED
    minsize CDATA #IMPLIED
    largeop (true | false) #IMPLIED
    movablelimits (true | false) #IMPLIED
    accent (true | false) #IMPLIED
    lquote CDATA #IMPLIED
    rquote CDATA #IMPLIED
    linethickness CDATA #IMPLIED
    scriptlevel CDATA #IMPLIED
    scriptsizemultiplier CDATA #IMPLIED
    scriptminsize CDATA #IMPLIED
    background CDATA #IMPLIED
    open CDATA #IMPLIED
    close CDATA #IMPLIED
    separators CDATA #IMPLIED
    subscriptshift CDATA #IMPLIED
    superscriptshift CDATA #IMPLIED
    accentunder (true | false) #IMPLIED
    align CDATA #IMPLIED
    rowalign CDATA #IMPLIED
```

```
columnalign CDATA #IMPLIED
columnwidth CDATA #IMPLIED
groupalign CDATA #IMPLIED
alignment scope CDATA #IMPLIED
rowspacing CDATA #IMPLIED
columnspacing CDATA #IMPLIED
rowlines CDATA #IMPLIED
columnlines CDATA #IMPLIED
frame (none | solid | dashed) #IMPLIED
framespacing CDATA #IMPLIED
equalrows CDATA #IMPLIED
equalcolumns CDATA #IMPLIED
displaystyle (true | false) #IMPLIED
rowspan CDATA #IMPLIED
columnspan CDATA #IMPLIED
edge (left | right) #IMPLIED
actiontype CDATA #IMPLIED
selection CDATA #IMPLIED >
```

<!ELEMENT merror %PresExpression; >

<!ATTLIST merror

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >
```

<!ELEMENT mpadding %PresExpression; >

<!ATTLIST mpadding

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
width CDATA #IMPLIED
height CDATA #IMPLIED
depth CDATA #IMPLIED
lspace CDATA #IMPLIED >
```

<!ELEMENT mphantom %PresExpression; >

<!ATTLIST mphantom

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >
```

```
<!ELEMENT mfenced %PresExpression; >

<!ATTLIST mfenced
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    open CDATA #IMPLIED
    close CDATA #IMPLIED
    separators CDATA #IMPLIED >

<!ELEMENT msub %PresExpression; >

<!ATTLIST msub
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    subscriptshift CDATA #IMPLIED >

<!ELEMENT msup %PresExpression; >

<!ATTLIST msup
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    superscriptshift CDATA #IMPLIED >

<!ELEMENT msubsup %PresExpression; >

<!ATTLIST msubsup
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    subscriptshift CDATA #IMPLIED
    superscriptshift CDATA #IMPLIED >

<!ELEMENT munder %PresExpression; >

<!ATTLIST munder
```

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
accentunder (true | false) #IMPLIED >

<!ELEMENT mover %PresExpression; >

<!ATTLIST mover
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
accent (true | false) #IMPLIED >

<!ELEMENT munderover %PresExpression; >

<!ATTLIST munderover
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
accent (true | false) #IMPLIED
accentunder (true | false) #IMPLIED >

<!ELEMENT mmultiscripts %PresExpression; >

<!ATTLIST mmultiscripts
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
subscriptshift CDATA #IMPLIED
superscriptshift CDATA #IMPLIED >

<!ELEMENT mtable %PresExpression; >

<!ATTLIST mtable
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
```

```
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
align CDATA #IMPLIED
rowalign CDATA #IMPLIED
columnalign CDATA #IMPLIED
columnwidth CDATA #IMPLIED
groupalign CDATA #IMPLIED
alignmentsscope CDATA #IMPLIED
rowspacing CDATA #IMPLIED
columnspacing CDATA #IMPLIED
rowlines CDATA #IMPLIED
columnlines CDATA #IMPLIED
frame (none | solid | dashed) #IMPLIED
framespacing CDATA #IMPLIED
equalrows CDATA #IMPLIED
equalcolumns CDATA #IMPLIED
displaystyle (true | false) #IMPLIED >

<!ELEMENT mtr %PresExpression; >

<!ATTLIST mtr
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  rowalign CDATA #IMPLIED
  columnalign CDATA #IMPLIED
  groupalign CDATA #IMPLIED >

