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A. DTDs

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This appendix is normative.

These DTDs and entity sets form a normative part of this specification. The complete set of DTD files together with an XML declaration and SGML Open Catalog is included in the [zip file](#) and the [gzip'd tar file](#) for this specification. Users looking for local copies of the DTDs to work with should download and use those archives rather than using the specific DTDs referenced below.

A.1. Document Type Definitions

These DTDs approximate the HTML 4 DTDs. The W3C recommends that you use the authoritative versions of these DTDs at their defined SYSTEM identifiers when validating content. If you need to use these DTDs locally you should download one of the archives of [this version](#). For completeness, the normative versions of the DTDs are included here:

A.1.1. XHTML-1.0-Strict

The file [DTD/xhtml1-strict.dtd](#) is a normative part of this specification. Its annotated contents are included here for completeness.

```
<!--
  Extensible HTML version 1.0 Strict DTD

  This is the same as HTML 4 Strict except for
  changes due to the differences between XML and SGML.

  Namespace = http://www.w3.org/1999/xhtml

  For further information, see: http://www.w3.org/TR/xhtml1

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  All Rights Reserved.

  This DTD module is identified by the PUBLIC and SYSTEM identifiers:

  PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd"

  $Revision: 1.24 $
```

```
$Date: 2002/07/31 19:34:51 $

-->

<!--===== Character mnemonic entities =====-->

<!ENTITY % HTMLlat1 PUBLIC
    "-//W3C//ENTITIES Latin 1 for XHTML//EN"
    "xhtml-lat1.ent">
%HTMLlat1;

<!ENTITY % HTMLsymbol PUBLIC
    "-//W3C//ENTITIES Symbols for XHTML//EN"
    "xhtml-symbol.ent">
%HTMLsymbol;

<!ENTITY % HTMLspecial PUBLIC
    "-//W3C//ENTITIES Special for XHTML//EN"
    "xhtml-special.ent">
%HTMLspecial;

<!--===== Imported Names =====-->

<!ENTITY % ContentType "CDATA">
    <!-- media type, as per [RFC2045] -->

<!ENTITY % ContentTypes "CDATA">
    <!-- comma-separated list of media types, as per [RFC2045] -->

<!ENTITY % Charset "CDATA">
    <!-- a character encoding, as per [RFC2045] -->

<!ENTITY % Charsets "CDATA">
    <!-- a space separated list of character encodings, as per [RFC2045] -->

<!ENTITY % LanguageCode "NMTOKEN">
    <!-- a language code, as per [RFC3066] -->

<!ENTITY % Character "CDATA">
    <!-- a single character, as per section 2.2 of [XML] -->

<!ENTITY % Number "CDATA">
    <!-- one or more digits -->

<!ENTITY % LinkTypes "CDATA">
    <!-- space-separated list of link types -->

<!ENTITY % MediaDesc "CDATA">
    <!-- single or comma-separated list of media descriptors -->

<!ENTITY % URI "CDATA">
    <!-- a Uniform Resource Identifier, see [RFC2396] -->

<!ENTITY % UriList "CDATA">
    <!-- a space separated list of Uniform Resource Identifiers -->

<!ENTITY % Datetime "CDATA">
    <!-- date and time information. ISO date format -->

<!ENTITY % Script "CDATA">
    <!-- script expression -->

<!ENTITY % StyleSheet "CDATA">
    <!-- style sheet data -->
```

```

<!ENTITY % Text "CDATA">
    <!-- used for titles etc. -->

<!ENTITY % Length "CDATA">
    <!-- nn for pixels or nn% for percentage length -->

<!ENTITY % MultiLength "CDATA">
    <!-- pixel, percentage, or relative -->

<!ENTITY % Pixels "CDATA">
    <!-- integer representing length in pixels -->

<!-- these are used for image maps -->

<!ENTITY % Shape "(rect|circle|poly|default)">

<!ENTITY % Coords "CDATA">
    <!-- comma separated list of lengths -->

<!--===== Generic Attributes =====>

<!-- core attributes common to most elements
    id        document-wide unique id
    class      space separated list of classes
    style      associated style info
    title      advisory title/amplification
-->
<!ENTITY % coreattrs
    "id        ID                #IMPLIED
    class      CDATA             #IMPLIED
    style      %StyleSheet;      #IMPLIED
    title      %Text;            #IMPLIED"
>

<!-- internationalization attributes
    lang        language code (backwards compatible)
    xml:lang     language code (as per XML 1.0 spec)
    dir          direction for weak/neutral text
-->
<!ENTITY % i18n
    "lang        %LanguageCode;  #IMPLIED
    xml:lang     %LanguageCode;  #IMPLIED
    dir          (ltr|rtl)       #IMPLIED"
>

<!-- attributes for common UI events
    onclick      a pointer button was clicked
    ondblclick   a pointer button was double clicked
    onmousedown  a pointer button was pressed down
    onmouseup    a pointer button was released
    onmousemove  a pointer was moved onto the element
    onmouseout   a pointer was moved away from the element
    onkeypress   a key was pressed and released
    onkeydown    a key was pressed down
    onkeyup      a key was released
-->
<!ENTITY % events
    "onclick     %Script;        #IMPLIED
    ondblclick   %Script;        #IMPLIED
    onmousedown  %Script;        #IMPLIED
    onmouseup    %Script;        #IMPLIED
    onmouseover  %Script;        #IMPLIED
    onmousemove  %Script;        #IMPLIED
    onmouseout   %Script;        #IMPLIED
    onkeypress   %Script;        #IMPLIED

```

```

onkeydown    %Script;          #IMPLIED
onkeyup      %Script;          #IMPLIED"
>

<!-- attributes for elements that can get the focus
accesskey    accessibility key character
tabindex     position in tabbing order
onfocus     the element got the focus
onblur       the element lost the focus
-->
<!ENTITY % focus
"accesskey    %Character;      #IMPLIED
tabindex     %Number;          #IMPLIED
onfocus     %Script;          #IMPLIED
onblur       %Script;          #IMPLIED"
>

<!ENTITY % attrs "%coreattrs; %i18n; %events;">

<!--===== Text Elements =====>

<!ENTITY % special.pre
"br | span | bdo | map">

<!ENTITY % special
"%special.pre; | object | img ">

<!ENTITY % fontstyle "tt | i | b | big | small ">

<!ENTITY % phrase "em | strong | dfn | code | q |
samp | kbd | var | cite | abbr | acronym | sub | sup ">

<!ENTITY % inline.forms "input | select | textarea | label | button">

<!-- these can occur at block or inline level -->
<!ENTITY % misc.inline "ins | del | script">

<!-- these can only occur at block level -->
<!ENTITY % misc "noscript | %misc.inline;">

<!ENTITY % inline "a | %special; | %fontstyle; | %phrase; | %inline.forms;">

<!-- %Inline; covers inline or "text-level" elements -->
<!ENTITY % Inline "(#PCDATA | %inline; | %misc.inline;)*">

<!--===== Block level elements =====>

<!ENTITY % heading "h1|h2|h3|h4|h5|h6">
<!ENTITY % lists "ul | ol | dl">
<!ENTITY % blocktext "pre | hr | blockquote | address">

<!ENTITY % block
"p | %heading; | div | %lists; | %blocktext; | fieldset | table">

<!ENTITY % Block "(%block; | form | %misc;)*">

<!-- %Flow; mixes block and inline and is used for list items etc. -->
<!ENTITY % Flow "(#PCDATA | %block; | form | %inline; | %misc;)*">

<!--===== Content models for exclusions =====>

<!-- a elements use %Inline; excluding a -->

<!ENTITY % a.content

```

```

    "(#PCDATA | %special; | %fontstyle; | %phrase; | %inline.forms; | %misc.inline;)*">

<!-- pre uses %Inline excluding big, small, sup or sup -->

<!ENTITY % pre.content
    "(#PCDATA | a | %fontstyle; | %phrase; | %special.pre; | %misc.inline;
    | %inline.forms;)*">

<!-- form uses %Block; excluding form -->

<!ENTITY % form.content "(%block; | %misc;)*">

<!-- button uses %Flow; but excludes a, form and form controls -->

<!ENTITY % button.content
    "(#PCDATA | p | %heading; | div | %lists; | %blocktext; |
    table | %special; | %fontstyle; | %phrase; | %misc;)*">

<!--===== Document Structure =====>

<!-- the namespace URI designates the document profile -->

<!ELEMENT html (head, body)>
<!ATTLIST html
    %il8n;
    id          ID          #IMPLIED
    xmlns       %URI;      #FIXED 'http://www.w3.org/1999/xhtml'
>

<!--===== Document Head =====>

<!ENTITY % head.misc "(script|style|meta|link|object)*">

<!-- content model is %head.misc; combined with a single
    title and an optional base element in any order -->

<!ELEMENT head (%head.misc;,
    ((title, %head.misc;, (base, %head.misc;)?) |
    (base, %head.misc;, (title, %head.misc;))))>

<!ATTLIST head
    %il8n;
    id          ID          #IMPLIED
    profile     %URI;      #IMPLIED
>

<!-- The title element is not considered part of the flow of text.
    It should be displayed, for example as the page header or
    window title. Exactly one title is required per document.
    -->
<!ELEMENT title (#PCDATA)>
<!ATTLIST title
    %il8n;
    id          ID          #IMPLIED
>

<!-- document base URI -->

<!ELEMENT base EMPTY>
<!ATTLIST base
    href       %URI;      #REQUIRED
    id         ID          #IMPLIED
>

<!-- generic metainformation -->

```

```

<!ELEMENT meta EMPTY>
<!ATTLIST meta
  %i18n;
  id          ID          #IMPLIED
  http-equiv  CDATA       #IMPLIED
  name        CDATA       #IMPLIED
  content     CDATA       #REQUIRED
  scheme      CDATA       #IMPLIED
>

<!--
Relationship values can be used in principle:

a) for document specific toolbars/menus when used
   with the link element in document head e.g.
   start, contents, previous, next, index, end, help
b) to link to a separate style sheet (rel="stylesheet")
c) to make a link to a script (rel="script")
d) by stylesheets to control how collections of
   html nodes are rendered into printed documents
e) to make a link to a printable version of this document
   e.g. a PostScript or PDF version (rel="alternate" media="print")
-->

<!ELEMENT link EMPTY>
<!ATTLIST link
  %attrs;
  charset    %Charset;    #IMPLIED
  href       %URI;        #IMPLIED
  hreflang   %LanguageCode; #IMPLIED
  type       %ContentType; #IMPLIED
  rel        %LinkTypes;  #IMPLIED
  rev        %LinkTypes;  #IMPLIED
  media      %MediaDesc;  #IMPLIED
>

<!-- style info, which may include CDATA sections -->
<!ELEMENT style (#PCDATA)>
<!ATTLIST style
  %i18n;
  id          ID          #IMPLIED
  type        %ContentType; #REQUIRED
  media       %MediaDesc;  #IMPLIED
  title       %Text;       #IMPLIED
  xml:space   (preserve)   #FIXED 'preserve'
>

<!-- script statements, which may include CDATA sections -->
<!ELEMENT script (#PCDATA)>
<!ATTLIST script
  id          ID          #IMPLIED
  charset     %Charset;   #IMPLIED
  type        %ContentType; #REQUIRED
  src         %URI;       #IMPLIED
  defer       (defer)     #IMPLIED
  xml:space   (preserve)   #FIXED 'preserve'
>

<!-- alternate content container for non script-based rendering -->

<!ELEMENT noscript %Block;>
<!ATTLIST noscript
  %attrs;
>

```

```
<!--===== Document Body =====>

<!ELEMENT body %Block;>
<!ATTLIST body
  %attrs;
  onload          %Script;    #IMPLIED
  onunload        %Script;    #IMPLIED
>

<!ELEMENT div %Flow;> <!-- generic language/style container -->
<!ATTLIST div
  %attrs;
>

<!--===== Paragraphs =====>

<!ELEMENT p %Inline;>
<!ATTLIST p
  %attrs;
>

<!--===== Headings =====>

<!--
  There are six levels of headings from h1 (the most important)
  to h6 (the least important).
-->

<!ELEMENT h1 %Inline;>
<!ATTLIST h1
  %attrs;
>

<!ELEMENT h2 %Inline;>
<!ATTLIST h2
  %attrs;
>

<!ELEMENT h3 %Inline;>
<!ATTLIST h3
  %attrs;
>

<!ELEMENT h4 %Inline;>
<!ATTLIST h4
  %attrs;
>

<!ELEMENT h5 %Inline;>
<!ATTLIST h5
  %attrs;
>

<!ELEMENT h6 %Inline;>
<!ATTLIST h6
  %attrs;
>

<!--===== Lists =====>

<!-- Unordered list -->

<!ELEMENT ul (li)+>
<!ATTLIST ul
  %attrs;
```

```
>

<!-- Ordered (numbered) list -->

<!ELEMENT ol (li)+>
<!ATTLIST ol
  %attrs;
>

<!-- list item -->

<!ELEMENT li %Flow;>
<!ATTLIST li
  %attrs;
>

<!-- definition lists - dt for term, dd for its definition -->

<!ELEMENT dl (dt|dd)+>
<!ATTLIST dl
  %attrs;
>

<!ELEMENT dt %Inline;>
<!ATTLIST dt
  %attrs;
>

<!ELEMENT dd %Flow;>
<!ATTLIST dd
  %attrs;
>

<!--===== Address =====>

<!-- information on author -->

<!ELEMENT address %Inline;>
<!ATTLIST address
  %attrs;
>

<!--===== Horizontal Rule =====>

<!ELEMENT hr EMPTY>
<!ATTLIST hr
  %attrs;
>

<!--===== Preformatted Text =====>

<!-- content is %Inline; excluding "img|object|big|small|sub|sup" -->

<!ELEMENT pre %pre.content;>
<!ATTLIST pre
  %attrs;
  xml:space (preserve) #FIXED 'preserve'
>

<!--===== Block-like Quotes =====>

<!ELEMENT blockquote %Block;>
<!ATTLIST blockquote
  %attrs;
  cite %URI; #IMPLIED
```



```

>

<!--===== Inserted/Deleted Text =====>

<!--
ins/del are allowed in block and inline content, but its
inappropriate to include block content within an ins element
occurring in inline content.
-->
<!ELEMENT ins %Flow;>
<!ATTLIST ins
  %attrs;
  cite      %URI;          #IMPLIED
  datetime  %Datetime;     #IMPLIED
>

<!ELEMENT del %Flow;>
<!ATTLIST del
  %attrs;
  cite      %URI;          #IMPLIED
  datetime  %Datetime;     #IMPLIED
>

<!--===== The Anchor Element =====>

<!-- content is %Inline; except that anchors shouldn't be nested -->

<!ELEMENT a %a.content;>
<!ATTLIST a
  %attrs;
  %focus;
  charset   %Charset;      #IMPLIED
  type      %ContentType;  #IMPLIED
  name      NMTOKEN        #IMPLIED
  href      %URI;          #IMPLIED
  hreflang  %LanguageCode; #IMPLIED
  rel       %LinkTypes;    #IMPLIED
  rev       %LinkTypes;    #IMPLIED
  shape     %Shape;        "rect"
  coords    %Coords;       #IMPLIED
>

<!--===== Inline Elements =====>

<!ELEMENT span %Inline;> <!-- generic language/style container -->
<!ATTLIST span
  %attrs;
>

<!ELEMENT bdo %Inline;> <!-- I18N BiDi over-ride -->
<!ATTLIST bdo
  %coreattrs;
  %events;
  lang      %LanguageCode; #IMPLIED
  xml:lang  %LanguageCode; #IMPLIED
  dir       (ltr|rtl)      #REQUIRED
>

<!ELEMENT br EMPTY> <!-- forced line break -->
<!ATTLIST br
  %coreattrs;
>

<!ELEMENT em %Inline;> <!-- emphasis -->
<!ATTLIST em %attrs;>

