

To: Daniel Kinney, Chair CC:DA  
From: MAGERT Committee on Cataloging and Classification  
Subject: Rule change proposals for cartographic materials

The Anglo-American Cataloguing Committee for Cartographic Materials met in Washington, D.C., September 8-14, 1998 to revise *Cartographic Materials: A Manual of Interpretation for AACR2*. All five member countries, Australia, Canada, New Zealand, the United Kingdom, and the United States were represented. While two of the countries (Australia and the United Kingdom) did not send representatives from their national cataloging agency the spokesperson for that country had conferred with and were also serving as representatives for their national cataloging agency.

The participants in the meeting were: Paige Andrew (Pennsylvania State University) representing the Northeast Map Organization (NEMO); HelenJane Armstrong (University of Florida) representing the Committee on Southeast Map Libraries, Southeast Division, Association of American Geographers (COSML); Francis Herbert (Royal Geographical Society) representing the British and Irish Committee on Map Information and Catalogue Systems (BRICMICS); Judy Kuhagen (Library of Congress, Cataloging Policy and Support Office) representing the Library; Mary Larsgaard (University of California, Santa Barbara) representing the American Library Association, Map and Geography Round Table (ALA/MAGERT) and the Western Association of Map Libraries (WAML); Elizabeth Mangan (Library of Congress, Geography and Map Division) Secretariat; Dorothy McGarry (retired) representing the Special Libraries Association (SLA); Velma Parker (National Archives of Canada) representing the Archives; Dorothy Prescott (retired), representing the Australian Map Curator Circle; Barbara Story (Library of Congress, Geography and Map Division) representing the Library; Michela (Shay) Turnbull (National Library of New Zealand) representing the National Library; and Grace Welch (University of Ottawa) representing the Association of Canadian Map Libraries and Archives (ACMLA).

In addition to reviewing the text of *Cartographic Materials* for consistency with the 1988 revision of AACR2 as well as subsequent updates, the committee incorporated additional rules to accommodate information prescribed by the U.S. Federal Geographic Data Committee's *Content Standards for Digital Geospatial Metadata*. Because there was not time during the week long meeting to fully analyze and evaluate changes needed to accommodate electronic resources, an international subcommittee was formed to look at the cataloging for cartographic electronic resources. The subcommittee was made up of members from Canada and the United States, the countries which have produced a considerable amount of digital spatial data and which need to process it. The subcommittee's recommendations have been incorporated as part of this document. An international committee to look at the cataloging of rare cartographic materials, with members from Australia, Canada, and the United Kingdom, was also formed. While this subcommittee's work has not yet been completed, we are not anticipating any changes to the rules, but rather a consolidation of what is prescribed for rare materials in general. The following suggested rule changes and new rules are the result of the committee's work to either incorporate new data or to clarify the existing text to reflect actual cataloging practice of all five countries.

## CURRENT RULE

**1.1C1.** Choose one of the lists of general material designations given below and use terms from the chosen list in all descriptions for which general material designation is desired.<sup>1</sup>

If general material designations are to be used in cataloguing, British agencies should use terms from list 1 and agencies in Australia, Canada, and the United States should use terms from list 2.<sup>2</sup>

### LIST 1

braille  
cartographic material  
computer file  
graphic  
manuscript  
microform  
motion picture  
multimedia  
music  
object  
sound recording  
text  
videorecording

### LIST 2

activity card  
art original  
art reproduction  
braille  
chart  
computer file  
diorama  
filmstrip  
flash card  
game  
globe  
kit  
manuscript  
map  
microform  
microscope slide  
model  
picture  
motion picture  
music  
picture  
realia  
slide  
sound recording  
technical drawing  
text  
toy  
transparency  
videorecording

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1. In all subsequent examples, other than those directly illustrating general material designations, the general material designation when indicated is given as [GMD]. The use of [GMD] in examples does not imply that a designation is required.

2. The following rules apply to list 2: (1) use *map* for cartographic charts, not *chart*; (2) for material treated in AACR2 chapter 8, use *picture* for any item not subsumed under one of the other terms in list 2; (3) use *technical drawings* for items fitting the definition of this term in AACR2 Glossary. Appendix D, for architectural renderings, however, use *art original* or *picture*, not *technical drawing*; (4) use *kit* for any item containing more than one type of material if the relative predominance of components is not easily determinable and for the single-medium packages sometimes called "lab kits."