<!ELEMENT mtable %PresExpression; >

<!ATTLIST mtable
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  rowalign CDATA #IMPLIED
  columnalign CDATA #IMPLIED
  groupalign CDATA #IMPLIED >

<!ELEMENT mtd %PresExpression; >

<!ATTLIST mtd
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
```

```
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
rowalign CDATA #IMPLIED
columnalign CDATA #IMPLIED
groupalign CDATA #IMPLIED
rowspan CDATA #IMPLIED
columnspan CDATA #IMPLIED >

<!ELEMENT maligngroup EMPTY >

<!ATTLIST maligngroup
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  groupalign CDATA #IMPLIED >

<!ELEMENT malignmark EMPTY >

<!ATTLIST malignmark
  edge (left | right) #IMPLIED >

<!ELEMENT maction %PresExpression; >

<!ATTLIST maction
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  actiontype CDATA #IMPLIED
  selection CDATA #IMPLIED >

<!--Content elements: tokens
(may contain embedded presentation constructs)-->
<!ELEMENT ci (#PCDATA | mchar | mglyph | mi | mn | mo | mtext | ms |
mspace | mrow |
  mfrac | msqrt | mroot | menclose | mstyle | merror | mpadded
|
  mphantom | mfenced | msub | msup | msubsup | munder | mover
|
  munderover | mmultiscripts | mtable | mtr | mlabeledtr | mtd
|
  maligngroup | malignmark | maction)* >

<!ATTLIST ci
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
```

```
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
type CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT csymbol (#PCDATA | mchar | mglyph | mi | mn | mo | mtext | ms |
mspace |
mrow | mfrac | msqrt | mroot | menclose | mstyle | merror |
mpadded |
mphantom | mfenced | msub | msup | msubsup | munder | mover
|
munderover | mmultiscripts | mtable | mtr | mlabeledtr | mtd
|
maligngroup | valignmark | maction)* >

<!ATTLIST csymbol
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
encoding CDATA ""
type CDATA #IMPLIED
definitionURL CDATA "" >

<!ELEMENT cn (#PCDATA | mchar | mglyph | sep | mi | mn | mo | mtext | ms |
mspace |
mrow | mfrac | msqrt | mroot | menclose | mstyle | merror |
mpadded |
mphantom | mfenced | msub | msup | msubsup | munder | mover
|
munderover | mmultiscripts | mtable | mtr | mlabeledtr | mtd
|
maligngroup | valignmark | maction)* >

<!ATTLIST cn
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
type CDATA #IMPLIED
base CDATA "10"
definitionURL CDATA ""
encoding CDATA "" >

<!--Content elements: special-->
<!ELEMENT apply %ContentExpression; >

<!ATTLIST apply
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >

<!--Content elements: operator (user-defined)-->
<!ELEMENT fn %ContentExpression; >

<!ATTLIST fn
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT lambda %ContentExpression; >

<!ATTLIST lambda
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!ELEMENT reln %ContentExpression; >

<!ATTLIST reln
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!--Content elements: constructors-->
<!ELEMENT interval %ContentExpression; >

<!ATTLIST interval
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
```

```
        other CDATA #IMPLIED
        closure CDATA "closed" >

<!ELEMENT list %ContentExpression; >

<!ATTLIST list
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    order CDATA "numeric" >

<!ELEMENT matrix %ContentExpression; >

<!ATTLIST matrix
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!ELEMENT matrixrow %ContentExpression; >

<!ATTLIST matrixrow
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!ELEMENT set %ContentExpression; >

<!ATTLIST set
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    type CDATA #IMPLIED >

<!ELEMENT vector %ContentExpression; >

<!ATTLIST vector
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >

<!--Content elements: semantics-->
<!ELEMENT semantics %ContentExpression; >

<!ATTLIST semantics
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT declare %ContentExpression; >

<!ATTLIST declare
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    type CDATA #IMPLIED
    scope CDATA "local"
    nargs CDATA "1"
    occurrence CDATA "function-model"
    definitionURL CDATA ""
    encoding CDATA "" >

<!--telephone number
-->
<!ELEMENT phone (#PCDATA) >

<!--fax number
-->
<!ELEMENT fax (#PCDATA) >

<!--email address
-->
<!ELEMENT email (#PCDATA) >

<!--Universal Resource Locator; e.g. www.wipo.int
-->
<!ELEMENT url (#PCDATA) >

<!--electronic address use for other than email
-->
<!ELEMENT ead (#PCDATA) >
```

