

Additional explanation of the section locMap

3.2	locMap?	ID, xml:lang, source
3.2.1	dataItem*	ID, xml:lang, source, varRef, nCubeRef
3.2.1.1	CubeCoord*	ID, xml:lang, source, coordNo, coordVal, coordValRef
3.2.1.2	physLoc*	ID, xml:lang, source, type, recRef, startPos, width, endPos

The location map (section 3.2) of the DTD was added so that all physical description information would now be located within section 3. The location element (4.2.1) under the variable element was NOT removed from the DTD in order to retain backward validity for any instances written according to version 1.00 or 1.01. The attribute locMap (an IDREF to the ID of element 3.2 locMap) was added to element 4.2.1 location, to use as a pointer to the location information in section 3. The recommendation is that all future instances of codebook xml files be written using the locMap element for physical location descriptions. Engines that search collections of mixed xml instances can search for the location element in the variable and either find the information directly or be referred to the locMap. The coordValRef attribute in CubeCoord is used when the coordVal is a stored value in a microdata variable.

The locMap serves as a means of mapping the logical content description of data items found in sections 4.2 (var) and 4.3 (nCube) and any number of physical storage instances for a particular data item. For example:

Microdata:

```
<var ID='AGE'>
  <location locMap='LM'/>
  <labl level='var'>Age</labl>
  <catgry>
    <catValue>1</catValue>
    <labl level='catValue'>under 18</labl>
  </catgry>
  <catgry>
    <catValue>2</catValue>
    <labl level='catValue'>18 and over</labl>
  </catgry>
</var>
```

```
<var ID='SEX'>
  <location locMap='LM'/>
  <labl level='var'>Sex</labl>
  <catgry>
    <catValue>1</catValue>
    <labl level='catValue'>Male</labl>
  </catgry>
  <catgry>
```

```

    <catValue>2</catValue>
    <labl level='catValue'>Female</labl>
  </catgry>
</var>

```

The corresponding locMap information would include

```

<locMap ID='LM'>
  <dataItem varRef='AGE'>
    <physLoc recRef='Rec1' startPos='300' width='1' endPos='300' />
  </dataItem>
  <dataItem varRef='AGE'>
    <physLoc recRef='Rec1' startPos='301' width='1' endPos='301' />
  </dataItem>
</locMap>

```

The attribute varRef in dataItem points to the logical description found in the var with the ID indicated.

If there were multiple storage instances of the data file (say as an ascii file and as a dBase file) a second physLoc element could be added to each with the appropriate attribute references. Note that a recRef refers to a record group within a specific file and inherits the file name and specifications of its storage information.

Aggregate:

```

<var ID='AGE'>
  <labl level='var'>Age</labl>
  <catgry>
    <catValue>1</catValue>
    <labl level='catValue'>under 18</labl>
  </catgry>
  <catgry>
    <catValue>2</catValue>
    <labl level='catValue'>18 and over</labl>
  </catgry>
</var>

```

```

<var ID='SEX'>
  <labl level='var'>Sex</labl>
  <catgry>
    <catValue>1</catValue>
    <labl level='catValue'>Male</labl>
  </catgry>
</var>

```

```

</catgry>
<catgry>
  <catValue>2</catValue>
  <labl level='catValue'>Female</labl>
</catgry>
</var>

<nCube ID='C1'>
  <location locMap='LM'>
    <labl level='nCube'>Age by Sex</labl>
    <dmns rank='1' varRef='AGE'>
    <dmns rank='2' varRef='SEX'>
  </nCube>

```

The corresponding locMap information would include:

```

<locMap ID='LM'>
  <dataItem nCube='C1'>
    <cubeCoord coordNo='1' coordVal='1'>
    <cubeCoord coordNo='2' coordVal='1'>
    <physLoc recRef='Rec1' startPos='300' width='9' endPos='308'>
  </dataItem>
  <dataItem nCube='C1'>
    <cubeCoord coordNo='1' coordVal='1'>
    <cubeCoord coordNo='2' coordVal='2'>
    <physLoc recRef='Rec1' startPos='309' width='9' endPos='317'>
  </dataItem>
  <dataItem nCube='C1'>
    <cubeCoord coordNo='1' coordVal='2'>
    <cubeCoord coordNo='2' coordVal='1'>
    <physLoc recRef='Rec1' startPos='318' width='9' endPos='326'>
  </dataItem>
  <dataItem nCube='C1'>
    <cubeCoord coordNo='1' coordVal='2'>
    <cubeCoord coordNo='2' coordVal='2'>
    <physLoc recRef='Rec1' startPos='327' width='9' endPos='335'>
  </dataItem>
</locMap>

```