Central Europe [GMD]  
Camden's Britannia, 1695 [GMD]  
Decca aeronautical plotting chart [GMD]

For materials for the visually impaired, add (*large print*) or (*tactile*), when appropriate, to any term in list 2. Add (*braille*), when appropriate to any term in list 2 other than *braille* or *text*.

... [map (braille, tactile)]  
... [music (braille)]  
... [text (large print)]

## PROPOSED RULE

**1.1C1.** Choose one of the lists of general material designations given below and use terms from the chosen list in all descriptions for which general material designation is desired.<sup>1</sup>

If general material designations are to be used in cataloguing, British agencies should use terms from list 1 and agencies in Australia, Canada, and the United States should use terms from list 2.<sup>2</sup>

### LIST 1

braille  
cartographic material  
computer file  
graphic  
manuscript  
microform  
motion picture  
multimedia  
music  
object  
sound recording  
text  
videorecording

### LIST 2

activity card  
art original  
art reproduction  
braille  
chart  
cartographic material  
computer file  
diorama  
filmstrip  
flash card  
game  
~~globe~~  
kit  
manuscript  
~~map~~  
microform

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1. In all subsequent examples, other than those directly illustrating general material designations, the general material designation when indicated is given as [GMD]. The use of [GMD] in examples does not imply that a designation is required.

2. The following rules apply to list 2: (1) use ~~map~~ cartographic material for cartographic charts, not *chart*; (2) for material treated in AACR2 chapter 8, use *picture* for any item not subsumed under one of the other terms in list 2; (3) use *technical drawings* for items fitting the definition of this term in AACR2 Glossary. Appendix D, for architectural renderings, however, use *art original* or *picture*, not *technical drawing*; (4) use *kit* for any item containing more than one type of material if the relative predominance of components is not easily determinable and for the single-medium packages sometimes called "lab kits."

microscope slide  
model  
picture  
motion picture  
music  
picture  
realia  
slide  
sound recording  
technical drawing  
text  
toy  
transparency  
videorecording

Central Europe [GMD]  
Camden's Britannia, 1695 [GMD]  
Decca aeronautical plotting chart [GMD]

For materials for the visually impaired, add (*large print*) or (*tactile*), when appropriate, to any term in list 2. Add (*braille*), when appropriate to any term in list 2 other than *braille* or *text*.

... [~~map~~ cartographic material (braille, tactile)]  
... [music (braille)]  
... [text (large print)]

## **CURRENT RULE**

**1.1C3.** If the item is a reproduction in one material of a work originally presented in another material (e.g., a map as microform; a map on a slide), give the general material designation appropriate to the material being described (e.g., in the case of a map on a slide, give the designation appropriate to the slide).

## **PROPOSED RULE**

**1.1C3.** If the item is a reproduction in one material of a work originally presented in another material (e.g., a map as microform; a map on a slide), give the general material designation appropriate to the material being described followed by the general material designation for the carrier, separated by space, semicolon, space ( ; ) (e.g., in the case of a map on a slide, give the designation appropriate to the slide).

Town of Preston, with views of principal business buildings [cartographic material ; microform]

**NEW RULE**

1.1C5. If an item and its carrier are represented by different general material designations, give the general material designation for the intellectual content followed by the general material designation for the carrier.

Delorme's streetfinder [cartographic material ; computer file]

## **CURRENT RULE**

**3.1B3.** If the chief source of information bears more than one title, choose the title proper as instructed in 1.1B8. If both or all of the titles are in the same language and script, choose the title proper on the basis of the sequence or layout of the titles. If these are insufficient to enable the choice to be made or are ambiguous, choose the most comprehensive title.

## **PROPOSED RULE**

**3.1B3.** If the chief source of information bears more than one title, choose the title proper as instructed in 1.1B8. If both or all of the titles are in the same language and script, choose the title proper on the basis of the sequence or layout of the titles. If these are insufficient to enable the choice to be made or are ambiguous, choose the most comprehensive title.

Give the source of the title proper in a note (see 3.7B3) when the title proper is taken from the verso of the item, or from its container or cover, or when the title proper is a panel title.