```
<!--cited document page , first
-->
<!ELEMENT ppf (#PCDATA) >

<!--cited document page, last
-->
<!ELEMENT ppl (#PCDATA) >

<!--cited document column, first
-->
<!ELEMENT colf (#PCDATA) >

<!--cited document column, last
-->
<!ELEMENT coll (#PCDATA) >

<!--cited paragraph, first
-->
<!ELEMENT paraf (#PCDATA) >

<!--cited paragraph, last
-->
<!ELEMENT paral (#PCDATA) >

<!--cited document line, first
-->
<!ELEMENT linef (#PCDATA) >

<!--cited document line, last
-->
<!ELEMENT linel (#PCDATA) >

<!ELEMENT mchar EMPTY >

<!ATTLIST mchar
            name CDATA #IMPLIED >

<!ELEMENT mglyph EMPTY >

<!ATTLIST mglyph
            alt CDATA #IMPLIED
            fontfamily CDATA #IMPLIED
            index CDATA #IMPLIED >

<!ELEMENT sep EMPTY >

<!ATTLIST sep
            xmlns CDATA #FIXED ""
            xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
            >

<!ELEMENT mprescripts EMPTY >

<!ATTLIST mprescripts
            xmlns CDATA #FIXED ""
            xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
            >

<!ELEMENT none EMPTY >

<!ATTLIST none
```

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
>

<!--Content elements: other-->
<!ELEMENT condition %ContentExpression; >

<!ATTLIST condition
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED >

<!ELEMENT annotation (%Annotation.content;) >

<!ATTLIST annotation
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
encoding CDATA "" >

<!ELEMENT annotation-xml ANY >

<!ATTLIST annotation-xml
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
encoding CDATA "" >

<!ELEMENT integers EMPTY >

<!ATTLIST integers
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT reals EMPTY >
```

```
<!--ATTLIST reals
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!--ELEMENT rationals EMPTY >

<!--ATTLIST rationals
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!--ELEMENT naturalnumbers EMPTY >

<!--ATTLIST naturalnumbers
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!--ELEMENT complexes EMPTY >

<!--ATTLIST complexes
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!--ELEMENT primes EMPTY >

<!--ATTLIST primes
```

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT exponentiale EMPTY >

<!-- ATTLIST exponentiale
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

-->

<!ELEMENT imaginaryi EMPTY >

<!-- ATTLIST imaginaryi
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

-->

<!ELEMENT notanumber EMPTY >

<!-- ATTLIST notanumber
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

-->

<!ELEMENT true EMPTY >

<!-- ATTLIST true
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT false EMPTY >

<!ATTLIST false
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT emptyset EMPTY >

<!ATTLIST emptyset
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT pi EMPTY >

<!ATTLIST pi
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT eulergamma EMPTY >

<!ATTLIST eulergamma
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
```

```
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT infinity EMPTY >

<!ATTLIST infinity
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!--Content elements: quantifiers-->
<!ELEMENT lowlimit %ContentExpression; >

<!ATTLIST lowlimit
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!ELEMENT uplimit %ContentExpression; >

<!ATTLIST uplimit
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >

<!ELEMENT bvar %ContentExpression; >

<!ATTLIST bvar
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED >
```

```
<!--ELEMENT degree %ContentExpression; -->

<!--ATTLIST degree
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED -->

<!--ELEMENT logbase %ContentExpression; -->

<!--ATTLIST logbase
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED -->

<!--ELEMENT inverse EMPTY -->

<!--ATTLIST inverse
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" -->

<!--ELEMENT ident EMPTY -->

<!--ATTLIST ident
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" -->

<!--ELEMENT abs EMPTY -->

<!--ATTLIST abs
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT conjugate EMPTY >

<!ATTLIST conjugate
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT exp EMPTY >

<!ATTLIST exp
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT factorial EMPTY >

<!ATTLIST factorial
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT arg EMPTY >

<!ATTLIST arg
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED

```

```
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT real EMPTY >

<!ATTLIST real
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT imaginary EMPTY >