```

```

<!ELEMENT strong %Inline;>      <!-- strong emphasis -->
<!ATTLIST strong %attrs;>

<!ELEMENT dfn %Inline;>         <!-- definitional -->
<!ATTLIST dfn %attrs;>

<!ELEMENT code %Inline;>        <!-- program code -->
<!ATTLIST code %attrs;>

<!ELEMENT samp %Inline;>        <!-- sample -->
<!ATTLIST samp %attrs;>

<!ELEMENT kbd %Inline;>         <!-- something user would type -->
<!ATTLIST kbd %attrs;>

<!ELEMENT var %Inline;>         <!-- variable -->
<!ATTLIST var %attrs;>

<!ELEMENT cite %Inline;>        <!-- citation -->
<!ATTLIST cite %attrs;>

<!ELEMENT abbr %Inline;>        <!-- abbreviation -->
<!ATTLIST abbr %attrs;>

<!ELEMENT acronym %Inline;>     <!-- acronym -->
<!ATTLIST acronym %attrs;>

<!ELEMENT q %Inline;>           <!-- inlined quote -->
<!ATTLIST q
  %attrs;
  cite          %URI;          #IMPLIED
  >

<!ELEMENT sub %Inline;>         <!-- subscript -->
<!ATTLIST sub %attrs;>

<!ELEMENT sup %Inline;>         <!-- superscript -->
<!ATTLIST sup %attrs;>

<!ELEMENT tt %Inline;>          <!-- fixed pitch font -->
<!ATTLIST tt %attrs;>

<!ELEMENT i %Inline;>           <!-- italic font -->
<!ATTLIST i %attrs;>

<!ELEMENT b %Inline;>           <!-- bold font -->
<!ATTLIST b %attrs;>

<!ELEMENT big %Inline;>         <!-- bigger font -->
<!ATTLIST big %attrs;>

<!ELEMENT small %Inline;>       <!-- smaller font -->
<!ATTLIST small %attrs;>

<!--===== Object =====>
<!--
  object is used to embed objects as part of HTML pages.
  param elements should precede other content. Parameters
  can also be expressed as attribute/value pairs on the
  object element itself when brevity is desired.
-->

<!ELEMENT object (#PCDATA | param | %block; | form | %inline; | %misc;)*>
<!ATTLIST object

```

```

%attrs;
declare      (declare)      #IMPLIED
classid      %URI;          #IMPLIED
codebase      %URI;          #IMPLIED
data          %URI;          #IMPLIED
type          %ContentType;  #IMPLIED
codetype      %ContentType;  #IMPLIED
archive       %UriList;      #IMPLIED
standby       %Text;         #IMPLIED
height        %Length;       #IMPLIED
width         %Length;       #IMPLIED
usemap        %URI;          #IMPLIED
name          NMTOKEN        #IMPLIED
tabindex      %Number;       #IMPLIED
>

<!--
  param is used to supply a named property value.
  In XML it would seem natural to follow RDF and support an
  abbreviated syntax where the param elements are replaced
  by attribute value pairs on the object start tag.
-->
<!ELEMENT param EMPTY>
<!ATTLIST param
  id          ID              #IMPLIED
  name        CDATA           #IMPLIED
  value       CDATA           #IMPLIED
  valuetype   (data|ref|object) "data"
  type        %ContentType;   #IMPLIED
>

<!--===== Images =====>

<!--
  To avoid accessibility problems for people who aren't
  able to see the image, you should provide a text
  description using the alt and longdesc attributes.
  In addition, avoid the use of server-side image maps.
  Note that in this DTD there is no name attribute. That
  is only available in the transitional and frameset DTD.
-->

<!ELEMENT img EMPTY>
<!ATTLIST img
  %attrs;
  src          %URI;          #REQUIRED
  alt          %Text;         #REQUIRED
  longdesc      %URI;          #IMPLIED
  height        %Length;       #IMPLIED
  width         %Length;       #IMPLIED
  usemap        %URI;          #IMPLIED
  ismap         (ismap)        #IMPLIED
>

<!-- usemap points to a map element which may be in this document
or an external document, although the latter is not widely supported -->

<!--===== Client-side image maps =====>

<!-- These can be placed in the same document or grouped in a
separate document although this isn't yet widely supported -->

<!ELEMENT map ((%block; | form | %misc;)+ | area+)>
<!ATTLIST map
  %il8n;

```

```

    %events;
    id          ID          #REQUIRED
    class       CDATA       #IMPLIED
    style       %StyleSheet; #IMPLIED
    title       %Text;      #IMPLIED
    name        NMTOKEN     #IMPLIED
  >

<!ELEMENT area EMPTY>
<!ATTLIST area
  %attrs;
  %focus;
  shape      %Shape;      "rect"
  coords     %Coords;     #IMPLIED
  href       %URI;        #IMPLIED
  nohref     (nohref)      #IMPLIED
  alt        %Text;      #REQUIRED
>

<!--===== Forms =====>
<!ELEMENT form %form.content;>  <!-- forms shouldn't be nested -->

<!ATTLIST form
  %attrs;
  action     %URI;        #REQUIRED
  method     (get|post)    "get"
  enctype    %ContentType; "application/x-www-form-urlencoded"
  onsubmit   %Script;     #IMPLIED
  onreset    %Script;     #IMPLIED
  accept     %ContentTypes; #IMPLIED
  accept-charset %Charsets; #IMPLIED
>

<!--
  Each label must not contain more than ONE field
  Label elements shouldn't be nested.
-->
<!ELEMENT label %Inline;>
<!ATTLIST label
  %attrs;
  for        IDREF        #IMPLIED
  accesskey  %Character; #IMPLIED
  onfocus   %Script;     #IMPLIED
  onblur     %Script;     #IMPLIED
>

<!ENTITY % InputType
  "(text | password | checkbox |
   radio | submit | reset |
   file | hidden | image | button)"
>

<!-- the name attribute is required for all but submit & reset -->

<!ELEMENT input EMPTY>      <!-- form control -->
<!ATTLIST input
  %attrs;
  %focus;
  type      %InputType;   "text"
  name      CDATA          #IMPLIED
  value     CDATA          #IMPLIED
  checked   (checked)      #IMPLIED
  disabled  (disabled)     #IMPLIED
  readonly  (readonly)     #IMPLIED
  size      CDATA          #IMPLIED

```

```

maxlength    %Number;          #IMPLIED
src          %URI;           #IMPLIED
alt          CDATA          #IMPLIED
usemap       %URI;           #IMPLIED
onselect     %Script;        #IMPLIED
onchange     %Script;        #IMPLIED
accept       %ContentTypes;  #IMPLIED
>

<!-- ELEMENT select (optgroup|option)+>  <!-- option selector -->
<!-- ATTLIST select
%attrs;
name          CDATA          #IMPLIED
size          %Number;        #IMPLIED
multiple      (multiple)     #IMPLIED
disabled      (disabled)     #IMPLIED
tabindex      %Number;        #IMPLIED
onfocus      %Script;        #IMPLIED
onblur        %Script;        #IMPLIED
onchange      %Script;        #IMPLIED
>

<!-- ELEMENT optgroup (option)+>  <!-- option group -->
<!-- ATTLIST optgroup
%attrs;
disabled      (disabled)     #IMPLIED
label         %Text;          #REQUIRED
>

<!-- ELEMENT option (#PCDATA)>  <!-- selectable choice -->
<!-- ATTLIST option
%attrs;
selected      (selected)     #IMPLIED
disabled      (disabled)     #IMPLIED
label         %Text;          #IMPLIED
value         CDATA          #IMPLIED
>

<!-- ELEMENT textarea (#PCDATA)>  <!-- multi-line text field -->
<!-- ATTLIST textarea
%attrs;
%focus;
name          CDATA          #IMPLIED
rows          %Number;        #REQUIRED
cols          %Number;        #REQUIRED
disabled      (disabled)     #IMPLIED
readonly      (readonly)     #IMPLIED
onselect      %Script;        #IMPLIED
onchange      %Script;        #IMPLIED
>

<!--
The fieldset element is used to group form fields.
Only one legend element should occur in the content
and if present should only be preceded by whitespace.
-->
<!-- ELEMENT fieldset (#PCDATA | legend | %block; | form | %inline; | %misc;)*>
<!-- ATTLIST fieldset
%attrs;
>

<!-- ELEMENT legend %Inline;>  <!-- fieldset label -->
<!-- ATTLIST legend
%attrs;
accesskey     %Character;    #IMPLIED

```

```

>

<!--
  Content is %Flow; excluding a, form and form controls
-->
<!ELEMENT button %button.content; <!-- push button -->
<!ATTLIST button
  %attrs;
  %focus;
  name          CDATA          #IMPLIED
  value         CDATA          #IMPLIED
  type          (button|submit|reset) "submit"
  disabled      (disabled)     #IMPLIED
>

<!--===== Tables =====>

<!-- Derived from IETF HTML table standard, see [RFC1942] -->

<!--
  The border attribute sets the thickness of the frame around the
  table. The default units are screen pixels.

  The frame attribute specifies which parts of the frame around
  the table should be rendered. The values are not the same as
  CALS to avoid a name clash with the valign attribute.
-->
<!ENTITY % TFrame "(void|above|below|hsides|lhs|rhs|vsides|box|border)">

<!--
  The rules attribute defines which rules to draw between cells:

  If rules is absent then assume:
    "none" if border is absent or border="0" otherwise "all"
-->
<!ENTITY % TRules "(none | groups | rows | cols | all)">

<!-- horizontal alignment attributes for cell contents

  char          alignment char, e.g. char=':'
  charoff       offset for alignment char
-->
<!ENTITY % cellhalign
  "align        (left|center|right|justify|char) #IMPLIED
  char          %Character;          #IMPLIED
  charoff       %Length;           #IMPLIED"
>

<!-- vertical alignment attributes for cell contents -->
<!ENTITY % cellvalign
  "valign       (top|middle|bottom|baseline) #IMPLIED"
>

<!ELEMENT table
  (caption?, (col*|colgroup*), thead?, tfoot?, (tbody+|tr+))>
<!ELEMENT caption %Inline;>
<!ELEMENT thead   (tr)+>
<!ELEMENT tfoot   (tr)+>
<!ELEMENT tbody   (tr)+>
<!ELEMENT colgroup (col)*>
<!ELEMENT col     EMPTY>
<!ELEMENT tr      (th|td)+>
<!ELEMENT th      %Flow;>
<!ELEMENT td      %Flow;>

```

```

<!ATTLIST table
  %attrs;
  summary      %Text;          #IMPLIED
  width        %Length;       #IMPLIED
  border       %Pixels;       #IMPLIED
  frame        %TFrame;       #IMPLIED
  rules       %TRules;       #IMPLIED
  cellpadding %Length;       #IMPLIED
  cellspacing %Length;       #IMPLIED
>

<!ATTLIST caption
  %attrs;
>

<!--
colgroup groups a set of col elements. It allows you to group
several semantically related columns together.
-->
<!ATTLIST colgroup
  %attrs;
  span        %Number;       "1"
  width       %MultiLength; #IMPLIED
  %cellhalign;
  %cellvalign;
>

<!--
col elements define the alignment properties for cells in
one or more columns.

The width attribute specifies the width of the columns, e.g.

    width=64          width in screen pixels
    width=0.5*        relative width of 0.5

The span attribute causes the attributes of one
col element to apply to more than one column.
-->
<!ATTLIST col
  %attrs;
  span        %Number;       "1"
  width       %MultiLength; #IMPLIED
  %cellhalign;
  %cellvalign;
>

<!--
Use thead to duplicate headers when breaking table
across page boundaries, or for static headers when
tbody sections are rendered in scrolling panel.

Use tfoot to duplicate footers when breaking table
across page boundaries, or for static footers when
tbody sections are rendered in scrolling panel.

Use multiple tbody sections when rules are needed
between groups of table rows.
-->
<!ATTLIST thead
  %attrs;
  %cellhalign;
  %cellvalign;
>

```

```

<!ATTLIST tfoot
  %attrs;
  %cellhalign;
  %cellvalign;
>

<!ATTLIST tbody
  %attrs;
  %cellhalign;
  %cellvalign;
>

<!ATTLIST tr
  %attrs;
  %cellhalign;
  %cellvalign;
>

<!-- Scope is simpler than headers attribute for common tables -->
<!ENTITY % Scope "(row|col|rowgroup|colgroup)">

<!-- th is for headers, td for data and for cells acting as both -->

<!ATTLIST th
  %attrs;
  abbr          %Text;          #IMPLIED
  axis          CDATA          #IMPLIED
  headers       IDREFS         #IMPLIED
  scope         %Scope;        #IMPLIED
  rowspan       %Number;       "1"
  colspan       %Number;       "1"
  %cellhalign;
  %cellvalign;
>

<!ATTLIST td
  %attrs;
  abbr          %Text;          #IMPLIED
  axis          CDATA          #IMPLIED
  headers       IDREFS         #IMPLIED
  scope         %Scope;        #IMPLIED
  rowspan       %Number;       "1"
  colspan       %Number;       "1"
  %cellhalign;
  %cellvalign;
>

```

A.1.2. XHTML-1.0-Transitional

The file [DTD/xhtml1-transitional.dtd](#) is a normative part of this specification. Its annotated contents are included here for completeness.

```

<!--
  Extensible HTML version 1.0 Transitional DTD

  This is the same as HTML 4 Transitional except for
  changes due to the differences between XML and SGML.

  Namespace = http://www.w3.org/1999/xhtml

```


For further information, see: <http://www.w3.org/TR/xhtml1>

Copyright (c) 1998-2002 W3C (MIT, INRIA, Keio),
All Rights Reserved.

This DTD module is identified by the PUBLIC and SYSTEM identifiers:

PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"

\$Revision: 1.27 \$

\$Date: 2002/08/01 18:16:48 \$

-->

<!--===== Character mnemonic entities =====-->

<!ENTITY % HTMLlat1 PUBLIC

"-//W3C//ENTITIES Latin 1 for XHTML//EN"

"xhtml-lat1.ent">

[%HTMLlat1;](#)

<!ENTITY % HTMLsymbol PUBLIC

"-//W3C//ENTITIES Symbols for XHTML//EN"

"xhtml-symbol.ent">

[%HTMLsymbol;](#)

<!ENTITY % HTMLspecial PUBLIC

"-//W3C//ENTITIES Special for XHTML//EN"

"xhtml-special.ent">

[%HTMLspecial;](#)

<!--===== Imported Names =====-->

<!ENTITY % ContentType "CDATA">

<!-- media type, as per [RFC2045] -->

<!ENTITY % ContentTypes "CDATA">

<!-- comma-separated list of media types, as per [RFC2045] -->

<!ENTITY % Charset "CDATA">

<!-- a character encoding, as per [RFC2045] -->

<!ENTITY % Charsets "CDATA">

<!-- a space separated list of character encodings, as per [RFC2045] -->

<!ENTITY % LanguageCode "NMTOKEN">

<!-- a language code, as per [RFC3066] -->

<!ENTITY % Character "CDATA">

<!-- a single character, as per section 2.2 of [XML] -->

<!ENTITY % Number "CDATA">

<!-- one or more digits -->

<!ENTITY % LinkTypes "CDATA">

<!-- space-separated list of link types -->

<!ENTITY % MediaDesc "CDATA">

<!-- single or comma-separated list of media descriptors -->

<!ENTITY % URI "CDATA">

<!-- a Uniform Resource Identifier, see [RFC2396] -->

<!ENTITY % UriList "CDATA">

```

    <!-- a space separated list of Uniform Resource Identifiers -->

<!ENTITY % Datetime "CDATA">
    <!-- date and time information. ISO date format -->

<!ENTITY % Script "CDATA">
    <!-- script expression -->

<!ENTITY % StyleSheet "CDATA">
    <!-- style sheet data -->

<!ENTITY % Text "CDATA">
    <!-- used for titles etc. -->

<!ENTITY % FrameTarget "NMTOKEN">
    <!-- render in this frame -->

<!ENTITY % Length "CDATA">
    <!-- nn for pixels or nn% for percentage length -->

<!ENTITY % MultiLength "CDATA">
    <!-- pixel, percentage, or relative -->

<!ENTITY % Pixels "CDATA">
    <!-- integer representing length in pixels -->

<!-- these are used for image maps -->

<!ENTITY % Shape "(rect|circle|poly|default)">

<!ENTITY % Coords "CDATA">
    <!-- comma separated list of lengths -->

<!-- used for object, applet, img, input and iframe -->
<!ENTITY % ImgAlign "(top|middle|bottom|left|right)">

<!-- a color using sRGB: #RRGGBB as Hex values -->
<!ENTITY % Color "CDATA">

<!-- There are also 16 widely known color names with their sRGB values:

    Black  = #000000    Green  = #008000
    Silver = #C0C0C0    Lime   = #00FF00
    Gray   = #808080    Olive  = #808000
    White  = #FFFFFF    Yellow = #FFFF00
    Maroon = #800000    Navy   = #000080
    Red    = #FF0000    Blue   = #0000FF
    Purple = #800080    Teal   = #008080
    Fuchsia= #FF00FF    Aqua   = #00FFFF
-->

<!--===== Generic Attributes =====>

<!-- core attributes common to most elements
    id      document-wide unique id
    class   space separated list of classes
    style    associated style info
    title    advisory title/amplification
-->
<!ENTITY % coreattrs
    "id"      ID          #IMPLIED
    class     CDATA       #IMPLIED
    style     %StyleSheet; #IMPLIED
    title     %Text;      #IMPLIED"
>