### **CURRENT RULE**

**3.1F2.** Add a word or phrase to the statement of responsibility if the relationship between the title and the person(s) or body (bodies) named in the statement is not clear.

Maps of the Mid-west [GMD] / [edited by] D.M. Bagley

### **DELETE RULE**

~~**3.1F2.** Add a word or phrase to the statement of responsibility if the relationship between the title and the person(s) or body (bodies) named in the statement is not clear.~~

~~Maps of the Mid-west [GMD] / [edited by] D.M. Bagley~~

## **CURRENT RULE**

### **3.3. MATHEMATICAL DATA AREA**

Contents:

- 3A. Preliminary rule
- 3B. Statement of scale
- 3C. Statement of projection
- 3D. Statement of coordinates and equinox

## **PROPOSED RULE**

### **3.3. MATHEMATICAL AND OTHER MATERIAL-SPECIFIC DETAILS DATA AREA**

Contents:

- 3A. Preliminary rule
- 3B. Statement of scale
- 3C. Statement of projection
- 3D. Statement of coordinates and equinox
- 3E. File characteristics
- 3F. Digital graphic representation
- 3G. Geo-spatial reference data
- 3H. Numeric and other data related to serials

## NEW RULE

3.3A3. This area is repeatable.

Scale 1:7,150,000. 1 cm = 71.5 km or 1 in. = 13 miles (E 73<sup>0</sup>-E 135<sup>0</sup>/N 54<sup>0</sup>-N 18<sup>0</sup>). –  
Scale 1:6 000 000. 1 cm = 60 km or 1 in. = 94.7 miles ; Albers conical equal area proj.,  
standard parallels 24<sup>0</sup> and 48<sup>0</sup> (E 66<sup>0</sup>-E 142<sup>0</sup>/N 54<sup>0</sup>-N 14<sup>0</sup>)

Scale 1:50,000 (W 95<sup>0</sup>10'-W 94<sup>0</sup>18'/N 50<sup>0</sup>30'-N 49<sup>0</sup>45'). – Scale 1:50,000 (W 93<sup>0</sup>30'-W  
92<sup>0</sup>30'/N 50<sup>0</sup>00'-N 49<sup>0</sup>45')

Scale 1:250,000 (W 80<sup>0</sup>-W 78<sup>0</sup>/N 47<sup>0</sup>-N 46<sup>0</sup>). – Scale 1:50,000 (W 80<sup>0</sup>00'-W 78<sup>0</sup>30'/N  
46<sup>0</sup>45'-N 46<sup>0</sup>00')

**NEW RULE**

3.3A4. If more than one material specific detail area is required, give them in the following order: mathematical data, file characteristics, and numeric and/or alphabetic, chronological, or other designation.

Scale not applicable (W 138°59'–W 93°47'/N 74°25'–N 69°16'). – Computer data  
(17 files : 692,560,000 bytes)

## CURRENT RULE

**3.3B1.** Give the scale of a cartographic item (except as noted below) as a representative fraction expressed as a ratio (1: ). Precede the ratio by *Scale*. Give the scale even if it is already recorded as part of the title proper or other title information.

Scale ca. 1:36,000,000  
(*Scale as it appears on the item*)

Bartholomew one inch map of the Lake District [GMD]. – Rev. – Scale 1:63,360

If a scale statement found in the chief source of information or accompanying material is not expressed as a representative fraction give it as a representative fraction in square brackets.

Scale [1:253,440]  
(*Scale statement reads: 1 inch to 4 miles*)

If a representative fraction or other scale statement is found in a source other than the chief source of information or accompanying materials (e.g., on a container or case not used as the chief source), give the scale as a representative fraction in square brackets.

Scale [1:63,360]

If no scale statement is found in the chief source of information or accompanying material or on the item's container or case, compute a representative fraction from a bar graph or a grid or by comparison with a map of known scale, and give it in square brackets preceded by *ca.*

Scale [ca. 1:63,360]

If no scale can be determined by any of the above means, give *Scale indeterminate*.

## PROPOSED RULE

**3.3B1.** Give the scale of a cartographic item (except as noted below) as a representative fraction expressed as a ratio (1: ). Precede the ratio by *Scale*. Give the scale even if it is already recorded as part of the title proper or other title information.