<!ATTLIST imaginary
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT not EMPTY >

<!ATTLIST not
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT ln EMPTY >

<!ATTLIST ln
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
```

```
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT sin EMPTY >

<!ATTLIST sin
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT cos EMPTY >

<!ATTLIST cos
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT tan EMPTY >

<!ATTLIST tan
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT sec EMPTY >

<!ATTLIST sec
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
```

```
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT csc EMPTY >

<!ATTLIST csc
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT cot EMPTY >

<!ATTLIST cot
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT sinh EMPTY >

<!ATTLIST sinh
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT cosh EMPTY >

<!ATTLIST cosh
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
```

```
encoding CDATA "" >

<!ELEMENT tanh EMPTY >

<!ATTLIST tanh
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT sech EMPTY >

<!ATTLIST sech
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT csch EMPTY >

<!ATTLIST csch
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT coth EMPTY >

<!ATTLIST coth
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >
```

```
<!ELEMENT arcsin    EMPTY >

<!ATTLIST arcsin
    xmlns CDATA    #FIXED ""
    xmlns:xlink CDATA    #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA    #IMPLIED
    class CDATA    #IMPLIED
    style CDATA    #IMPLIED
    id ID    #IMPLIED
    xref IDREF    #IMPLIED
    other CDATA    #IMPLIED
    definitionURL CDATA    ""
    encoding CDATA    "" >

<!ELEMENT arccos    EMPTY >

<!ATTLIST arccos
    xmlns CDATA    #FIXED ""
    xmlns:xlink CDATA    #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA    #IMPLIED
    class CDATA    #IMPLIED
    style CDATA    #IMPLIED
    id ID    #IMPLIED
    xref IDREF    #IMPLIED
    other CDATA    #IMPLIED
    definitionURL CDATA    ""
    encoding CDATA    "" >

<!ELEMENT arctan    EMPTY >

<!ATTLIST arctan
    xmlns CDATA    #FIXED ""
    xmlns:xlink CDATA    #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA    #IMPLIED
    class CDATA    #IMPLIED
    style CDATA    #IMPLIED
    id ID    #IMPLIED
    xref IDREF    #IMPLIED
    other CDATA    #IMPLIED
    definitionURL CDATA    ""
    encoding CDATA    "" >

<!ELEMENT determinant    EMPTY >

<!ATTLIST determinant
    xmlns CDATA    #FIXED ""
    xmlns:xlink CDATA    #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA    #IMPLIED
    class CDATA    #IMPLIED
    style CDATA    #IMPLIED
    id ID    #IMPLIED
    xref IDREF    #IMPLIED
    other CDATA    #IMPLIED
    definitionURL CDATA    ""
    encoding CDATA    "" >

<!ELEMENT transpose    EMPTY >
```

```
<!ATTLIST transpose
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT card EMPTY >

<!ATTLIST card
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT quotient EMPTY >

<!ATTLIST quotient
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT divide EMPTY >

<!ATTLIST divide
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT power EMPTY >

<!ATTLIST power
    xmlns CDATA #FIXED ""
```

```
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT rem EMPTY >

<!ATTLIST rem
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT implies EMPTY >

<!ATTLIST implies
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT vectorproduct EMPTY >

<!ATTLIST vectorproduct
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT scalarproduct EMPTY >

<!ATTLIST scalarproduct
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT outerproduct EMPTY >

<!--ATTLIST outerproduct
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT setdiff EMPTY >

<!--ATTLIST setdiff
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT compose EMPTY >

<!--ATTLIST compose
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT plus EMPTY >

<!--ATTLIST plus
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
```

```
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT times EMPTY >

<!--ATTLIST times
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT max EMPTY >

<!--ATTLIST max
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT min EMPTY >

<!--ATTLIST min
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT gcd EMPTY >

<!--ATTLIST gcd
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
```

```
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT lcm EMPTY >

<!ATTLIST lcm
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT and EMPTY >

<!ATTLIST and
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT or EMPTY >

<!ATTLIST or
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT xor EMPTY >

<!ATTLIST xor
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
```

```
        definitionURL CDATA ""
        encoding CDATA "" >

<!--ELEMENT union EMPTY -->

<!--ATTLIST union
        xmlns CDATA #FIXED ""
        xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

        xlink:href CDATA #IMPLIED
        class CDATA #IMPLIED
        style CDATA #IMPLIED
        id ID #IMPLIED
        xref IDREF #IMPLIED
        other CDATA #IMPLIED
        definitionURL CDATA ""
        encoding CDATA "" >