```

```

<!-- internationalization attributes
  lang          language code (backwards compatible)
  xml:lang      language code (as per XML 1.0 spec)
  dir           direction for weak/neutral text
-->
<!ENTITY % il8n
"lang          %LanguageCode; #IMPLIED
 xml:lang      %LanguageCode; #IMPLIED
 dir          (ltr|rtl)      #IMPLIED"
>

<!-- attributes for common UI events
 onclick       a pointer button was clicked
 ondblclick    a pointer button was double clicked
 onmousedown   a pointer button was pressed down
 onmouseup     a pointer button was released
 onmousemove   a pointer was moved onto the element
 onmouseout    a pointer was moved away from the element
 onkeypress    a key was pressed and released
 onkeydown     a key was pressed down
 onkeyup       a key was released
-->
<!ENTITY % events
"onclick       %Script;      #IMPLIED
 ondblclick    %Script;      #IMPLIED
 onmousedown   %Script;      #IMPLIED
 onmouseup     %Script;      #IMPLIED
 onmouseover   %Script;      #IMPLIED
 onmousemove   %Script;      #IMPLIED
 onmouseout    %Script;      #IMPLIED
 onkeypress    %Script;      #IMPLIED
 onkeydown     %Script;      #IMPLIED
 onkeyup       %Script;      #IMPLIED"
>

<!-- attributes for elements that can get the focus
 accesskey     accessibility key character
 tabindex      position in tabbing order
 onfocus      the element got the focus
 onblur       the element lost the focus
-->
<!ENTITY % focus
"accesskey     %Character;    #IMPLIED
 tabindex      %Number;         #IMPLIED
 onfocus      %Script;         #IMPLIED
 onblur       %Script;         #IMPLIED"
>

<!ENTITY % attrs "%coreattrs; %il8n; %events;">

<!-- text alignment for p, div, h1-h6. The default is
      align="left" for ltr headings, "right" for rtl -->

<!ENTITY % TextAlign "align (left|center|right|justify) #IMPLIED">

<!--===== Text Elements =====>

<!ENTITY % special.extra
"object | applet | img | map | iframe">

<!ENTITY % special.basic
"br | span | bdo">

<!ENTITY % special

```

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```

<!--===== Document Structure =====>

<!-- the namespace URI designates the document profile -->

<!ELEMENT html (head, body)>
<!ATTLIST html
  %i18n;
  id          ID          #IMPLIED
  xmlns       %URI;       #FIXED 'http://www.w3.org/1999/xhtml'
>

<!--===== Document Head =====>

<!ENTITY % head.misc "(script|style|meta|link|object|isindex)*">

<!-- content model is %head.misc; combined with a single
      title and an optional base element in any order -->

<!ELEMENT head (%head.misc;,
  ((title, %head.misc;, (base, %head.misc;)? ) |
   (base, %head.misc;, (title, %head.misc;))))>

<!ATTLIST head
  %i18n;
  id          ID          #IMPLIED
  profile     %URI;       #IMPLIED
>

<!-- The title element is not considered part of the flow of text.
      It should be displayed, for example as the page header or
      window title. Exactly one title is required per document.
      -->
<!ELEMENT title (#PCDATA)>
<!ATTLIST title
  %i18n;
  id          ID          #IMPLIED
>

<!-- document base URI -->

<!ELEMENT base EMPTY>
<!ATTLIST base
  id          ID          #IMPLIED
  href        %URI;       #IMPLIED
  target      %FrameTarget; #IMPLIED
>

<!-- generic metainformation -->
<!ELEMENT meta EMPTY>
<!ATTLIST meta
  %i18n;
  id          ID          #IMPLIED
  http-equiv  CDATA       #IMPLIED
  name        CDATA       #IMPLIED
  content     CDATA       #REQUIRED
  scheme      CDATA       #IMPLIED
>

<!--
  Relationship values can be used in principle:

  a) for document specific toolbars/menus when used
     with the link element in document head e.g.
       start, contents, previous, next, index, end, help
  b) to link to a separate style sheet (rel="stylesheet")

```

```

    c) to make a link to a script (rel="script")
    d) by stylesheets to control how collections of
       html nodes are rendered into printed documents
    e) to make a link to a printable version of this document
       e.g. a PostScript or PDF version (rel="alternate" media="print")
-->

```

```

<!ELEMENT link EMPTY>
<!ATTLIST link
  %attrs;
  charset      %Charset;      #IMPLIED
  href         %URI;          #IMPLIED
  hreflang     %LanguageCode; #IMPLIED
  type         %ContentType;   #IMPLIED
  rel          %LinkTypes;     #IMPLIED
  rev          %LinkTypes;     #IMPLIED
  media        %MediaDesc;     #IMPLIED
  target       %FrameTarget;   #IMPLIED
>

```

```

<!-- style info, which may include CDATA sections -->
<!ELEMENT style (#PCDATA)>
<!ATTLIST style
  %i18n;
  id           ID              #IMPLIED
  type         %ContentType;   #REQUIRED
  media        %MediaDesc;     #IMPLIED
  title        %Text;          #IMPLIED
  xml:space    (preserve)      #FIXED 'preserve'
>

```

```

<!-- script statements, which may include CDATA sections -->
<!ELEMENT script (#PCDATA)>
<!ATTLIST script
  id           ID              #IMPLIED
  charset      %Charset;      #IMPLIED
  type         %ContentType;   #REQUIRED
  language     CDATA           #IMPLIED
  src          %URI;          #IMPLIED
  defer        (defer)         #IMPLIED
  xml:space    (preserve)      #FIXED 'preserve'
>

```

```

<!-- alternate content container for non script-based rendering -->

```

```

<!ELEMENT noscript %Flow;>
<!ATTLIST noscript
  %attrs;
>

```

```

<!--===== Frames =====>

```

```

<!-- inline subwindow -->

```

```

<!ELEMENT iframe %Flow;>
<!ATTLIST iframe
  %coreattrs;
  longdesc     %URI;          #IMPLIED
  name         NMTOKEN        #IMPLIED
  src          %URI;          #IMPLIED
  frameborder  (1|0)          "1"
  marginwidth  %Pixels;       #IMPLIED
  marginheight %Pixels;       #IMPLIED
  scrolling    (yes|no|auto)   "auto"
  align        %ImgAlign;     #IMPLIED

```

```
height      %Length;      #IMPLIED
width       %Length;      #IMPLIED
>

<!-- alternate content container for non frame-based rendering -->

<!ELEMENT noframes %Flow;>
<!ATTLIST noframes
%attrs;
>

<!--===== Document Body =====>

<!ELEMENT body %Flow;>
<!ATTLIST body
%attrs;
  onload      %Script;      #IMPLIED
  onunload     %Script;      #IMPLIED
  background   %URI;        #IMPLIED
  bgcolor      %Color;       #IMPLIED
  text         %Color;       #IMPLIED
  link         %Color;       #IMPLIED
  vlink        %Color;       #IMPLIED
  alink        %Color;       #IMPLIED
>

<!ELEMENT div %Flow;> <!-- generic language/style container -->
<!ATTLIST div
%attrs;
%TextAlign;
>

<!--===== Paragraphs =====>

<!ELEMENT p %Inline;>
<!ATTLIST p
%attrs;
%TextAlign;
>

<!--===== Headings =====>

<!--
  There are six levels of headings from h1 (the most important)
  to h6 (the least important).
-->

<!ELEMENT h1 %Inline;>
<!ATTLIST h1
%attrs;
%TextAlign;
>

<!ELEMENT h2 %Inline;>
<!ATTLIST h2
%attrs;
%TextAlign;
>

<!ELEMENT h3 %Inline;>
<!ATTLIST h3
%attrs;
%TextAlign;
>
```

```

<!ELEMENT h4 %Inline;>
<!ATTLIST h4
  %attrs;
  %TextAlign;
>

<!ELEMENT h5 %Inline;>
<!ATTLIST h5
  %attrs;
  %TextAlign;
>

<!ELEMENT h6 %Inline;>
<!ATTLIST h6
  %attrs;
  %TextAlign;
>

<!--===== Lists =====>

<!-- Unordered list bullet styles -->

<!ENTITY % ULStyle "(disc|square|circle)">

<!-- Unordered list -->

<!ELEMENT ul (li)+>
<!ATTLIST ul
  %attrs;
  type          %ULStyle;      #IMPLIED
  compact       (compact)      #IMPLIED
>

<!-- Ordered list numbering style

    1   arabic numbers      1, 2, 3, ...
    a   lower alpha        a, b, c, ...
    A   upper alpha        A, B, C, ...
    i   lower roman        i, ii, iii, ...
    I   upper roman        I, II, III, ...

    The style is applied to the sequence number which by default
    is reset to 1 for the first list item in an ordered list.
-->
<!ENTITY % OLStyle "CDATA">

<!-- Ordered (numbered) list -->

<!ELEMENT ol (li)+>
<!ATTLIST ol
  %attrs;
  type          %OLStyle;      #IMPLIED
  compact       (compact)      #IMPLIED
  start         %Number;      #IMPLIED
>

<!-- single column list (DEPRECATED) -->
<!ELEMENT menu (li)+>
<!ATTLIST menu
  %attrs;
  compact       (compact)      #IMPLIED
>

<!-- multiple column list (DEPRECATED) -->
<!ELEMENT dir (li)+>

```



```

<!ATTLIST dir
  %attrs;
  compact      (compact)      #IMPLIED
>

<!-- LISTyle is constrained to: "(<a href="#">%ULStyle;%OLStyle;%Flow;>
<!ATTLIST li
  %attrs;
  type          %LISTyle;      #IMPLIED
  value         %Number;      #IMPLIED
>

<!-- definition lists - dt for term, dd for its definition -->

<!ELEMENT dl (dt|dd)+>
<!ATTLIST dl
  %attrs;
  compact      (compact)      #IMPLIED
>

<!ELEMENT dt %Inline;>
<!ATTLIST dt
  %attrs;
>

<!ELEMENT dd %Flow;>
<!ATTLIST dd
  %attrs;
>

<!--===== Address =====>

<!-- information on author -->

<!ELEMENT address (#PCDATA | %inline; | %misc.inline; | p)*>
<!ATTLIST address
  %attrs;
>

<!--===== Horizontal Rule =====>

<!ELEMENT hr EMPTY>
<!ATTLIST hr
  %attrs;
  align        (left|center|right) #IMPLIED
  noshade      (noshade)          #IMPLIED
  size         %Pixels;           #IMPLIED
  width        %Length;          #IMPLIED
>

<!--===== Preformatted Text =====>

<!-- content is %Inline; excluding
      "img|object|applet|big|small|sub|sup|font|basefont" -->

<!ELEMENT pre %pre.content;>
<!ATTLIST pre
  %attrs;
  width        %Number;          #IMPLIED
  xml:space    (preserve)         #FIXED 'preserve'

```

```

>

<!--===== Block-like Quotes =====>

<!ELEMENT blockquote %Flow;>
<!ATTLIST blockquote
  %attrs;
  cite          %URI;          #IMPLIED
>

<!--===== Text alignment =====>

<!-- center content -->
<!ELEMENT center %Flow;>
<!ATTLIST center
  %attrs;
>

<!--===== Inserted/Deleted Text =====>

<!--
  ins/del are allowed in block and inline content, but its
  inappropriate to include block content within an ins element
  occurring in inline content.
-->
<!ELEMENT ins %Flow;>
<!ATTLIST ins
  %attrs;
  cite          %URI;          #IMPLIED
  datetime      %Datetime;     #IMPLIED
>

<!ELEMENT del %Flow;>
<!ATTLIST del
  %attrs;
  cite          %URI;          #IMPLIED
  datetime      %Datetime;     #IMPLIED
>

<!--===== The Anchor Element =====>

<!-- content is %Inline; except that anchors shouldn't be nested -->

<!ELEMENT a %a.content;>
<!ATTLIST a
  %attrs;
  %focus;
  charset       %Charset;      #IMPLIED
  type          %ContentType;   #IMPLIED
  name          NMTOKEN         #IMPLIED
  href          %URI;           #IMPLIED
  hreflang      %LanguageCode;  #IMPLIED
  rel           %LinkTypes;     #IMPLIED
  rev           %LinkTypes;     #IMPLIED
  shape         %Shape;         "rect"
  coords        %Coords;        #IMPLIED
  target        %FrameTarget;   #IMPLIED
>

<!--===== Inline Elements =====>

<!ELEMENT span %Inline;> <!-- generic language/style container -->
<!ATTLIST span
  %attrs;
>

```

```
<!ELEMENT bdo %Inline;> <!-- I18N BiDi over-ride -->
<!ATTLIST bdo
  %coreattrs;
  %events;
  lang %LanguageCode; #IMPLIED
  xml:lang %LanguageCode; #IMPLIED
  dir (ltr|rtl) #REQUIRED
>

<!ELEMENT br EMPTY> <!-- forced line break -->
<!ATTLIST br
  %coreattrs;
  clear (left|all|right|none) "none"
>

<!ELEMENT em %Inline;> <!-- emphasis -->
<!ATTLIST em %attrs;>

<!ELEMENT strong %Inline;> <!-- strong emphasis -->
<!ATTLIST strong %attrs;>

<!ELEMENT dfn %Inline;> <!-- definitional -->
<!ATTLIST dfn %attrs;>

<!ELEMENT code %Inline;> <!-- program code -->
<!ATTLIST code %attrs;>

<!ELEMENT samp %Inline;> <!-- sample -->
<!ATTLIST samp %attrs;>

<!ELEMENT kbd %Inline;> <!-- something user would type -->
<!ATTLIST kbd %attrs;>

<!ELEMENT var %Inline;> <!-- variable -->
<!ATTLIST var %attrs;>

<!ELEMENT cite %Inline;> <!-- citation -->
<!ATTLIST cite %attrs;>

<!ELEMENT abbr %Inline;> <!-- abbreviation -->
<!ATTLIST abbr %attrs;>

<!ELEMENT acronym %Inline;> <!-- acronym -->
<!ATTLIST acronym %attrs;>

<!ELEMENT q %Inline;> <!-- inlined quote -->
<!ATTLIST q
  %attrs;
  cite %URI; #IMPLIED
>

<!ELEMENT sub %Inline;> <!-- subscript -->
<!ATTLIST sub %attrs;>

<!ELEMENT sup %Inline;> <!-- superscript -->
<!ATTLIST sup %attrs;>

<!ELEMENT tt %Inline;> <!-- fixed pitch font -->
<!ATTLIST tt %attrs;>

<!ELEMENT i %Inline;> <!-- italic font -->
<!ATTLIST i %attrs;>

<!ELEMENT b %Inline;> <!-- bold font -->
```

```

<!ATTLIST b %attrs;>

<!ELEMENT big %Inline;>    <!-- bigger font -->
<!ATTLIST big %attrs;>

<!ELEMENT small %Inline;>    <!-- smaller font -->
<!ATTLIST small %attrs;>

<!ELEMENT u %Inline;>    <!-- underline -->
<!ATTLIST u %attrs;>

<!ELEMENT s %Inline;>    <!-- strike-through -->
<!ATTLIST s %attrs;>

<!ELEMENT strike %Inline;>    <!-- strike-through -->
<!ATTLIST strike %attrs;>

<!ELEMENT basefont EMPTY>    <!-- base font size -->
<!ATTLIST basefont
  id          ID          #IMPLIED
  size        CDATA       #REQUIRED
  color       %Color;    #IMPLIED
  face        CDATA       #IMPLIED
>

<!ELEMENT font %Inline;> <!-- local change to font -->
<!ATTLIST font
  %coreattrs;
  %i18n;
  size        CDATA       #IMPLIED
  color       %Color;    #IMPLIED
  face        CDATA       #IMPLIED
>

<!--===== Object =====>
<!--
  object is used to embed objects as part of HTML pages.
  param elements should precede other content. Parameters
  can also be expressed as attribute/value pairs on the
  object element itself when brevity is desired.
-->

<!ELEMENT object (#PCDATA | param | %block; | form | %inline; | %misc;)*>
<!ATTLIST object
  %attrs;
  declare      (declare)    #IMPLIED
  classid      %URI;       #IMPLIED
  codebase     %URI;       #IMPLIED
  data         %URI;       #IMPLIED
  type         %ContentType; #IMPLIED
  codetype     %ContentType; #IMPLIED
  archive      %UriList;   #IMPLIED
  standby      %Text;       #IMPLIED
  height       %Length;    #IMPLIED
  width        %Length;    #IMPLIED
  usemap       %URI;       #IMPLIED
  name         NMTOKEN      #IMPLIED
  tabindex     %Number;     #IMPLIED
  align        %ImgAlign;  #IMPLIED
  border       %Pixels;    #IMPLIED
  hspace       %Pixels;    #IMPLIED
  vspace       %Pixels;    #IMPLIED
>

<!--

```

param is used to supply a named property value.

In XML it would seem natural to follow RDF and support an abbreviated syntax where the param elements are replaced by attribute value pairs on the object start tag.