Scale ca. 1:36,000,000  
(*Scale as it appears on the item*)

Bartholomew one inch map of the Lake District [GMD]. – Rev. – Scale 1:63,360

If a scale statement found in the chief source of information or accompanying material is not expressed as a representative fraction give it as a representative fraction in square brackets.

Scale [1:253,440]  
(*Scale statement reads: 1 inch to 4 miles*)

If a representative fraction or other scale statement is found in a source other than the chief source of information or accompanying materials (e.g., on a container or case not used as the chief source), give the scale as a representative fraction in square brackets.

Scale [1:63,360]

If no scale statement is found in the chief source of information or accompanying material or on the item's container or case, ~~compute~~ estimate a representative fraction from a bar ~~graph~~ scale or a grid ~~or by comparison with a map of known scale, and give it in square brackets preceded by ca.~~ Give the representative fraction preceded by ca. in square brackets.

Scale [ca. 1:63,360]

If no scale can be determined by any of the above means, give *Scale indeterminate not given*. Optionally, estimate a scale by comparison with a map of known scale and give it in square brackets preceded by ca. If no scale can be determined by either estimate or comparison, give the statement *Scale indeterminate*.

**3.3B2** examples

**CURRENT EXAMPLES**

Scale 1:59 403 960. “Along meridians only, 1 inch = 936 statute miles”

Scale [ca. 1:90 000] not “1 inch to the mile”

**PROPOSED EXAMPLES**

Scale 1:59 403 960. “Along meridians only, 1 ~~inch~~ in. = 936 statute miles”

Scale [ca. 1:90 000] not “1 ~~inch~~ in. to the mile”

**CURRENT RULE**

**3.3B4.** If the description is of a multipart item with two scales, give both. Give the larger scale first.

Scale 1:100,000 and 1:200,000

**PROPOSED RULE**

**3.3B4.** If the description is of a multipart item with two scales, give both in separate scale statements. Give the larger scale first.

Scale 1:100,000 ~~and~~ – Scale 1:200,000

**CURRENT RULE**

**3.3B5.** If the description is of a multipart item with three or more scales, give *Scales vary*.

**PROPOSED RULE**

**3.3B5.** If the description is of a multipart item with three or more scales, give *Scales vary* ~~vary~~ differ.

### **CURRENT RULE**

**3.3B6.** In describing a cartographic item in which all the main maps are of one or two scales, give the scale or both scales (in the latter case give the larger scale first). If the main maps are of three or more scales, give *Scales vary*.

### **PROPOSED RULE**

**3.3B6.** In describing a cartographic item in which all the main maps are of one or two scales, give the scale or both scales (in the latter case give the larger scale first). If the main maps are of three or more scales, give *Scales ~~vary~~ differ*.

### **CURRENT RULE**

**3.3B7.** Give a statement of scale for celestial charts, maps of imaginary places, views (bird's-eye views or map views), and maps with nonlinear scales only if the information appears on the item. If the item is not drawn to scale, give *Not drawn to scale*.

### **PROPOSED RULE**

**3.3B7.** Give a statement of scale for celestial charts, maps of imaginary places, views (bird's-eye views or map views), and maps with nonlinear scales only if the information appears on the item. If the item is not drawn to a consistent scale, give *Not drawn to scale*.

## CURRENT RULE

**3.3B8.** In describing a relief model or other three-dimensional item, give the vertical scale (specified as such) after the horizontal scale if the vertical scale can be ascertained.

## PROPOSED RULE

**3.3B8.** In describing a relief model ~~or~~ or other three-dimensional item or a two-dimensional representation of a three-dimensional item (e.g., block diagram, profile), give the vertical scale (specified as such) after the horizontal scale if the vertical scale can be ascertained.

## NEW RULE

**3.3B9.** For electronic resources give the statement *Scale not applicable*.

Optionally, if the electronic resource was encoded from a cartographic item, give the scale of the cartographic item as a representative fraction according to the preceding rules. Precede the ratio by *Input scale*.

Input scale [ca. 1:500,000]

Input scale 1:1,000,000

**3.3C1. examples**

**CURRENT EXAMPLES**

conic equidistant proj.

**PROPOSED EXAMPLE**

~~conic~~ Conic equidistant proj.