<!--ELEMENT intersect EMPTY -->

<!--ATTLIST intersect
        xmlns CDATA #FIXED ""
        xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

        xlink:href CDATA #IMPLIED
        class CDATA #IMPLIED
        style CDATA #IMPLIED
        id ID #IMPLIED
        xref IDREF #IMPLIED
        other CDATA #IMPLIED
        definitionURL CDATA ""
        encoding CDATA "" >

<!--ELEMENT mean EMPTY -->

<!--ATTLIST mean
        xmlns CDATA #FIXED ""
        xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

        xlink:href CDATA #IMPLIED
        class CDATA #IMPLIED
        style CDATA #IMPLIED
        id ID #IMPLIED
        xref IDREF #IMPLIED
        other CDATA #IMPLIED
        definitionURL CDATA ""
        encoding CDATA "" >

<!--ELEMENT sdev EMPTY -->

<!--ATTLIST sdev
        xmlns CDATA #FIXED ""
        xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

        xlink:href CDATA #IMPLIED
        class CDATA #IMPLIED
        style CDATA #IMPLIED
        id ID #IMPLIED
        xref IDREF #IMPLIED
        other CDATA #IMPLIED
        definitionURL CDATA ""
        encoding CDATA "" >
```

<!ELEMENT variance EMPTY >

<!ATTLIST variance

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >
```

<!ELEMENT median EMPTY >

<!ATTLIST median

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >
```

<!ELEMENT mode EMPTY >

<!ATTLIST mode

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >
```

<!ELEMENT selector EMPTY >

<!ATTLIST selector

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >
```

<!ELEMENT root EMPTY >

```
<!-- root
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!-- minus
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!-- log
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!-- int
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!-- diff
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!-- diff
```

```
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT partialdiff EMPTY >

<!ATTLIST partialdiff
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT divergence EMPTY >

<!ATTLIST divergence
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT grad EMPTY >

<!ATTLIST grad
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT curl EMPTY >

<!ATTLIST curl
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"
```

```
xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT laplacian EMPTY >

<!ATTLIST laplacian
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT sum EMPTY >

<!ATTLIST sum
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT product EMPTY >

<!ATTLIST product
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT limit EMPTY >

<!ATTLIST limit
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
```

```
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT moment EMPTY >

<!ATTLIST moment
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT exists EMPTY >

<!ATTLIST exists
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT forall EMPTY >

<!ATTLIST forall
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT neq EMPTY >

<!ATTLIST neq
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
```

```
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT in EMPTY >

<!ATTLIST in
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT notin EMPTY >

<!ATTLIST notin
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT notsubset EMPTY >

<!ATTLIST notsubset
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
  other CDATA #IMPLIED
  definitionURL CDATA ""
  encoding CDATA "" >

<!ELEMENT notprsubset EMPTY >

<!ATTLIST notprsubset
  xmlns CDATA #FIXED ""
  xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

  xlink:href CDATA #IMPLIED
  class CDATA #IMPLIED
  style CDATA #IMPLIED
  id ID #IMPLIED
  xref IDREF #IMPLIED
```

```
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" >

<!ELEMENT tendsto EMPTY >

<!-- ATTLIST tendsto
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA ""
type CDATA #IMPLIED -->

<!ELEMENT eq EMPTY >

<!-- ATTLIST eq
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" -->

<!ELEMENT leq EMPTY >

<!-- ATTLIST leq
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
definitionURL CDATA ""
encoding CDATA "" -->