```
-->
<!ELEMENT param EMPTY>
<!ATTLIST param
  id          ID          #IMPLIED
  name        CDATA       #REQUIRED
  value       CDATA       #IMPLIED
  valuetype   (data|ref|object) "data"
  type        %ContentType; #IMPLIED
>

<!--===== Java applet =====>
<!--
  One of code or object attributes must be present.
  Place param elements before other content.
-->
<!ELEMENT applet (#PCDATA | param | %block; | form | %inline; | %misc;)*>
<!ATTLIST applet
  %coreattrs;
  codebase    %URI;      #IMPLIED
  archive     CDATA       #IMPLIED
  code        CDATA       #IMPLIED
  object      CDATA       #IMPLIED
  alt         %Text;      #IMPLIED
  name        NMTOKEN     #IMPLIED
  width       %Length;    #REQUIRED
  height      %Length;    #REQUIRED
  align       %ImgAlign;  #IMPLIED
  hspace      %Pixels;    #IMPLIED
  vspace      %Pixels;    #IMPLIED
>

<!--===== Images =====>

<!--
  To avoid accessibility problems for people who aren't
  able to see the image, you should provide a text
  description using the alt and longdesc attributes.
  In addition, avoid the use of server-side image maps.
-->

<!ELEMENT img EMPTY>
<!ATTLIST img
  %attrs;
  src         %URI;      #REQUIRED
  alt         %Text;      #REQUIRED
  name        NMTOKEN     #IMPLIED
  longdesc    %URI;      #IMPLIED
  height      %Length;    #IMPLIED
  width       %Length;    #IMPLIED
  usemap      %URI;      #IMPLIED
  ismap       (ismap)     #IMPLIED
  align       %ImgAlign;  #IMPLIED
  border      %Length;    #IMPLIED
  hspace      %Pixels;    #IMPLIED
  vspace      %Pixels;    #IMPLIED
>

<!-- usemap points to a map element which may be in this document
or an external document, although the latter is not widely supported -->

<!--===== Client-side image maps =====>
```

```
<!-- These can be placed in the same document or grouped in a
       separate document although this isn't yet widely supported -->
```

```
<!ELEMENT map ((%block; | form | %misc;)+ | area+)>
```

```
<!ATTLIST map
```

```
  %i18n;
```

```
  %events;
```

```
  id ID #REQUIRED
```

```
  class CDATA #IMPLIED
```

```
  style %StyleSheet; #IMPLIED
```

```
  title %Text; #IMPLIED
```

```
  name CDATA #IMPLIED
```

```
>
```

```
<!ELEMENT area EMPTY>
```

```
<!ATTLIST area
```

```
  %attrs;
```

```
  %focus;
```

```
  shape %Shape; "rect"
```

```
  coords %Coords; #IMPLIED
```

```
  href %URI; #IMPLIED
```

```
  nohref (nohref) #IMPLIED
```

```
  alt %Text; #REQUIRED
```

```
  target %FrameTarget; #IMPLIED
```

```
>
```

```
<!--===== Forms =====-->
```

```
<!ELEMENT form %form.content; <!-- forms shouldn't be nested -->
```

```
<!ATTLIST form
```

```
  %attrs;
```

```
  action %URI; #REQUIRED
```

```
  method (get|post) "get"
```

```
  name NMTOKEN #IMPLIED
```

```
  enctype %ContentType; "application/x-www-form-urlencoded"
```

```
  onsubmit %Script; #IMPLIED
```

```
  onreset %Script; #IMPLIED
```

```
  accept %ContentTypes; #IMPLIED
```

```
  accept-charset %Charsets; #IMPLIED
```

```
  target %FrameTarget; #IMPLIED
```

```
>
```

```
<!--
```

```
  Each label must not contain more than ONE field
```

```
  Label elements shouldn't be nested.
```

```
-->
```

```
<!ELEMENT label %Inline;>
```

```
<!ATTLIST label
```

```
  %attrs;
```

```
  for IDREF #IMPLIED
```

```
  accesskey %Character; #IMPLIED
```

```
  onfocus %Script; #IMPLIED
```

```
  onblur %Script; #IMPLIED
```

```
>
```

```
<!ENTITY % InputType
```

```
  "(text | password | checkbox |
```

```
   radio | submit | reset |
```

```
   file | hidden | image | button)"
```

```
>
```

```
<!-- the name attribute is required for all but submit & reset -->
```

```

<!ELEMENT input EMPTY>          <!-- form control -->
<!ATTLIST input
  %attrs;
  %focus;
  type          %InputType;      "text"
  name          CDATA              #IMPLIED
  value         CDATA              #IMPLIED
  checked       (checked)          #IMPLIED
  disabled      (disabled)         #IMPLIED
  readonly      (readonly)         #IMPLIED
  size          CDATA              #IMPLIED
  maxlength     %Number;          #IMPLIED
  src           %URI;            #IMPLIED
  alt           CDATA              #IMPLIED
  usemap        %URI;            #IMPLIED
  onselect      %Script;         #IMPLIED
  onchange      %Script;         #IMPLIED
  accept        %ContentTypes;  #IMPLIED
  align         %ImgAlign;       #IMPLIED
>

<!ELEMENT select (optgroup|option)+> <!-- option selector -->
<!ATTLIST select
  %attrs;
  name          CDATA              #IMPLIED
  size          %Number;          #IMPLIED
  multiple      (multiple)         #IMPLIED
  disabled      (disabled)         #IMPLIED
  tabindex      %Number;          #IMPLIED
  onfocus      %Script;         #IMPLIED
  onblur        %Script;         #IMPLIED
  onchange      %Script;         #IMPLIED
>

<!ELEMENT optgroup (option)+>    <!-- option group -->
<!ATTLIST optgroup
  %attrs;
  disabled      (disabled)         #IMPLIED
  label         %Text;            #REQUIRED
>

<!ELEMENT option (#PCDATA)>      <!-- selectable choice -->
<!ATTLIST option
  %attrs;
  selected      (selected)         #IMPLIED
  disabled      (disabled)         #IMPLIED
  label         %Text;            #IMPLIED
  value         CDATA              #IMPLIED
>

<!ELEMENT textarea (#PCDATA)>    <!-- multi-line text field -->
<!ATTLIST textarea
  %attrs;
  %focus;
  name          CDATA              #IMPLIED
  rows          %Number;          #REQUIRED
  cols          %Number;          #REQUIRED
  disabled      (disabled)         #IMPLIED
  readonly      (readonly)         #IMPLIED
  onselect      %Script;         #IMPLIED
  onchange      %Script;         #IMPLIED
>

<!--
  The fieldset element is used to group form fields.

```

```

    Only one legend element should occur in the content
    and if present should only be preceded by whitespace.
-->
<!ELEMENT fieldset (#PCDATA | legend | %block; | form | %inline; | %misc;)*>
<!ATTLIST fieldset
    %attrs;
>

<!ENTITY % LAlign "(top|bottom|left|right)">

<!ELEMENT legend %Inline;>      <!-- fieldset label -->
<!ATTLIST legend
    %attrs;
    accesskey    %Character;      #IMPLIED
    align        %LAlign;          #IMPLIED
>

<!--
Content is %Flow; excluding a, form, form controls, iframe
-->
<!ELEMENT button %button.content;>  <!-- push button -->
<!ATTLIST button
    %attrs;
    %focus;
    name          CDATA              #IMPLIED
    value          CDATA              #IMPLIED
    type           (button|submit|reset) "submit"
    disabled       (disabled)         #IMPLIED
>

<!-- single-line text input control (DEPRECATED) -->
<!ELEMENT isindex EMPTY>
<!ATTLIST isindex
    %coreattrs;
    %i18n;
    prompt         %Text;          #IMPLIED
>

<!--===== Tables =====>

<!-- Derived from IETF HTML table standard, see [RFC1942] -->

<!--
The border attribute sets the thickness of the frame around the
table. The default units are screen pixels.

The frame attribute specifies which parts of the frame around
the table should be rendered. The values are not the same as
CALS to avoid a name clash with the valign attribute.
-->
<!ENTITY % TFrame "(void|above|below|hsides|lhs|rhs|vsides|box|border)">

<!--
The rules attribute defines which rules to draw between cells:

If rules is absent then assume:
    "none" if border is absent or border="0" otherwise "all"
-->

<!ENTITY % TRules "(none | groups | rows | cols | all)">

<!-- horizontal placement of table relative to document -->
<!ENTITY % TAlign "(left|center|right)">

<!-- horizontal alignment attributes for cell contents

```



```

    char          alignment char, e.g. char=':'
    charoff       offset for alignment char
-->
<!ENTITY % cellhalign
"align          (left|center|right|justify|char) #IMPLIED
 char           %Character;          #IMPLIED
 charoff        %Length;           #IMPLIED"
>

<!-- vertical alignment attributes for cell contents -->
<!ENTITY % cellvalign
"valign         (top|middle|bottom|baseline) #IMPLIED"
>

<!ELEMENT table
  (caption?, (col*|colgroup*), thead?, tfoot?, (tbody+|tr+))>
<!ELEMENT caption %Inline;>
<!ELEMENT thead   (tr)+>
<!ELEMENT tfoot   (tr)+>
<!ELEMENT tbody  (tr)+>
<!ELEMENT colgroup (col)*>
<!ELEMENT col     EMPTY>
<!ELEMENT tr      (th|td)+>
<!ELEMENT th      %Flow;>
<!ELEMENT td      %Flow;>

<!ATTLIST table
  %attrs;
  summary      %Text;          #IMPLIED
  width        %Length;        #IMPLIED
  border       %Pixels;        #IMPLIED
  frame        %TFrame;          #IMPLIED
  rules        %TRules;          #IMPLIED
  cellspacing  %Length;        #IMPLIED
  cellpadding %Length;        #IMPLIED
  align        %TAlign;          #IMPLIED
  bgcolor      %Color;          #IMPLIED
>

<!ENTITY % CAlign "(top|bottom|left|right)">

<!ATTLIST caption
  %attrs;
  align        %CAlign;          #IMPLIED
>

<!--
colgroup groups a set of col elements. It allows you to group
several semantically related columns together.
-->
<!ATTLIST colgroup
  %attrs;
  span         %Number;          "1"
  width        %MultiLength;      #IMPLIED
  %cellhalign;
  %cellvalign;
>

<!--
col elements define the alignment properties for cells in
one or more columns.

The width attribute specifies the width of the columns, e.g.

```

width=64 width in screen pixels
width=0.5* relative width of 0.5

The span attribute causes the attributes of one col element to apply to more than one column.

-->

```
<!ATTLIST col
  %attrs;
  span          %Number;          "1"
  width         %MultiLength;    #IMPLIED
  %cellhalign;
  %cellvalign;
>
```

<!--

Use thead to duplicate headers when breaking table across page boundaries, or for static headers when tbody sections are rendered in scrolling panel.

Use tfoot to duplicate footers when breaking table across page boundaries, or for static footers when tbody sections are rendered in scrolling panel.

Use multiple tbody sections when rules are needed between groups of table rows.

-->

```
<!ATTLIST thead
  %attrs;
  %cellhalign;
  %cellvalign;
>
```

```
<!ATTLIST tfoot
  %attrs;
  %cellhalign;
  %cellvalign;
>
```

```
<!ATTLIST tbody
  %attrs;
  %cellhalign;
  %cellvalign;
>
```

```
<!ATTLIST tr
  %attrs;
  %cellhalign;
  %cellvalign;
  bgcolor       %Color;          #IMPLIED
>
```

<!-- Scope is simpler than headers attribute for common tables -->
<!ENTITY % Scope "(row|col|rowgroup|colgroup)">

<!-- th is for headers, td for data and for cells acting as both -->

```
<!ATTLIST th
  %attrs;
  abbr          %Text;          #IMPLIED
  axis          CDATA           #IMPLIED
  headers       IDREFS          #IMPLIED
  scope         %Scope;        #IMPLIED
  rowspan       %Number;        "1"
  colspan       %Number;        "1"
  %cellhalign;
```

```

%cellvalign;
nowrap      (nowrap)      #IMPLIED
bgcolor     %Color;       #IMPLIED
width       %Length;      #IMPLIED
height      %Length;      #IMPLIED
>

<!ATTLIST td
  %attrs;
  abbr       %Text;        #IMPLIED
  axis       CDATA         #IMPLIED
  headers    IDREFS        #IMPLIED
  scope      %Scope;      #IMPLIED
  rowspan    %Number;      "1"
  colspan    %Number;      "1"
  %cellhalign;
  %cellvalign;
  nowrap     (nowrap)      #IMPLIED
  bgcolor     %Color;       #IMPLIED
  width       %Length;      #IMPLIED
  height      %Length;      #IMPLIED
>

```

A.1.3. XHTML-1.0-Frameset

The file [DTD/xhtml1-frameset.dtd](#) is a normative part of this specification. Its annotated contents are included here for completeness.

```

<!--
  Extensible HTML version 1.0 Frameset DTD

  This is the same as HTML 4 Frameset except for
  changes due to the differences between XML and SGML.

  Namespace = http://www.w3.org/1999/xhtml

  For further information, see: http://www.w3.org/TR/xhtml1

  Copyright (c) 1998-2002 W3C (MIT, INRIA, Keio),
  All Rights Reserved.