## CURRENT RULE

**3.3C2.** *Optional addition.* Give phrases associated with the projection statement in the source of information that concern, for example, meridians, parallels, and/or ellipsoid.

; transverse Mercator proj., central meridian  $35^{\circ}13'30''\text{E}$

; azimuthal equidistant proj. centred on Nicosia, N  $35^{\circ}10'$ , E  $33^{\circ}22'$

## PROPOSED RULE

**3.3C2.** *Optional addition.* Give phrases associated with the projection statement in the prescribed source(s) ~~source~~ of information that concern meridians and/or parallels, ~~and/or ellipsoid~~. Notes on ellipsoids may be given (see 3.7B8).

; ~~azimuthal~~ Azimuthal equidistant proj. centred on Nicosia, N  $35^{\circ}10'$ , E  $33^{\circ}22'$

; ~~transverse~~ Transverse Mercator proj., central meridian  $35^{\circ}13'30''\text{E}$

## CURRENT RULE

**3.3D1.** For terrestrial maps, etc., give the coordinates in the following order:

westernmost extent of area covered by item (longitude)  
easternmost extent of area covered by item (longitude)  
northernmost extent of area covered by item (latitude)  
southernmost extent of area covered by item (latitude)

Express the coordinates in degrees (<sup>0</sup>), minutes (′), and seconds (″) of the sexagesimal system (360<sup>0</sup> circle) taken from the Greenwich prime meridian. Precede each coordinate by W, E, N, or S, as appropriate. Separate the two sets of latitude and longitude by a diagonal slash, neither preceded nor followed by a space. Separate each longitude or latitude from its counterpart by a dash, neither preceded nor followed by a space.

(E 79<sup>0</sup>–E 86<sup>0</sup>/N 20<sup>0</sup>–N 12<sup>0</sup>)

(E 15<sup>0</sup>00′00″–E 17<sup>0</sup>30′45″/N 1<sup>0</sup>30′12″–S 2<sup>0</sup>30′35″)

(W 74<sup>0</sup>50′–W 74<sup>0</sup>40′/N 45<sup>0</sup>05′–N 45<sup>0</sup>00′)

*Optionally*, give other meridians (prime, local, or source) found on the item in the note area (see 3.7B8).

## PROPOSED RULE

**3.3D1.** For terrestrial maps, etc., give the coordinates in the following order:

westernmost extent of area covered by item (longitude)  
easternmost extent of area covered by item (longitude)  
northernmost extent of area covered by item (latitude)  
southernmost extent of area covered by item (latitude)

Express the coordinates in degrees (<sup>0</sup>), minutes (′), and seconds (″) of the sexagesimal system (360<sup>0</sup> circle) taken from the Greenwich prime meridian. Precede each coordinate by W, E, N, or S, as appropriate. Separate the two sets of longitude and latitude ~~latitude and longitude~~ by a diagonal slash, neither preceded nor followed by a space. Separate each longitude or latitude from its counterpart by a dash, neither preceded nor followed by a space.

(E 79<sup>0</sup>–E 86<sup>0</sup>/N 20<sup>0</sup>–N 12<sup>0</sup>)

(E 15<sup>0</sup>00′00″–E 17<sup>0</sup>30′45″/N 1<sup>0</sup>30′12″–S 2<sup>0</sup>30′35″)

(W 74<sup>0</sup>50′–W 74<sup>0</sup>40′/N 45<sup>0</sup>05′–N 45<sup>0</sup>00′)

*Optional addition.* For those situations where a more precise indication of geographic coverage is desired, for each polygon use a string of coordinate pairs, each pair representing a vertex of a polygon.

List the coordinate pairs in clockwise order, starting with the vertex that is the southeastern most vertex of the polygon. In each coordinate pair, give longitude, followed by latitude, and express each in degrees, minutes, and seconds as appropriate to the size of the area being described.

Enclose each coordinate-pair string in parentheses; separate longitude from latitude in any one pair with a slash, and separate coordinate pairs within a string with space, semicolon, space.

The first and last coordinate pairs must be the same to close the polygon.