<!ELEMENT lt EMPTY >

<!-- ATTLIST lt
xmlns CDATA #FIXED ""
xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

xlink:href CDATA #IMPLIED
class CDATA #IMPLIED
style CDATA #IMPLIED
id ID #IMPLIED
xref IDREF #IMPLIED
other CDATA #IMPLIED
```

| | |
|--|--|
| | <pre>definitionURL CDATA "" encoding CDATA "" > <!--ELEMENT geq EMPTY --> <!--ATTLIST geq xmlns CDATA #FIXED "" xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink" xlink:href CDATA #IMPLIED class CDATA #IMPLIED style CDATA #IMPLIED id ID #IMPLIED xref IDREF #IMPLIED other CDATA #IMPLIED definitionURL CDATA "" encoding CDATA "" > <!--ELEMENT gt EMPTY --> <!--ATTLIST gt xmlns CDATA #FIXED "" xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink" xlink:href CDATA #IMPLIED class CDATA #IMPLIED style CDATA #IMPLIED id ID #IMPLIED xref IDREF #IMPLIED other CDATA #IMPLIED definitionURL CDATA "" encoding CDATA "" ></pre> |
| | <pre>encoding CDATA "" > <!--ELEMENT equivalent EMPTY --> <!--ATTLIST equivalent xmlns CDATA #FIXED "" xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink" xlink:href CDATA #IMPLIED class CDATA #IMPLIED style CDATA #IMPLIED id ID #IMPLIED xref IDREF #IMPLIED other CDATA #IMPLIED definitionURL CDATA "" encoding CDATA "" > <!--ELEMENT approx EMPTY --> <!--ATTLIST approx xmlns CDATA #FIXED "" xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink" xlink:href CDATA #IMPLIED class CDATA #IMPLIED style CDATA #IMPLIED id ID #IMPLIED xref IDREF #IMPLIED other CDATA #IMPLIED definitionURL CDATA ""</pre> |

```
encoding CDATA "" >

<!ELEMENT subset EMPTY >
<!ATTLIST subset
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA "" >

<!ELEMENT prsubset EMPTY >
<!ATTLIST prsubset
    xmlns CDATA #FIXED ""
    xmlns:xlink CDATA #FIXED "http://www.w3.org/1999/xlink"