  This DTD module is identified by the PUBLIC and SYSTEM identifiers:

  PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
  SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd"

  $Revision: 1.26 $
  $Date: 2002/08/01 18:16:48 $

-->

<!--===== Character mnemonic entities =====>

<!ENTITY % HTMLlat1 PUBLIC
  "-//W3C//ENTITIES Latin 1 for XHTML//EN"
  "xhtml-lat1.ent">
%HTMLlat1;

<!ENTITY % HTMLsymbol PUBLIC
  "-//W3C//ENTITIES Symbols for XHTML//EN"
  "xhtml-symbol.ent">
%HTMLsymbol;

```

```
<!ENTITY % HTMLspecial PUBLIC
    "-//W3C//ENTITIES Special for XHTML//EN"
    "xhtml-special.ent">
%HTMLspecial;

<!--===== Imported Names =====>

<!ENTITY % ContentType "CDATA">
    <!-- media type, as per [RFC2045] -->

<!ENTITY % ContentTypes "CDATA">
    <!-- comma-separated list of media types, as per [RFC2045] -->

<!ENTITY % Charset "CDATA">
    <!-- a character encoding, as per [RFC2045] -->

<!ENTITY % Charsets "CDATA">
    <!-- a space separated list of character encodings, as per [RFC2045] -->

<!ENTITY % LanguageCode "NMTOKEN">
    <!-- a language code, as per [RFC3066] -->

<!ENTITY % Character "CDATA">
    <!-- a single character, as per section 2.2 of [XML] -->

<!ENTITY % Number "CDATA">
    <!-- one or more digits -->

<!ENTITY % LinkTypes "CDATA">
    <!-- space-separated list of link types -->

<!ENTITY % MediaDesc "CDATA">
    <!-- single or comma-separated list of media descriptors -->

<!ENTITY % URI "CDATA">
    <!-- a Uniform Resource Identifier, see [RFC2396] -->

<!ENTITY % UriList "CDATA">
    <!-- a space separated list of Uniform Resource Identifiers -->

<!ENTITY % Datetime "CDATA">
    <!-- date and time information. ISO date format -->

<!ENTITY % Script "CDATA">
    <!-- script expression -->

<!ENTITY % StyleSheet "CDATA">
    <!-- style sheet data -->

<!ENTITY % Text "CDATA">
    <!-- used for titles etc. -->

<!ENTITY % FrameTarget "NMTOKEN">
    <!-- render in this frame -->

<!ENTITY % Length "CDATA">
    <!-- nn for pixels or nn% for percentage length -->

<!ENTITY % MultiLength "CDATA">
    <!-- pixel, percentage, or relative -->

<!ENTITY % MultiLengths "CDATA">
    <!-- comma-separated list of MultiLength -->
```

```
<!ENTITY % Pixels "CDATA">
  <!-- integer representing length in pixels -->

<!-- these are used for image maps -->

<!ENTITY % Shape "(rect|circle|poly|default)">

<!ENTITY % Coords "CDATA">
  <!-- comma separated list of lengths -->

<!-- used for object, applet, img, input and iframe -->
<!ENTITY % ImgAlign "(top|middle|bottom|left|right)">

<!-- a color using sRGB: #RRGGBB as Hex values -->
<!ENTITY % Color "CDATA">

<!-- There are also 16 widely known color names with their sRGB values:

    Black  = #000000      Green  = #008000
    Silver = #C0C0C0      Lime   = #00FF00
    Gray   = #808080      Olive  = #808000
    White  = #FFFFFF      Yellow = #FFFF00
    Maroon = #800000      Navy   = #000080
    Red    = #FF0000      Blue   = #0000FF
    Purple = #800080      Teal   = #008080
    Fuchsia= #FF00FF      Aqua   = #00FFFF
-->

<!--===== Generic Attributes =====>

<!-- core attributes common to most elements
id      document-wide unique id
class   space separated list of classes
style   associated style info
title   advisory title/amplification
-->
<!ENTITY % coreattrs
"id      ID          #IMPLIED
class    CDATA       #IMPLIED
style    %StyleSheet; #IMPLIED
title    %Text;      #IMPLIED"
>

<!-- internationalization attributes
lang     language code (backwards compatible)
xml:lang language code (as per XML 1.0 spec)
dir      direction for weak/neutral text
-->
<!ENTITY % i18n
"lang     %LanguageCode; #IMPLIED
xml:lang  %LanguageCode; #IMPLIED
dir       (ltr|rtl)     #IMPLIED"
>

<!-- attributes for common UI events
onclick   a pointer button was clicked
ondblclick a pointer button was double clicked
onmousedown a pointer button was pressed down
onmouseup  a pointer button was released
onmousemove a pointer was moved onto the element
onmouseout a pointer was moved away from the element
onkeypress a key was pressed and released
onkeydown  a key was pressed down
onkeyup    a key was released
-->
```

```

<!ENTITY % events
"onclick      %Script;      #IMPLIED
 ondblclick   %Script;      #IMPLIED
 onmousedown  %Script;      #IMPLIED
 onmouseup    %Script;      #IMPLIED
 onmouseover  %Script;      #IMPLIED
 onmousemove  %Script;      #IMPLIED
 onmouseout   %Script;      #IMPLIED
 onkeypress   %Script;      #IMPLIED
 onkeydown    %Script;      #IMPLIED
 onkeyup      %Script;      #IMPLIED"
>

<!-- attributes for elements that can get the focus
accesskey     accessibility key character
tabindex      position in tabbing order
onfocus      the element got the focus
onblur        the element lost the focus
-->
<!ENTITY % focus
"accesskey    %Character;    #IMPLIED
tabindex      %Number;      #IMPLIED
onfocus      %Script;      #IMPLIED
onblur        %Script;      #IMPLIED"
>

<!ENTITY % attrs "%coreattrs; %i18n; %events;">

<!-- text alignment for p, div, h1-h6. The default is
align="left" for ltr headings, "right" for rtl -->

<!ENTITY % TextAlign "align (left|center|right|justify) #IMPLIED">

<!--===== Text Elements =====>

<!ENTITY % special.extra
"object | applet | img | map | iframe">

<!ENTITY % special.basic
"br | span | bdo">

<!ENTITY % special
"%special.basic; | %special.extra;">

<!ENTITY % fontstyle.extra "big | small | font | basefont">

<!ENTITY % fontstyle.basic "tt | i | b | u
| s | strike ">

<!ENTITY % fontstyle "%fontstyle.basic; | %fontstyle.extra;">

<!ENTITY % phrase.extra "sub | sup">
<!ENTITY % phrase.basic "em | strong | dfn | code | q |
samp | kbd | var | cite | abbr | acronym">

<!ENTITY % phrase "%phrase.basic; | %phrase.extra;">

<!ENTITY % inline.forms "input | select | textarea | label | button">

<!-- these can occur at block or inline level -->
<!ENTITY % misc.inline "ins | del | script">

<!-- these can only occur at block level -->
<!ENTITY % misc "noscript | %misc.inline;">

```

```

<!ENTITY % inline "a | %special; | %fontstyle; | %phrase; | %inline.forms;">

<!-- %Inline; covers inline or "text-level" elements -->
<!ENTITY % Inline "(#PCDATA | %inline; | %misc.inline;)*">

<!--===== Block level elements =====>

<!ENTITY % heading "h1|h2|h3|h4|h5|h6">
<!ENTITY % lists "ul | ol | dl | menu | dir">
<!ENTITY % blocktext "pre | hr | blockquote | address | center">

<!ENTITY % block
    "p | %heading; | div | %lists; | %blocktext; | isindex | fieldset | table">

<!-- %Flow; mixes block and inline and is used for list items etc. -->
<!ENTITY % Flow "(#PCDATA | %block; | form | %inline; | %misc;)*">

<!--===== Content models for exclusions =====>

<!-- a elements use %Inline; excluding a -->

<!ENTITY % a.content
    "(#PCDATA | %special; | %fontstyle; | %phrase; | %inline.forms; | %misc.inline;)*">

<!-- pre uses %Inline excluding img, object, applet, big, small,
    sub, sup, font, or basefont -->

<!ENTITY % pre.content
    "(#PCDATA | a | %special.basic; | %fontstyle.basic; | %phrase.basic; |
        %inline.forms; | %misc.inline;)*">

<!-- form uses %Flow; excluding form -->

<!ENTITY % form.content "(#PCDATA | %block; | %inline; | %misc;)*">

<!-- button uses %Flow; but excludes a, form, form controls, iframe -->

<!ENTITY % button.content
    "(#PCDATA | p | %heading; | div | %lists; | %blocktext; |
        table | br | span | bdo | object | applet | img | map |
        %fontstyle; | %phrase; | %misc;)*">

<!--===== Document Structure =====>

<!-- the namespace URI designates the document profile -->

<!ELEMENT html (head, frameset)>
<!ATTLIST html
    %i18n;
    id ID #IMPLIED
    xmlns %URI; #FIXED 'http://www.w3.org/1999/xhtml'
>

<!--===== Document Head =====>

<!ENTITY % head.misc "(script|style|meta|link|object|isindex)*">

<!-- content model is %head.misc; combined with a single
    title and an optional base element in any order -->

<!ELEMENT head (%head.misc;,
    ((title, %head.misc;, (base, %head.misc;)?) |
    (base, %head.misc;, (title, %head.misc;))))>

```

```

<!ATTLIST head
  %i18n;
  id          ID          #IMPLIED
  profile     %URI;       #IMPLIED
>

<!-- The title element is not considered part of the flow of text.
      It should be displayed, for example as the page header or
      window title. Exactly one title is required per document.
-->
<!ELEMENT title (#PCDATA)>
<!ATTLIST title
  %i18n;
  id          ID          #IMPLIED
>

<!-- document base URI -->

<!ELEMENT base EMPTY>
<!ATTLIST base
  id          ID          #IMPLIED
  href        %URI;       #IMPLIED
  target      %FrameTarget; #IMPLIED
>

<!-- generic metainformation -->
<!ELEMENT meta EMPTY>
<!ATTLIST meta
  %i18n;
  id          ID          #IMPLIED
  http-equiv  CDATA       #IMPLIED
  name        CDATA       #IMPLIED
  content     CDATA       #REQUIRED
  scheme      CDATA       #IMPLIED
>

<!--
  Relationship values can be used in principle:

  a) for document specific toolbars/menus when used
     with the link element in document head e.g.
       start, contents, previous, next, index, end, help
  b) to link to a separate style sheet (rel="stylesheet")
  c) to make a link to a script (rel="script")
  d) by stylesheets to control how collections of
     html nodes are rendered into printed documents
  e) to make a link to a printable version of this document
     e.g. a PostScript or PDF version (rel="alternate" media="print")
-->

<!ELEMENT link EMPTY>
<!ATTLIST link
  %attrs;
  charset     %Charset;    #IMPLIED
  href        %URI;       #IMPLIED
  hreflang    %LanguageCode; #IMPLIED
  type        %ContentType; #IMPLIED
  rel         %LinkTypes;  #IMPLIED
  rev         %LinkTypes;  #IMPLIED
  media       %MediaDesc;   #IMPLIED
  target      %FrameTarget; #IMPLIED
>

<!-- style info, which may include CDATA sections -->

```



```

<!ELEMENT style (#PCDATA)>
<!ATTLIST style
  %i18n;
  id          ID          #IMPLIED
  type        %ContentType; #REQUIRED
  media       %MediaDesc;  #IMPLIED
  title       %Text;       #IMPLIED
  xml:space   (preserve)   #FIXED 'preserve'
>

<!-- script statements, which may include CDATA sections -->
<!ELEMENT script (#PCDATA)>
<!ATTLIST script
  id          ID          #IMPLIED
  charset     %Charset;   #IMPLIED
  type        %ContentType; #REQUIRED
  language    CDATA      #IMPLIED
  src         %URI;       #IMPLIED
  defer       (defer)     #IMPLIED
  xml:space   (preserve)   #FIXED 'preserve'
>

<!-- alternate content container for non script-based rendering -->

<!ELEMENT noscript %Flow;>
<!ATTLIST noscript
  %attrs;
>

<!--===== Frames =====>

<!-- only one noframes element permitted per document -->

<!ELEMENT frameset (frameset|frame|noframes)*>
<!ATTLIST frameset
  %coreattrs;
  rows      %MultiLengths; #IMPLIED
  cols      %MultiLengths; #IMPLIED
  onload    %Script;       #IMPLIED
  onunload  %Script;       #IMPLIED
>

<!-- reserved frame names start with "_" otherwise starts with letter -->

<!-- tiled window within frameset -->

<!ELEMENT frame EMPTY>
<!ATTLIST frame
  %coreattrs;
  longdesc  %URI;          #IMPLIED
  name      NMTOKEN        #IMPLIED
  src       %URI;          #IMPLIED
  frameborder (1|0)       "1"
  marginwidth %Pixels;     #IMPLIED
  marginheight %Pixels;    #IMPLIED
  noresize   (noresize)    #IMPLIED
  scrolling  (yes|no|auto)  "auto"
>

<!-- inline subwindow -->

<!ELEMENT iframe %Flow;>
<!ATTLIST iframe
  %coreattrs;
  longdesc  %URI;          #IMPLIED

```

```

    name      NMTOKEN      #IMPLIED
    src        %URI;          #IMPLIED
    frameborder (1|0)      "1"
    marginwidth %Pixels;      #IMPLIED
    marginheight %Pixels;    #IMPLIED
    scrolling   (yes|no|auto) "auto"
    align      %ImgAlign;    #IMPLIED
    height     %Length;     #IMPLIED
    width      %Length;     #IMPLIED
  >

<!-- alternate content container for non frame-based rendering -->

<!ELEMENT noframes (body)>
<!ATTLIST noframes
  %attrs;
>

<!--===== Document Body =====>

<!ELEMENT body %Flow;>
<!ATTLIST body
  %attrs;
  onload      %Script;      #IMPLIED
  onunload    %Script;      #IMPLIED
  background  %URI;          #IMPLIED
  bgcolor     %Color;       #IMPLIED
  text        %Color;       #IMPLIED
  link        %Color;       #IMPLIED
  vlink       %Color;       #IMPLIED
  alink       %Color;       #IMPLIED
>

<!ELEMENT div %Flow;> <!-- generic language/style container -->
<!ATTLIST div
  %attrs;
  %TextAlign;
>

<!--===== Paragraphs =====>

<!ELEMENT p %Inline;>
<!ATTLIST p
  %attrs;
  %TextAlign;
>

<!--===== Headings =====>

<!--
  There are six levels of headings from h1 (the most important)
  to h6 (the least important).
-->

<!ELEMENT h1 %Inline;>
<!ATTLIST h1
  %attrs;
  %TextAlign;
>

<!ELEMENT h2 %Inline;>
<!ATTLIST h2
  %attrs;
  %TextAlign;
>

```

```

<!ELEMENT h3 %Inline;>
<!ATTLIST h3
  %attrs;
  %TextAlign;
>

<!ELEMENT h4 %Inline;>
<!ATTLIST h4
  %attrs;
  %TextAlign;
>

<!ELEMENT h5 %Inline;>
<!ATTLIST h5
  %attrs;
  %TextAlign;
>

<!ELEMENT h6 %Inline;>
<!ATTLIST h6
  %attrs;
  %TextAlign;
>

<!--===== Lists =====>

<!-- Unordered list bullet styles -->

<!ENTITY % ULStyle "(disc|square|circle)">

<!-- Unordered list -->

<!ELEMENT ul (li)+>
<!ATTLIST ul
  %attrs;
  type %ULStyle; #IMPLIED
  compact (compact) #IMPLIED
>

<!-- Ordered list numbering style

    1 arabic numbers      1, 2, 3, ...
    a lower alpha        a, b, c, ...
    A upper alpha        A, B, C, ...
    i lower roman        i, ii, iii, ...
    I upper roman        I, II, III, ...