    xlink:href CDATA #IMPLIED
    class CDATA #IMPLIED
    style CDATA #IMPLIED
    id ID #IMPLIED
    xref IDREF #IMPLIED
    other CDATA #IMPLIED
    definitionURL CDATA ""
    encoding CDATA ""
```

[Annex 2 follows/
L'annexe 2 suit]

April 4, 2002

Madam,
Sir,

*Standard for the electronic filing and processing of
international applications: Proposals for change*

Proposed modifications of the Administrative Instructions under the PCT

1. This circular concerns proposals for change to the standard for the electronic filing and processing of international applications under the Patent Cooperation Treaty (PCT) which will, if adopted, result in modifications of Part 7 and Annex F of the Administrative Instructions under the PCT. It is being sent, for the purposes of consultation pursuant to Rule 89.2(b) of the Regulations under the PCT, to the national and regional patent Offices of, or acting for, all PCT Contracting States, including all receiving Offices, International Searching Authorities, International Preliminary Examining Authorities, and designated and elected Offices, and to interested intergovernmental organizations, as well as to certain non-governmental organizations representing users of the PCT system.

2. The International Bureau has received a number of proposals for change to the standard for the electronic filing and processing of international applications which, if adopted, would result in modifications of Annex F of the Administrative Instructions under the PCT, together with related proposals for amendment to certain provisions of Part 7 of the Administrative Instructions.

3. The proposals are available on WIPO's Web site (see http://www.wipo.int/pct/efiling_standard/en) as annexes to the following "Proposal for Change" (PFC) files:

- PCT/EF/PFC 02/001 relating to Part 7, Section 709 "Means of Communication" (proposal by the Japan Patent Office);
- PCT/EF/PFC 02/002 relating to Annex F, section 4 "IA Documents Packaging" (proposal by the Japan Patent Office);
- PCT/EF/PFC 02/003 relating to Annex F, section 5 "Transmission" (proposal by the Japan Patent Office);
- PCT/EF/PFC 02/004 relating to Annex F, Appendix I, section 4.1 "Package header" (proposal by the Japan Patent Office);

- PCT/EF/PFC 02/005 relating to Annex F, Appendix I, section 3 “DTDs for new PCT applications (E-PCT)” (proposal by the United States Patent and Trademark Office);
- PCT/EF/PFC 02/006 relating to Annex F would add a recommendation on a file naming convention (proposal by the United States Patent and Trademark Office);
- PCT/EF/PFC 02/007 relating to Annex F, Appendix I, section 4.1 “Package header” (proposal by the United States Patent and Trademark Office);
- PCT/EF/PFC 02/008 relating to Part 7, Section 703 “Filing Requirements; Basic Common Standard” (proposal by the United States Patent and Trademark Office).

4. The International Bureau would appreciate receiving any comments on the proposed modifications by May 15, 2002. Comments should preferably be made by e-mail via the “Submit comments” facility on the Web site, but may alternatively be made in writing by letter or by fax to +41 (22) 338 8040. Comments will be included as Annexes to the relevant PFCs. Copies of the proposals on paper are available from the International Bureau on request. Inquiries concerning the proposals should be directed to Mr. Thiam Ming Song (e-mail: song@wipo.int; phone: 41 (22) 338 9640; fax: 41 (22) 338 8040).

5. In Circular C. PCT 827, which is also dated April 4, 2002, the International Bureau proposes other modifications of the Administrative Instructions which would add to Annex F a new section 2.5 “Change procedure” dealing with special procedures for the proposal, consideration and implementation of future modifications of the standard for electronic filing and processing of international applications. It is intended that consideration of the proposals referred to in the present Circular will proceed independently of those other proposals.

6. The International Bureau intends to promulgate by June 30, 2002, the modifications proposed in the present Circular, revised if necessary in the light of comments received. It is envisaged that the modifications would enter into force on January 1, 2003.

Sincerely yours,

Francis Gurry
Assistant Director General

OMPI CIRCULAIRE C. PCT 830

Le 4 avril, 2002

Madame,
Monsieur,

*Norme concernant le dépôt et le traitement électroniques
des demandes internationales : propositions de modification*

Propositions de modification des instructions administratives selon le PCT

1. La présente circulaire concerne des propositions de modification de la norme concernant le dépôt et le traitement des demandes internationales selon le Traité de coopération en matière de brevets (PCT) qui, si elles étaient adoptées, aboutiraient à la modification de la septième partie et de l'annexe F des instructions administratives du PCT. Elle est adressée, aux fins de la consultation prévue à la règle 89.2.b) du règlement d'exécution du PCT, aux offices de brevets nationaux et régionaux de tous les États contractants du PCT ou agissant pour eux, notamment l'ensemble des offices récepteurs, des administrations chargées de la recherche internationale, des administrations chargées de l'examen préliminaire international et des offices désignés et élus, ainsi qu'aux organisations intergouvernementales intéressées et à certaines organisations non gouvernementales représentant les utilisateurs du système du PCT.

2. Le Bureau international a reçu un certain nombre de propositions de modification de la norme concernant le dépôt et le traitement électroniques des demandes internationales qui, si elles étaient adoptées, entraîneraient des modifications de l'annexe F des instructions administratives du PCT, ainsi qu'un certain nombre de propositions concernant les changements correspondants à apporter à certaines dispositions de la septième partie des instructions administratives.

3. Ces propositions peuvent être consultées sur le site Web de l'OMPI (voir http://www.wipo.int/pct/efiling_standard/fr) en tant qu'annexes des dossiers de propositions de modification suivants :

- PCT/EF/PFC 02/001 concernant l'instruction 709 de la septième partie, intitulée "Moyens de communication" (proposition de l'Office des brevets du Japon);
- PCT/EF/PFC 02/002 concernant la section 4 de l'annexe F, intitulée "Empaquetage des documents constitutifs de demandes internationales" (proposition de l'Office des brevets du Japon);
- PCT/EF/PFC 02/003 concernant la section 5 de l'annexe F, intitulée "Transmission" (proposition de l'Office des brevets du Japon);
- PCT/EF/PFC 02/004 concernant la section 4.1 de l'appendice I de l'annexe F, intitulée "En-tête du paquet" (proposition de l'Office des brevets du Japon);
- PCT/EF/PFC 02/005 concernant la section 3 de l'appendice I de l'annexe F, intitulée "DTD pour de nouvelles demandes PCT présentées sous forme

électronique” (proposition de l’Office des brevets et des marques des États-Unis d’Amérique);

- PCT/EF/PFC 02/006 concernant l’annexe F, visant à ajouter une recommandation relative à une convention de dénomination des fichiers (proposition de l’Office des brevets et des marques des États-Unis d’Amérique);
- PCT/EF/PFC 02/007 concernant la section 4.1 de l’appendice I de l’annexe F, intitulée “En-tête du paquet” (proposition de l’Office des brevets et des marques des États-Unis d’Amérique);
- PCT/EF/PFC 02/008 concernant l’instruction 703 de la septième partie, intitulée “Exigences de dépôt, norme commune de base” (proposition de l’Office des brevets et des marques des États-Unis d’Amérique).

4. Le Bureau international souhaiterait recevoir tout commentaire sur ces propositions de modification pour le 15 mai 2002 au plus tard. Les commentaires doivent de préférence être envoyés par courrier électronique grâce à la fonction “envoyer un commentaire” prévue sur le site Web, mais peuvent aussi être envoyés par courrier postal ou par télécopie (41-22-338 8040). Les commentaires éventuels seront inclus dans les annexes des différentes propositions de modification. Des copies de ces propositions sous forme imprimée sont disponibles auprès du Bureau international sur demande. Les demandes de renseignements concernant ces propositions sont à adresser à M. Thiam Ming Song (courrier électronique : song@wipo.int; téléphone : 41-22-338 9640; télécopie : 41-22-338 8040).

5. Dans la circulaire C. PCT 827, qui est aussi datée du 4 avril 2002, le Bureau international suggère d’autres modifications des instructions administratives visant à ajouter à l’annexe F une section 2.5 intitulée “Procédure de modification”, qui prévoit des procédures spéciales pour la proposition, l’examen et la mise en œuvre des futures modifications de la norme concernant le dépôt et le traitement électroniques des demandes internationales. L’examen des propositions faisant l’objet de la présente circulaire doit s’effectuer indépendamment de celui de ces autres propositions.

6. Le Bureau international a l’intention de promulguer les modifications proposées dans la présente circulaire le 30 juin 2002, après les avoir révisées si nécessaire en fonction des commentaires reçus. Ces modifications devraient entrer en vigueur le 1^{er} janvier 2003.

Veillez agréer, Madame, Monsieur, l’assurance de ma considération distinguée.

Francis Gurry
Sous-directeur général

[Annex 3 follows/
L’annexe 3 suit]

COMMENTS BY IP AUSTRALIA

PCT/EF/PFC 02/005

IP Australia generally supports the concept of including large tables of data as stand-alone tables rather than inside the application-body and recognises the amount of effort required to produce the level of detail contained in this proposal.

Does the proposal intend to still allow inclusion of the same tables within the application-body as well as separately? IP Australia supports the provision of flexibility and choice for its customers.

Dtd's are fundamental standards required for the exchange of information across all sectors. It is essential that the basic principles of data analysis and normalisation processes be applied to ensure quality standards continue to form the basis for electronic information exchange within the IP community. Given the number of dtd's involved in this proposal, it would be beneficial for WIPO to continue investigating opportunities for further rationalisation as part of the change process in an effort to minimise the overall quantity and variety of dtd's.

[Annex 4 follows/
L'annexe 4 suit]

COMMENTS BY THE KOREAN INTELLECTUAL PROPERTY OFFICE

Comments on PCT/EF/PFC 02/005 relating to Annex F, Appendix I, Section 3 "DTDs for New PCT applications (E-PCT)" (proposal by the USPTO)

This proposal introduces a new electronic document for efficiently dealing with a complicated table. It is judged as an efficient alternative for a large table.

In the KIPOnet system, a complicated mathematical formula, a chemical formula and a table are converted to images, and each image is managed as a file referenced documents.

Basically, we agree with this proposal but, as a premise, even complicated tables have to be converted to images as a "referenced document".

[Annex 5 follows/
L'annexe 5 suit]

COMMENTS BY THE EUROPEAN PATENT OFFICE, THE JAPAN PATENT OFFICE,
AND THE UNITED STATES PATENT AND TRADEMARK OFFICE
(THE TRILATERAL OFFICES)

The Trilateral Offices accept the proposal for a stand-alone table DTD, on the understanding that the DTD matches the internal table DTD used in the ePCT DTDs.
See PCT/EF/PFC 02/010 for a Trilateral proposal to modify the application body and package data to accommodate this new DTD.

[End of Annex and of file/
Fin de l'annexe et du dossier]