    The style is applied to the sequence number which by default
    is reset to 1 for the first list item in an ordered list.
-->
<!ENTITY % OLStyle "CDATA">

<!-- Ordered (numbered) list -->

<!ELEMENT ol (li)+>
<!ATTLIST ol
  %attrs;
  type %OLStyle; #IMPLIED
  compact (compact) #IMPLIED
  start %Number; #IMPLIED
>

<!-- single column list (DEPRECATED) -->
<!ELEMENT menu (li)+>

```

```

<!ATTLIST menu
  %attrs;
  compact      (compact)      #IMPLIED
>

<!-- multiple column list (DEPRECATED) -->
<!ELEMENT dir (li)+>
<!ATTLIST dir
  %attrs;
  compact      (compact)      #IMPLIED
>

<!-- LIStyle is constrained to: "(%ULStyle;|%OLStyle;)" -->
<!ENTITY % LIStyle "CDATA">

<!-- list item -->

<!ELEMENT li %Flow;>
<!ATTLIST li
  %attrs;
  type         %LIStyle;      #IMPLIED
  value        %Number;      #IMPLIED
>

<!-- definition lists - dt for term, dd for its definition -->

<!ELEMENT dl (dt|dd)+>
<!ATTLIST dl
  %attrs;
  compact      (compact)      #IMPLIED
>

<!ELEMENT dt %Inline;>
<!ATTLIST dt
  %attrs;
>

<!ELEMENT dd %Flow;>
<!ATTLIST dd
  %attrs;
>

<!--===== Address =====>

<!-- information on author -->

<!ELEMENT address (#PCDATA | %inline; | %misc.inline; | p)*>
<!ATTLIST address
  %attrs;
>

<!--===== Horizontal Rule =====>

<!ELEMENT hr EMPTY>
<!ATTLIST hr
  %attrs;
  align        (left|center|right) #IMPLIED
  noshade      (noshade)          #IMPLIED
  size         %Pixels;           #IMPLIED
  width        %Length;          #IMPLIED
>

<!--===== Preformatted Text =====>

<!-- content is %Inline; excluding

```

"img|object|applet|big|small|sub|sup|font|basefont" -->

```
<!ELEMENT pre %pre.content;>
```

```
<!ATTLIST pre
  %attrs;
  width      %Number;      #IMPLIED
  xml:space  (preserve)    #FIXED 'preserve'
>
```

<!--===== Block-like Quotes =====>

```
<!ELEMENT blockquote %Flow;>
```

```
<!ATTLIST blockquote
  %attrs;
  cite      %URI;          #IMPLIED
>
```

<!--===== Text alignment =====>

```
<!-- center content -->
<!ELEMENT center %Flow;>
<!ATTLIST center
  %attrs;
>
```

<!--===== Inserted/Deleted Text =====>

```
<!--
  ins/del are allowed in block and inline content, but its
  inappropriate to include block content within an ins element
  occurring in inline content.
-->
```

```
<!ELEMENT ins %Flow;>
<!ATTLIST ins
  %attrs;
  cite      %URI;          #IMPLIED
  datetime  %Datetime;     #IMPLIED
>
```

```
<!ELEMENT del %Flow;>
<!ATTLIST del
  %attrs;
  cite      %URI;          #IMPLIED
  datetime  %Datetime;     #IMPLIED
>
```

<!--===== The Anchor Element =====>

```
<!-- content is %Inline; except that anchors shouldn't be nested -->
```

```
<!ELEMENT a %a.content;>
```

```
<!ATTLIST a
  %attrs;
  %focus;
  charset   %Charset;      #IMPLIED
  type      %ContentType;  #IMPLIED
  name      NMTOKEN        #IMPLIED
  href      %URI;          #IMPLIED
  hreflang  %LanguageCode; #IMPLIED
  rel       %LinkTypes;    #IMPLIED
  rev       %LinkTypes;    #IMPLIED
  shape     %Shape;        "rect"
  coords    %Coords;       #IMPLIED
  target    %FrameTarget;  #IMPLIED
>
```

```
>

<!--===== Inline Elements =====>

<!ELEMENT span %Inline;> <!-- generic language/style container -->
<!ATTLIST span
  %attrs;
>

<!ELEMENT bdo %Inline;> <!-- I18N BiDi over-ride -->
<!ATTLIST bdo
  %coreattrs;
  %events;
  lang %LanguageCode; #IMPLIED
  xml:lang %LanguageCode; #IMPLIED
  dir (ltr|rtl) #REQUIRED
>

<!ELEMENT br EMPTY> <!-- forced line break -->
<!ATTLIST br
  %coreattrs;
  clear (left|all|right|none) "none"
>

<!ELEMENT em %Inline;> <!-- emphasis -->
<!ATTLIST em %attrs;>

<!ELEMENT strong %Inline;> <!-- strong emphasis -->
<!ATTLIST strong %attrs;>

<!ELEMENT dfn %Inline;> <!-- definitional -->
<!ATTLIST dfn %attrs;>

<!ELEMENT code %Inline;> <!-- program code -->
<!ATTLIST code %attrs;>

<!ELEMENT samp %Inline;> <!-- sample -->
<!ATTLIST samp %attrs;>

<!ELEMENT kbd %Inline;> <!-- something user would type -->
<!ATTLIST kbd %attrs;>

<!ELEMENT var %Inline;> <!-- variable -->
<!ATTLIST var %attrs;>

<!ELEMENT cite %Inline;> <!-- citation -->
<!ATTLIST cite %attrs;>

<!ELEMENT abbr %Inline;> <!-- abbreviation -->
<!ATTLIST abbr %attrs;>

<!ELEMENT acronym %Inline;> <!-- acronym -->
<!ATTLIST acronym %attrs;>

<!ELEMENT q %Inline;> <!-- inlined quote -->
<!ATTLIST q
  %attrs;
  cite %URI; #IMPLIED
>

<!ELEMENT sub %Inline;> <!-- subscript -->
<!ATTLIST sub %attrs;>

<!ELEMENT sup %Inline;> <!-- superscript -->
<!ATTLIST sup %attrs;>
```

```

<!ELEMENT tt %Inline;>    <!-- fixed pitch font -->
<!ATTLIST tt %attrs;>

<!ELEMENT i %Inline;>    <!-- italic font -->
<!ATTLIST i %attrs;>

<!ELEMENT b %Inline;>    <!-- bold font -->
<!ATTLIST b %attrs;>

<!ELEMENT big %Inline;>    <!-- bigger font -->
<!ATTLIST big %attrs;>

<!ELEMENT small %Inline;>    <!-- smaller font -->
<!ATTLIST small %attrs;>

<!ELEMENT u %Inline;>    <!-- underline -->
<!ATTLIST u %attrs;>

<!ELEMENT s %Inline;>    <!-- strike-through -->
<!ATTLIST s %attrs;>

<!ELEMENT strike %Inline;>    <!-- strike-through -->
<!ATTLIST strike %attrs;>

<!ELEMENT basefont EMPTY>    <!-- base font size -->
<!ATTLIST basefont
  id          ID          #IMPLIED
  size        CDATA       #REQUIRED
  color       %Color;     #IMPLIED
  face        CDATA       #IMPLIED
>

<!ELEMENT font %Inline;>    <!-- local change to font -->
<!ATTLIST font
  %coreattrs;
  %il8n;
  size        CDATA       #IMPLIED
  color       %Color;     #IMPLIED
  face        CDATA       #IMPLIED
>

<!--===== Object =====>
<!--
  object is used to embed objects as part of HTML pages.
  param elements should precede other content. Parameters
  can also be expressed as attribute/value pairs on the
  object element itself when brevity is desired.
-->

<!ELEMENT object (#PCDATA | param | %block; | form | %inline; | %misc;)*>
<!ATTLIST object
  %attrs;
  declare      (declare)    #IMPLIED
  classid      %URI;        #IMPLIED
  codebase     %URI;        #IMPLIED
  data         %URI;        #IMPLIED
  type         %ContentType; #IMPLIED
  codetype     %ContentType; #IMPLIED
  archive      %UriList;    #IMPLIED
  standby      %Text;          #IMPLIED
  height       %Length;    #IMPLIED
  width        %Length;    #IMPLIED
  usemap       %URI;        #IMPLIED
  name         NMTOKEN      #IMPLIED

```

```

    tabindex      %Number;          #IMPLIED
    align         %ImgAlign;       #IMPLIED
    border        %Pixels;          #IMPLIED
    hspace        %Pixels;          #IMPLIED
    vspace        %Pixels;          #IMPLIED
  >

<!--
  param is used to supply a named property value.
  In XML it would seem natural to follow RDF and support an
  abbreviated syntax where the param elements are replaced
  by attribute value pairs on the object start tag.
-->
<!ELEMENT param EMPTY>
<!ATTLIST param
    id          ID          #IMPLIED
    name        CDATA       #REQUIRED
    value       CDATA       #IMPLIED
    datatype    (data|ref|object) "data"
    type        %ContentType; #IMPLIED
  >

<!--===== Java applet =====>
<!--
  One of code or object attributes must be present.
  Place param elements before other content.
-->
<!ELEMENT applet (#PCDATA | param | %block; | form | %inline; | %misc;)*>
<!ATTLIST applet
    %coreattrs;
    codebase    %URI;          #IMPLIED
    archive     CDATA        #IMPLIED
    code        CDATA        #IMPLIED
    object      CDATA        #IMPLIED
    alt         %Text;          #IMPLIED
    name        NMTOKEN      #IMPLIED
    width       %Length;       #REQUIRED
    height      %Length;       #REQUIRED
    align       %ImgAlign;     #IMPLIED
    hspace      %Pixels;       #IMPLIED
    vspace      %Pixels;       #IMPLIED
  >

<!--===== Images =====>

<!--
  To avoid accessibility problems for people who aren't
  able to see the image, you should provide a text
  description using the alt and longdesc attributes.
  In addition, avoid the use of server-side image maps.
-->

<!ELEMENT img EMPTY>
<!ATTLIST img
    %attrs;
    src         %URI;          #REQUIRED
    alt         %Text;          #REQUIRED
    name        NMTOKEN      #IMPLIED
    longdesc    %URI;          #IMPLIED
    height      %Length;       #IMPLIED
    width       %Length;       #IMPLIED
    usemap      %URI;          #IMPLIED
    ismap       (ismap)      #IMPLIED
    align       %ImgAlign;     #IMPLIED
    border      %Pixels;       #IMPLIED

```



```

hspace      %Pixels;      #IMPLIED
vspace      %Pixels;      #IMPLIED
>

<!-- usemap points to a map element which may be in this document
      or an external document, although the latter is not widely supported -->

<!--===== Client-side image maps =====>

<!-- These can be placed in the same document or grouped in a
      separate document although this isn't yet widely supported -->

<!ELEMENT map ((%block; | form | %misc;)+ | area+)>
<!ATTLIST map
  %i18n;
  %events;
  id          ID          #REQUIRED
  class       CDATA       #IMPLIED
  style       %StyleSheet; #IMPLIED
  title       %Text;      #IMPLIED
  name        NMTOKEN     #IMPLIED
>

<!ELEMENT area EMPTY>
<!ATTLIST area
  %attrs;
  %focus;
  shape       %Shape;      "rect"
  coords      %Coords;     #IMPLIED
  href        %URI;        #IMPLIED
  nohref      (nohref)    #IMPLIED
  alt         %Text;      #REQUIRED
  target      %FrameTarget; #IMPLIED
>

<!--===== Forms =====>

<!ELEMENT form %form.content;>  <!-- forms shouldn't be nested -->

<!ATTLIST form
  %attrs;
  action      %URI;        #REQUIRED
  method      (get|post)   "get"
  name        NMTOKEN     #IMPLIED
  enctype     %ContentType; "application/x-www-form-urlencoded"
  onsubmit    %Script;     #IMPLIED
  onreset     %Script;     #IMPLIED
  accept      %ContentTypes; #IMPLIED
  accept-charset %Charsets; #IMPLIED
  target      %FrameTarget; #IMPLIED
>

<!--
  Each label must not contain more than ONE field
  Label elements shouldn't be nested.
-->
<!ELEMENT label %Inline;>
<!ATTLIST label
  %attrs;
  for         IDREF       #IMPLIED
  accesskey   %Character; #IMPLIED
  onfocus    %Script;     #IMPLIED
  onblur      %Script;     #IMPLIED
>

```

```

<!ENTITY % InputType
    "(text | password | checkbox |
     radio | submit | reset |
     file | hidden | image | button)"
>

<!-- the name attribute is required for all but submit & reset -->

<!ELEMENT input EMPTY>          <!-- form control -->
<!ATTLIST input
    %attrs;
    %focus;
    type          %InputType;      "text"
    name          CDATA              #IMPLIED
    value         CDATA              #IMPLIED
    checked       (checked)          #IMPLIED
    disabled      (disabled)         #IMPLIED
    readonly      (readonly)         #IMPLIED
    size          CDATA              #IMPLIED
    maxlength     %Number;          #IMPLIED
    src           %URI;            #IMPLIED
    alt           CDATA              #IMPLIED
    usemap        %URI;            #IMPLIED
    onselect      %Script;         #IMPLIED
    onchange      %Script;         #IMPLIED
    accept        %ContentTypes;  #IMPLIED
    align         %ImgAlign;       #IMPLIED
>

<!ELEMENT select (optgroup|option)+>  <!-- option selector -->
<!ATTLIST select
    %attrs;
    name          CDATA              #IMPLIED
    size          %Number;          #IMPLIED
    multiple      (multiple)         #IMPLIED
    disabled      (disabled)         #IMPLIED
    tabindex      %Number;          #IMPLIED
    onfocus      %Script;         #IMPLIED
    onblur        %Script;         #IMPLIED
    onchange      %Script;         #IMPLIED
>

<!ELEMENT optgroup (option)+>         <!-- option group -->
<!ATTLIST optgroup
    %attrs;
    disabled      (disabled)         #IMPLIED
    label         %Text;            #REQUIRED
>

<!ELEMENT option (#PCDATA)>           <!-- selectable choice -->
<!ATTLIST option
    %attrs;
    selected      (selected)         #IMPLIED
    disabled      (disabled)         #IMPLIED
    label         %Text;            #IMPLIED
    value         CDATA              #IMPLIED
>

<!ELEMENT textarea (#PCDATA)>         <!-- multi-line text field -->
<!ATTLIST textarea
    %attrs;
    %focus;
    name          CDATA              #IMPLIED
    rows          %Number;          #REQUIRED
    cols          %Number;          #REQUIRED

```

```

disabled      (disabled)      #IMPLIED
readonly      (readonly)      #IMPLIED
onselect      %Script;        #IMPLIED
onchange      %Script;        #IMPLIED
>

<!--
The fieldset element is used to group form fields.
Only one legend element should occur in the content
and if present should only be preceded by whitespace.
-->
<!ELEMENT fieldset (#PCDATA | legend | %block; | form | %inline; | %misc;)*>
<!ATTLIST fieldset
  %attrs;
>

<!ENTITY % LAlign "(top|bottom|left|right)">

<!ELEMENT legend %Inline;>      <!-- fieldset label -->
<!ATTLIST legend
  %attrs;
  accesskey    %Character;      #IMPLIED
  align        %LAlign;         #IMPLIED
>

<!--
Content is %Flow; excluding a, form, form controls, iframe
-->
<!ELEMENT button %button.content;> <!-- push button -->
<!ATTLIST button
  %attrs;
  %focus;
  name         CDATA            #IMPLIED
  value        CDATA            #IMPLIED
  type         (button|submit|reset) "submit"
  disabled     (disabled)      #IMPLIED
>

<!-- single-line text input control (DEPRECATED) -->
<!ELEMENT isindex EMPTY>
<!ATTLIST isindex
  %coreattrs;
  %i18n;
  prompt       %Text;          #IMPLIED
>

<!--===== Tables =====>

<!-- Derived from IETF HTML table standard, see [RFC1942] -->

<!--
The border attribute sets the thickness of the frame around the
table. The default units are screen pixels.

The frame attribute specifies which parts of the frame around
the table should be rendered. The values are not the same as
CALS to avoid a name clash with the valign attribute.
-->
<!ENTITY % TFrame "(void|above|below|hsides|lhs|rhs|vsides|box|border)">

<!--
The rules attribute defines which rules to draw between cells:

If rules is absent then assume:
  "none" if border is absent or border="0" otherwise "all"

```

```

-->

<!ENTITY % TRules "(none | groups | rows | cols | all)">

<!-- horizontal placement of table relative to document -->
<!ENTITY % TAlign "(left|center|right)">

<!-- horizontal alignment attributes for cell contents

    char          alignment char, e.g. char=":"
    charoff        offset for alignment char
-->
<!ENTITY % cellhalign
    "align        (left|center|right|justify|char) #IMPLIED
     char         %Character;          #IMPLIED
     charoff      %Length;            #IMPLIED"
>

<!-- vertical alignment attributes for cell contents -->
<!ENTITY % cellvalign
    "valign       (top|middle|bottom|baseline) #IMPLIED"
>

<!ELEMENT table
    (caption?, (col*|colgroup*), thead?, tfoot?, (tbody+|tr+))>
<!ELEMENT caption %Inline;>
<!ELEMENT thead    (tr)+>
<!ELEMENT tfoot    (tr)+>
<!ELEMENT tbody   (tr)+>
<!ELEMENT colgroup (col)*>
<!ELEMENT col      EMPTY>
<!ELEMENT tr       (th|td)+>
<!ELEMENT th       %Flow;>
<!ELEMENT td       %Flow;>

<!ATTLIST table
    %attrs;
    summary      %Text;          #IMPLIED
    width        %Length;        #IMPLIED
    border       %Pixels;        #IMPLIED
    frame        %TFrame;          #IMPLIED
    rules        %TRules;          #IMPLIED
    cellpadding %Length;        #IMPLIED
    cellspacing %Length;        #IMPLIED
    align        %TAlign;          #IMPLIED
    bgcolor      %Color;          #IMPLIED
>

<!ENTITY % CAlign "(top|bottom|left|right)">

<!ATTLIST caption
    %attrs;
    align        %CAlign;          #IMPLIED
>

<!--
colgroup groups a set of col elements. It allows you to group
several semantically related columns together.
-->
<!ATTLIST colgroup
    %attrs;
    span         %Number;          "1"
    width        %MultiLength;      #IMPLIED
    %cellhalign;
    %cellvalign;

```

```

>

<!--
col elements define the alignment properties for cells in
one or more columns.

The width attribute specifies the width of the columns, e.g.

    width=64           width in screen pixels
    width=0.5*         relative width of 0.5

The span attribute causes the attributes of one
col element to apply to more than one column.
-->
<!ATTLIST col
    %attrs;
    span          %Number;          "1"
    width         %MultiLength;     #IMPLIED
    %cellhalign;
    %cellvalign;
>

<!--
    Use thead to duplicate headers when breaking table
    across page boundaries, or for static headers when
    tbody sections are rendered in scrolling panel.

    Use tfoot to duplicate footers when breaking table
    across page boundaries, or for static footers when
    tbody sections are rendered in scrolling panel.

    Use multiple tbody sections when rules are needed
    between groups of table rows.
-->
<!ATTLIST thead
    %attrs;
    %cellhalign;
    %cellvalign;
>

<!ATTLIST tfoot
    %attrs;
    %cellhalign;
    %cellvalign;
>

<!ATTLIST tbody
    %attrs;
    %cellhalign;
    %cellvalign;
>

<!ATTLIST tr
    %attrs;
    %cellhalign;
    %cellvalign;
    bgcolor       %Color;          #IMPLIED
>

<!-- Scope is simpler than headers attribute for common tables -->
<!ENTITY % Scope "(row|col|rowgroup|colgroup)">

<!-- th is for headers, td for data and for cells acting as both -->

<!ATTLIST th

```

```

%attrs;
abbr      %Text;      #IMPLIED
axis      CDATA       #IMPLIED
headers   IDREFS      #IMPLIED
scope     %Scope;    #IMPLIED
rowspan   %Number;    "1"
colspan   %Number;    "1"
%cellhalign;
%cellvalign;
nowrap    (nowrap)    #IMPLIED
bgcolor   %Color;     #IMPLIED
width     %Pixels;    #IMPLIED
height    %Pixels;    #IMPLIED
>

<!ATTLIST td
%attrs;
abbr      %Text;      #IMPLIED
axis      CDATA       #IMPLIED
headers   IDREFS      #IMPLIED
scope     %Scope;    #IMPLIED
rowspan   %Number;    "1"
colspan   %Number;    "1"
%cellhalign;
%cellvalign;
nowrap    (nowrap)    #IMPLIED
bgcolor   %Color;     #IMPLIED
width     %Pixels;    #IMPLIED
height    %Pixels;    #IMPLIED
>

```

A.2. Entity Sets

The XHTML entity sets are the same as for HTML 4, but have been modified to be valid XML 1.0 entity declarations. Note the entity for the Euro currency sign (€ or € or €) is defined as part of the special characters.

A.2.1. Latin-1 characters

The file [DTD/xhtml-lat1.ent](http://www.w3.org/TR/xhtml1/DTD/xhtml-lat1.ent) is a normative part of this specification. Its annotated contents are included here for completeness.

```

<!-- Portions (C) International Organization for Standardization 1986
      Permission to copy in any form is granted for use with
      conforming SGML systems and applications as defined in
      ISO 8879, provided this notice is included in all copies.
-->
<!-- Character entity set. Typical invocation:
      <!ENTITY % HTMLlat1 PUBLIC
          "-//W3C//ENTITIES Latin 1 for XHTML//EN"
          "http://www.w3.org/TR/xhtml1/DTD/xhtml-lat1.ent">
      %HTMLlat1;
-->

<!ENTITY nbsp      "&#160;"> <!-- no-break space = non-breaking space,
                                U+00A0 ISOnum -->
<!ENTITY iexcl     "&#161;"> <!-- inverted exclamation mark, U+00A1 ISOnum -->
<!ENTITY cent      "&#162;"> <!-- cent sign, U+00A2 ISOnum -->
<!ENTITY pound     "&#163;"> <!-- pound sign, U+00A3 ISOnum -->

```

```
<!ENTITY curren "&#164;"> <!-- currency sign, U+00A4 ISONum -->
<!ENTITY yen    "&#165;"> <!-- yen sign = yuan sign, U+00A5 ISONum -->
<!ENTITY brvbar "&#166;"> <!-- broken bar = broken vertical bar,
                             U+00A6 ISONum -->
<!ENTITY sect   "&#167;"> <!-- section sign, U+00A7 ISONum -->
<!ENTITY uml    "&#168;"> <!-- diaeresis = spacing diaeresis,
                             U+00A8 ISODia -->
<!ENTITY copy   "&#169;"> <!-- copyright sign, U+00A9 ISONum -->
<!ENTITY ordf   "&#170;"> <!-- feminine ordinal indicator, U+00AA ISONum -->
<!ENTITY laquo  "&#171;"> <!-- left-pointing double angle quotation mark
                             = left pointing guillemet, U+00AB ISONum -->
<!ENTITY not    "&#172;"> <!-- not sign = angled dash,
                             U+00AC ISONum -->
<!ENTITY shy    "&#173;"> <!-- soft hyphen = discretionary hyphen,
                             U+00AD ISONum -->
<!ENTITY reg    "&#174;"> <!-- registered sign = registered trade mark sign,
                             U+00AE ISONum -->
<!ENTITY macr   "&#175;"> <!-- macron = spacing macron = overline
                             = APL overbar, U+00AF ISODia -->
<!ENTITY deg    "&#176;"> <!-- degree sign, U+00B0 ISONum -->
<!ENTITY plusmn "&#177;"> <!-- plus-minus sign = plus-or-minus sign,
                             U+00B1 ISONum -->
<!ENTITY sup2   "&#178;"> <!-- superscript two = superscript digit two
                             = squared, U+00B2 ISONum -->
<!ENTITY sup3   "&#179;"> <!-- superscript three = superscript digit three
                             = cubed, U+00B3 ISONum -->
<!ENTITY acute  "&#180;"> <!-- acute accent = spacing acute,
                             U+00B4 ISODia -->
<!ENTITY micro  "&#181;"> <!-- micro sign, U+00B5 ISONum -->
<!ENTITY para   "&#182;"> <!-- pilcrow sign = paragraph sign,
                             U+00B6 ISONum -->
<!ENTITY middot "&#183;"> <!-- middle dot = Georgian comma
                             = Greek middle dot, U+00B7 ISONum -->
<!ENTITY cedil  "&#184;"> <!-- cedilla = spacing cedilla, U+00B8 ISODia -->
<!ENTITY sup1   "&#185;"> <!-- superscript one = superscript digit one,
                             U+00B9 ISONum -->
<!ENTITY ordm   "&#186;"> <!-- masculine ordinal indicator,
                             U+00BA ISONum -->
<!ENTITY raquo  "&#187;"> <!-- right-pointing double angle quotation mark
                             = right pointing guillemet, U+00BB ISONum -->
<!ENTITY frac14 "&#188;"> <!-- vulgar fraction one quarter
                             = fraction one quarter, U+00BC ISONum -->
<!ENTITY frac12 "&#189;"> <!-- vulgar fraction one half
                             = fraction one half, U+00BD ISONum -->
<!ENTITY frac34 "&#190;"> <!-- vulgar fraction three quarters
                             = fraction three quarters, U+00BE ISONum -->
<!ENTITY iquest "&#191;"> <!-- inverted question mark
                             = turned question mark, U+00BF ISONum -->
<!ENTITY Agrave "&#192;"> <!-- latin capital letter A with grave
                             = latin capital letter A grave,
                             U+00C0 ISOLat1 -->
<!ENTITY Aacute "&#193;"> <!-- latin capital letter A with acute,
                             U+00C1 ISOLat1 -->
<!ENTITY Acirc  "&#194;"> <!-- latin capital letter A with circumflex,
                             U+00C2 ISOLat1 -->
<!ENTITY Atilde "&#195;"> <!-- latin capital letter A with tilde,
                             U+00C3 ISOLat1 -->
<!ENTITY Auml   "&#196;"> <!-- latin capital letter A with diaeresis,
                             U+00C4 ISOLat1 -->
<!ENTITY Aring  "&#197;"> <!-- latin capital letter A with ring above
                             = latin capital letter A ring,
                             U+00C5 ISOLat1 -->
<!ENTITY AElig  "&#198;"> <!-- latin capital letter AE
                             = latin capital ligature AE,
                             U+00C6 ISOLat1 -->
```

```
<!ENTITY Ccedil "&#199;"> <!-- latin capital letter C with cedilla,
                                U+00C7 ISolat1 -->
<!ENTITY Egrave "&#200;"> <!-- latin capital letter E with grave,
                                U+00C8 ISolat1 -->
<!ENTITY Eacute "&#201;"> <!-- latin capital letter E with acute,
                                U+00C9 ISolat1 -->
<!ENTITY Ecirc "&#202;"> <!-- latin capital letter E with circumflex,
                                U+00CA ISolat1 -->
<!ENTITY Euml "&#203;"> <!-- latin capital letter E with diaeresis,
                                U+00CB ISolat1 -->
<!ENTITY Igrave "&#204;"> <!-- latin capital letter I with grave,
                                U+00CC ISolat1 -->
<!ENTITY Iacute "&#205;"> <!-- latin capital letter I with acute,
                                U+00CD ISolat1 -->
<!ENTITY Icirc "&#206;"> <!-- latin capital letter I with circumflex,
                                U+00CE ISolat1 -->
<!ENTITY Iuml "&#207;"> <!-- latin capital letter I with diaeresis,
                                U+00CF ISolat1 -->
<!ENTITY ETH "&#208;"> <!-- latin capital letter ETH, U+00D0 ISolat1 -->
<!ENTITY Ntilde "&#209;"> <!-- latin capital letter N with tilde,
                                U+00D1 ISolat1 -->
<!ENTITY Ograve "&#210;"> <!-- latin capital letter O with grave,
                                U+00D2 ISolat1 -->
<!ENTITY Oacute "&#211;"> <!-- latin capital letter O with acute,
                                U+00D3 ISolat1 -->
<!ENTITY Ocirc "&#212;"> <!-- latin capital letter O with circumflex,
                                U+00D4 ISolat1 -->
<!ENTITY Otilde "&#213;"> <!-- latin capital letter O with tilde,
                                U+00D5 ISolat1 -->
<!ENTITY Ouml "&#214;"> <!-- latin capital letter O with diaeresis,
                                U+00D6 ISolat1 -->
<!ENTITY times "&#215;"> <!-- multiplication sign, U+00D7 ISOnum -->
<!ENTITY Oslash "&#216;"> <!-- latin capital letter O with stroke
                                = latin capital letter O slash,
                                U+00D8 ISolat1 -->
<!ENTITY Ugrave "&#217;"> <!-- latin capital letter U with grave,
                                U+00D9 ISolat1 -->
<!ENTITY Uacute "&#218;"> <!-- latin capital letter U with acute,
                                U+00DA ISolat1 -->
<!ENTITY Ucirc "&#219;"> <!-- latin capital letter U with circumflex,
                                U+00DB ISolat1 -->
<!ENTITY Uuml "&#220;"> <!-- latin capital letter U with diaeresis,
                                U+00DC ISolat1 -->
<!ENTITY Yacute "&#221;"> <!-- latin capital letter Y with acute,
                                U+00DD ISolat1 -->
<!ENTITY THORN "&#222;"> <!-- latin capital letter THORN,
                                U+00DE ISolat1 -->
<!ENTITY szlig "&#223;"> <!-- latin small letter sharp s = ess-zed,
                                U+00DF ISolat1 -->
<!ENTITY agrave "&#224;"> <!-- latin small letter a with grave
                                = latin small letter a grave,
                                U+00E0 ISolat1 -->
<!ENTITY aacute "&#225;"> <!-- latin small letter a with acute,
                                U+00E1 ISolat1 -->
<!ENTITY acirc "&#226;"> <!-- latin small letter a with circumflex,
                                U+00E2 ISolat1 -->
<!ENTITY atilde "&#227;"> <!-- latin small letter a with tilde,
                                U+00E3 ISolat1 -->
<!ENTITY auml "&#228;"> <!-- latin small letter a with diaeresis,
                                U+00E4 ISolat1 -->
<!ENTITY aring "&#229;"> <!-- latin small letter a with ring above
                                = latin small letter a ring,
                                U+00E5 ISolat1 -->
<!ENTITY aelig "&#230;"> <!-- latin small letter ae
                                = latin small ligature ae, U+00E6 ISolat1 -->
```



```

<!ENTITY ccedil "&#231;"> <!-- latin small letter c with cedilla,
                                U+00E7 ISolat1 -->
<!ENTITY egrave "&#232;"> <!-- latin small letter e with grave,
                                U+00E8 ISolat1 -->
<!ENTITY eacute "&#233;"> <!-- latin small letter e with acute,
                                U+00E9 ISolat1 -->
<!ENTITY ecirc "&#234;"> <!-- latin small letter e with circumflex,
                                U+00EA ISolat1 -->
<!ENTITY euml "&#235;"> <!-- latin small letter e with diaeresis,
                                U+00EB ISolat1 -->
<!ENTITY igrave "&#236;"> <!-- latin small letter i with grave,
                                U+00EC ISolat1 -->
<!ENTITY iacute "&#237;"> <!-- latin small letter i with acute,
                                U+00ED ISolat1 -->
<!ENTITY icirc "&#238;"> <!-- latin small letter i with circumflex,
                                U+00EE ISolat1 -->
<!ENTITY iuml "&#239;"> <!-- latin small letter i with diaeresis,
                                U+00EF ISolat1 -->
<!ENTITY eth "&#240;"> <!-- latin small letter eth, U+00F0 ISolat1 -->
<!ENTITY ntilde "&#241;"> <!-- latin small letter n with tilde,
                                U+00F1 ISolat1 -->
<!ENTITY ograve "&#242;"> <!-- latin small letter o with grave,
                                U+00F2 ISolat1 -->
<!ENTITY oacute "&#243;"> <!-- latin small letter o with acute,
                                U+00F3 ISolat1 -->
<!ENTITY ocirc "&#244;"> <!-- latin small letter o with circumflex,
                                U+00F4 ISolat1 -->
<!ENTITY otilde "&#245;"> <!-- latin small letter o with tilde,
                                U+00F5 ISolat1 -->
<!ENTITY ouml "&#246;"> <!-- latin small letter o with diaeresis,
                                U+00F6 ISolat1 -->
<!ENTITY divide "&#247;"> <!-- division sign, U+00F7 ISOnum -->
<!ENTITY oslash "&#248;"> <!-- latin small letter o with stroke,
                                = latin small letter o slash,
                                U+00F8 ISolat1 -->
<!ENTITY ugrave "&#249;"> <!-- latin small letter u with grave,
                                U+00F9 ISolat1 -->
<!ENTITY uacute "&#250;"> <!-- latin small letter u with acute,
                                U+00FA ISolat1 -->
<!ENTITY ucirc "&#251;"> <!-- latin small letter u with circumflex,
                                U+00FB ISolat1 -->
<!ENTITY uuml "&#252;"> <!-- latin small letter u with diaeresis,
                                U+00FC ISolat1 -->
<!ENTITY yacute "&#253;"> <!-- latin small letter y with acute,
                                U+00FD ISolat1 -->
<!ENTITY thorn "&#254;"> <!-- latin small letter thorn,
                                U+00FE ISolat1 -->
<!ENTITY yuml "&#255;"> <!-- latin small letter y with diaeresis,
                                U+00FF ISolat1 -->

```

A.2.2. Special characters

The file [DTD/xhtml-special.ent](https://www.w3.org/TR/xhtml1/DTD/xhtml-special.ent) is a normative part of this specification. Its annotated contents are included here for completeness.

```

<!-- Special characters for XHTML -->

<!-- Character entity set. Typical invocation:
    <!ENTITY % HTMLspecial PUBLIC
        "-//W3C//ENTITIES Special for XHTML//EN"
        "http://www.w3.org/TR/xhtml1/DTD/xhtml-special.ent">
    %HTMLspecial;
-->

```

```
<!-- Portions (C) International Organization for Standardization 1986:
      Permission to copy in any form is granted for use with
      conforming SGML systems and applications as defined in
      ISO 8879, provided this notice is included in all copies.
-->

<!-- Relevant ISO entity set is given unless names are newly introduced.
      New names (i.e., not in ISO 8879 list) do not clash with any
      existing ISO 8879 entity names. ISO 10646 character numbers
      are given for each character, in hex. values are decimal
      conversions of the ISO 10646 values and refer to the document
      character set. Names are Unicode names.
-->

<!-- C0 Controls and Basic Latin -->
<!ENTITY quot    "&#34;"> <!-- quotation mark, U+0022 ISOnum -->
<!ENTITY amp     "&#38;#38;"> <!-- ampersand, U+0026 ISOnum -->
<!ENTITY lt      "&#38;#60;"> <!-- less-than sign, U+003C ISOnum -->
<!ENTITY gt      "&#62;"> <!-- greater-than sign, U+003E ISOnum -->
<!ENTITY apos    "&#39;"> <!-- apostrophe = APL quote, U+0027 ISOnum -->

<!-- Latin Extended-A -->
<!ENTITY OElig   "&#338;"> <!-- latin capital ligature OE,
                           U+0152 ISolat2 -->
<!ENTITY oelig   "&#339;"> <!-- latin small ligature oe, U+0153 ISolat2 -->
<!-- ligature is a misnomer, this is a separate character in some languages -->
<!ENTITY Scaron  "&#352;"> <!-- latin capital letter S with caron,
                           U+0160 ISolat2 -->
<!ENTITY scaron  "&#353;"> <!-- latin small letter s with caron,
                           U+0161 ISolat2 -->
<!ENTITY Yuml    "&#376;"> <!-- latin capital letter Y with diaeresis,
                           U+0178 ISolat2 -->

<!-- Spacing Modifier Letters -->
<!ENTITY circ    "&#710;"> <!-- modifier letter circumflex accent,
                           U+02C6 ISOpub -->
<!ENTITY tilde   "&#732;"> <!-- small tilde, U+02DC ISodia -->

<!-- General Punctuation -->
<!ENTITY ensp    "&#8194;"> <!-- en space, U+2002 ISOpub -->
<!ENTITY emsp    "&#8195;"> <!-- em space, U+2003 ISOpub -->
<!ENTITY thinsp  "&#8201;"> <!-- thin space, U+2009 ISOpub -->
<!ENTITY zwnj    "&#8204;"> <!-- zero width non-joiner,
                           U+200C NEW RFC 2070 -->
<!ENTITY zwj     "&#8205;"> <!-- zero width joiner, U+200D NEW RFC 2070 -->
<!ENTITY lrm     "&#8206;"> <!-- left-to-right mark, U+200E NEW RFC 2070 -->
<!ENTITY rlm     "&#8207;"> <!-- right-to-left mark, U+200F NEW RFC 2070 -->
<!ENTITY ndash   "&#8211;"> <!-- en dash, U+2013 ISOpub -->
<!ENTITY mdash   "&#8212;"> <!-- em dash, U+2014 ISOpub -->
<!ENTITY lsquo   "&#8216;"> <!-- left single quotation mark,
                           U+2018 ISOnum -->
<!ENTITY rsquo   "&#8217;"> <!-- right single quotation mark,
                           U+2019 ISOnum -->
<!ENTITY sbquo   "&#8218;"> <!-- single low-9 quotation mark, U+201A NEW -->
<!ENTITY ldquo   "&#8220;"> <!-- left double quotation mark,
                           U+201C ISOnum -->
<!ENTITY rdquo   "&#8221;"> <!-- right double quotation mark,
                           U+201D ISOnum -->
<!ENTITY bdquo   "&#8222;"> <!-- double low-9 quotation mark, U+201E NEW -->
<!ENTITY dagger  "&#8224;"> <!-- dagger, U+2020 ISOpub -->
<!ENTITY Dagger  "&#8225;"> <!-- double dagger, U+2021 ISOpub -->
<!ENTITY permil  "&#8240;"> <!-- per mille sign, U+2030 ISotech -->
<!ENTITY lsquo   "&#8249;"> <!-- single left-pointing angle quotation mark,
                           U+2039 ISO proposed -->
```

```

<!-- lsaquo is proposed but not yet ISO standardized -->
<!ENTITY rsquo "&#8250;"> <!-- single right-pointing angle quotation mark,
                                U+203A ISO proposed -->
<!-- rsquo is proposed but not yet ISO standardized -->

<!-- Currency Symbols -->
<!ENTITY euro "&#8364;"> <!-- euro sign, U+20AC NEW -->

```

A.2.3. Symbols

The file [DTD/xhtml-symbol.ent](http://www.w3.org/TR/xhtml1/DTD/xhtml-symbol.ent) is a normative part of this specification. Its annotated contents are included here for completeness.

```

<!-- Mathematical, Greek and Symbolic characters for XHTML -->

<!-- Character entity set. Typical invocation:
    <!ENTITY % HTMLsymbol PUBLIC
        "-//W3C//ENTITIES Symbols for XHTML//EN"
        "http://www.w3.org/TR/xhtml1/DTD/xhtml-symbol.ent">
    %HTMLsymbol;
-->

<!-- Portions (C) International Organization for Standardization 1986:
    Permission to copy in any form is granted for use with
    conforming SGML systems and applications as defined in
    ISO 8879, provided this notice is included in all copies.
-->

<!-- Relevant ISO entity set is given unless names are newly introduced.
    New names (i.e., not in ISO 8879 list) do not clash with any
    existing ISO 8879 entity names. ISO 10646 character numbers
    are given for each character, in hex. values are decimal
    conversions of the ISO 10646 values and refer to the document
    character set. Names are Unicode names.
-->

<!-- Latin Extended-B -->
<!ENTITY fnof "&#402;"> <!-- latin small letter f with hook = function
                                = florin, U+0192 ISOtech -->

<!-- Greek -->
<!ENTITY Alpha "&#913;"> <!-- greek capital letter alpha, U+0391 -->
<!ENTITY Beta "&#914;"> <!-- greek capital letter beta, U+0392 -->
<!ENTITY Gamma "&#915;"> <!-- greek capital letter gamma,
                                U+0393 ISOgrk3 -->
<!ENTITY Delta "&#916;"> <!-- greek capital letter delta,
                                U+0394 ISOgrk3 -->
<!ENTITY Epsilon "&#917;"> <!-- greek capital letter epsilon, U+0395 -->
<!ENTITY Zeta "&#918;"> <!-- greek capital letter zeta, U+0396 -->
<!ENTITY Eta "&#919;"> <!-- greek capital letter eta, U+0397 -->
<!ENTITY Theta "&#920;"> <!-- greek capital letter theta,
                                U+0398 ISOgrk3 -->
<!ENTITY Iota "&#921;"> <!-- greek capital letter iota, U+0399 -->
<!ENTITY Kappa "&#922;"> <!-- greek capital letter kappa, U+039A -->
<!ENTITY Lambda "&#923;"> <!-- greek capital letter lamda,
                                U+039B ISOgrk3 -->
<!ENTITY Mu "&#924;"> <!-- greek capital letter mu, U+039C -->
<!ENTITY Nu "&#925;"> <!-- greek capital letter nu, U+039D -->
<!ENTITY Xi "&#926;"> <!-- greek capital letter xi, U+039E ISOgrk3 -->
<!ENTITY Omicron "&#927;"> <!-- greek capital letter omicron, U+039F -->
<!ENTITY Pi "&#928;"> <!-- greek capital letter pi, U+03A0 ISOgrk3 -->
<!ENTITY Rho "&#929;"> <!-- greek capital letter rho, U+03A1 -->
<!-- there is no Sigmaf, and no U+03A2 character either -->

```

```
<!-- General Punctuation -->
```

```

                                U+203E NEW -->
<!ENTITY frasl      "&#8260;"> <!-- fraction slash, U+2044 NEW -->

<!-- Letterlike Symbols -->
<!ENTITY weierp     "&#8472;"> <!-- script capital P = power set
                                = Weierstrass p, U+2118 ISOamso -->
<!ENTITY image      "&#8465;"> <!-- black-letter capital I = imaginary part,
                                U+2111 ISOamso -->
<!ENTITY real       "&#8476;"> <!-- black-letter capital R = real part symbol,
                                U+211C ISOamso -->
<!ENTITY trade      "&#8482;"> <!-- trade mark sign, U+2122 ISOnum -->
<!ENTITY alefsym    "&#8501;"> <!-- alef symbol = first transfinite cardinal,
                                U+2135 NEW -->
<!-- alef symbol is NOT the same as hebrew letter alef,
    U+05D0 although the same glyph could be used to depict both characters -->

<!-- Arrows -->
<!ENTITY larr       "&#8592;"> <!-- leftwards arrow, U+2190 ISOnum -->
<!ENTITY uarr       "&#8593;"> <!-- upwards arrow, U+2191 ISOnum -->
<!ENTITY rarr       "&#8594;"> <!-- rightwards arrow, U+2192 ISOnum -->
<!ENTITY darr       "&#8595;"> <!-- downwards arrow, U+2193 ISOnum -->
<!ENTITY harr       "&#8596;"> <!-- left right arrow, U+2194 ISOamsa -->
<!ENTITY crarr      "&#8629;"> <!-- downwards arrow with corner leftwards
                                = carriage return, U+21B5 NEW -->
<!ENTITY lArr       "&#8656;"> <!-- leftwards double arrow, U+21D0 ISotech -->
<!-- Unicode does not say that lArr is the same as the 'is implied by' arrow
    but also does not have any other character for that function. So lArr can
    be used for 'is implied by' as ISotech suggests -->
<!ENTITY uArr       "&#8657;"> <!-- upwards double arrow, U+21D1 ISOamsa -->
<!ENTITY rArr       "&#8658;"> <!-- rightwards double arrow,
                                U+21D2 ISotech -->
<!-- Unicode does not say this is the 'implies' character but does not have
    another character with this function so rArr can be used for 'implies'
    as ISotech suggests -->
<!ENTITY dArr       "&#8659;"> <!-- downwards double arrow, U+21D3 ISOamsa -->
<!ENTITY hArr       "&#8660;"> <!-- left right double arrow,
                                U+21D4 ISOamsa -->

<!-- Mathematical Operators -->
<!ENTITY forall     "&#8704;"> <!-- for all, U+2200 ISotech -->
<!ENTITY part       "&#8706;"> <!-- partial differential, U+2202 ISotech -->
<!ENTITY exist      "&#8707;"> <!-- there exists, U+2203 ISotech -->
<!ENTITY empty      "&#8709;"> <!-- empty set = null set, U+2205 ISOamso -->
<!ENTITY nabla      "&#8711;"> <!-- nabla = backward difference,
                                U+2207 ISotech -->
<!ENTITY isin       "&#8712;"> <!-- element of, U+2208 ISotech -->
<!ENTITY notin      "&#8713;"> <!-- not an element of, U+2209 ISotech -->
<!ENTITY ni         "&#8715;"> <!-- contains as member, U+220B ISotech -->
<!ENTITY prod       "&#8719;"> <!-- n-ary product = product sign,
                                U+220F ISOamsb -->
<!-- prod is NOT the same character as U+03A0 'greek capital letter pi' though
    the same glyph might be used for both -->
<!ENTITY sum        "&#8721;"> <!-- n-ary summation, U+2211 ISOamsb -->
<!-- sum is NOT the same character as U+03A3 'greek capital letter sigma'
    though the same glyph might be used for both -->
<!ENTITY minus      "&#8722;"> <!-- minus sign, U+2212 ISotech -->
<!ENTITY lowast     "&#8727;"> <!-- asterisk operator, U+2217 ISotech -->
<!ENTITY radic      "&#8730;"> <!-- square root = radical sign,
                                U+221A ISotech -->
<!ENTITY prop       "&#8733;"> <!-- proportional to, U+221D ISotech -->
<!ENTITY infin      "&#8734;"> <!-- infinity, U+221E ISotech -->
<!ENTITY ang        "&#8736;"> <!-- angle, U+2220 ISOamso -->
<!ENTITY and        "&#8743;"> <!-- logical and = wedge, U+2227 ISotech -->
<!ENTITY or         "&#8744;"> <!-- logical or = vee, U+2228 ISotech -->
<!ENTITY cap        "&#8745;"> <!-- intersection = cap, U+2229 ISotech -->

```

```

<!ENTITY cup      "&#8746;"> <!-- union = cup, U+222A ISOTech -->
<!ENTITY int      "&#8747;"> <!-- integral, U+222B ISOTech -->
<!ENTITY there4   "&#8756;"> <!-- therefore, U+2234 ISOTech -->
<!ENTITY sim      "&#8764;"> <!-- tilde operator = varies with = similar to,
                                U+223C ISOTech -->
<!-- tilde operator is NOT the same character as the tilde, U+007E,
      although the same glyph might be used to represent both -->
<!ENTITY cong     "&#8773;"> <!-- approximately equal to, U+2245 ISOTech -->
<!ENTITY asymp    "&#8776;"> <!-- almost equal to = asymptotic to,
                                U+2248 ISOamsr -->
<!ENTITY ne       "&#8800;"> <!-- not equal to, U+2260 ISOTech -->
<!ENTITY equiv    "&#8801;"> <!-- identical to, U+2261 ISOTech -->
<!ENTITY le       "&#8804;"> <!-- less-than or equal to, U+2264 ISOTech -->
<!ENTITY ge       "&#8805;"> <!-- greater-than or equal to,
                                U+2265 ISOTech -->
<!ENTITY sub      "&#8834;"> <!-- subset of, U+2282 ISOTech -->
<!ENTITY sup      "&#8835;"> <!-- superset of, U+2283 ISOTech -->
<!ENTITY nsub     "&#8836;"> <!-- not a subset of, U+2284 ISOamsn -->
<!ENTITY sube     "&#8838;"> <!-- subset of or equal to, U+2286 ISOTech -->
<!ENTITY supe     "&#8839;"> <!-- superset of or equal to,
                                U+2287 ISOTech -->
<!ENTITY oplus    "&#8853;"> <!-- circled plus = direct sum,
                                U+2295 ISOamsb -->
<!ENTITY otimes   "&#8855;"> <!-- circled times = vector product,
                                U+2297 ISOamsb -->
<!ENTITY perp     "&#8869;"> <!-- up tack = orthogonal to = perpendicular,
                                U+22A5 ISOTech -->
<!ENTITY sdot     "&#8901;"> <!-- dot operator, U+22C5 ISOamsb -->
<!-- dot operator is NOT the same character as U+00B7 middle dot -->

<!-- Miscellaneous Technical -->
<!ENTITY lceil    "&#8968;"> <!-- left ceiling = APL upstile,
                                U+2308 ISOamsc -->
<!ENTITY rceil    "&#8969;"> <!-- right ceiling, U+2309 ISOamsc -->
<!ENTITY lfloor   "&#8970;"> <!-- left floor = APL downstile,
                                U+230A ISOamsc -->
<!ENTITY rfloor   "&#8971;"> <!-- right floor, U+230B ISOamsc -->
<!ENTITY lang     "&#9001;"> <!-- left-pointing angle bracket = bra,
                                U+2329 ISOTech -->
<!-- lang is NOT the same character as U+003C 'less than sign'
      or U+2039 'single left-pointing angle quotation mark' -->
<!ENTITY rang     "&#9002;"> <!-- right-pointing angle bracket = ket,
                                U+232A ISOTech -->
<!-- rang is NOT the same character as U+003E 'greater than sign'
      or U+203A 'single right-pointing angle quotation mark' -->

<!-- Geometric Shapes -->
<!ENTITY loz      "&#9674;"> <!-- lozenge, U+25CA ISOpub -->

<!-- Miscellaneous Symbols -->
<!ENTITY spades   "&#9824;"> <!-- black spade suit, U+2660 ISOpub -->
<!-- black here seems to mean filled as opposed to hollow -->
<!ENTITY clubs    "&#9827;"> <!-- black club suit = shamrock,
                                U+2663 ISOpub -->
<!ENTITY hearts   "&#9829;"> <!-- black heart suit = valentine,
                                U+2665 ISOpub -->
<!ENTITY diams    "&#9830;"> <!-- black diamond suit, U+2666 ISOpub -->

```

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