(W 114<sup>0</sup>/N 32<sup>0</sup> ; W 117<sup>0</sup>/N 33<sup>0</sup> ; W 121<sup>0</sup>/N 35<sup>0</sup> ; W 125<sup>0</sup>/N 43<sup>0</sup> ; W 120<sup>0</sup>/N 42<sup>0</sup> ; W 120<sup>0</sup>/N 39<sup>0</sup> ; W 115<sup>0</sup>/N 34<sup>0</sup> ; W 114<sup>0</sup>/N 32<sup>0</sup>)

For those situations where an area or areas within a given polygon are excluded, list the coordinate pairs for any area excluded as given above, but in counterclockwise order.

Polygons must be closed and have non-intersecting boundaries; they are, in the words of the U.S. Spatial Data Transfer Standard, G-polygons – a closed, connected, contiguous area.

Optionally, coordinates may be recorded as decimal degrees for electronic resources. Coordinates given in decimal degrees for locations east of Greenwich and north of the equator are expressed as positive numbers and may be preceded by a plus sign. Locations west of Greenwich and south of the equator are expressed as negative numbers and are preceded by a minus sign. Do not include the plus or minus sign, but follow each coordinate by W, E, N, or S, as appropriate.

(95.15<sup>0</sup> W-74.35<sup>0</sup> W/56.85<sup>0</sup> N-41.73<sup>0</sup> N)

Optionally Optional addition, give other meridians (prime, local, or source) found on the item in the note area (see 3.7B8).

### **CURRENT RULE**

**3.3D2.** For celestial charts, give as coordinates the right ascension of the item, or the right ascensions of the western and eastern limits of its collective coverage, and the declination of the centre of the item, or the northern and southern limits of its collective coverage.

### **PROPOSED RULE**

**3.3D2.** For celestial ~~charts~~ maps, give as coordinates the right ascension of the item, or the right ascensions of the western and eastern limits of its collective coverage, and the declination of the centre of the item, or the northern and southern limits of its collective coverage.

## NEW RULE

### **3.3F. Digital graphic representation**

#### **3.3F1. Punctuation**

For instructions on the use of spaces before and after prescribed punctuation, see 0C.

Precede this area by a full stop, space, dash, space.

Precede the object type by a colon.

Precede the format name by a semicolon.

Enclose each statement on the number of objects in parentheses.

If both point/vector object count and VPF level are given, precede the VPF level by a semicolon.

**3.3F2. Direct reference method.** When the information is readily available, identify the system of objects used to represent space in an electronic resource (e.g., raster, vector, point).

**3.3F3. Object type.** When the information is readily available, indicate the specific type of point, raster, and/or vector object type(s) used in the electronic resource. Separate multiple types by a comma.

Point : entity point

Vector : network chain, non-planar graph

Raster : pixel

**3.3F4. Format.** When the information is readily available, indicate the format name and version in which the electronic resource is stored.

Raster : pixel ; GIF 87

#### **3.3F5. Object count**

**Point/vector object count.** When the information is readily available, give the number of point or vector objects for each type of object used in an electronic resource.

Vector : GT-polygon composed of chains (70)

**Raster object count.** When the information is readily available, give the number of rows x columns x voxels (vertical) in a raster electronic resource. Row and column count are used with rectangular raster items. Voxels are used with rectangular volumetric raster items.

Raster : pixel (128 x 128)

Raster : pixel (5,000 x 5,000)

**3.3F6. Point/vector VPF topology level.** When the information is readily available, record the completeness of the topology in the electronic resource in terms of the vector product format level.

Vector : edge (70) ; VPF2

**3.3F7. Indirect reference method.** When the information is readily available, describe the types of geographic features, addressing schemes, or other means through which locations are referenced.

100-year floodplain boundary; 500-year floodplain boundary

## NEW RULE

### **3.3G. Geospatial reference data**

If the information is readily available, give the horizontal coordinate system (geographic system or map projection or grid coordinate system) and the name of the geodetic datum. Where units are not specified, numbers are given in degrees; producers often provide these in decimal degrees, with east longitude and north latitude positive, and west longitude and south latitude negative.

#### **3.3G1. Punctuation**

For instructions on the use of spaces before and after prescribed punctuation, see 0C.

Precede this area by a full stop, space, dash, space.

End with a full stop and a space.

Enclose each set of projection or ellipsoid parameters in parentheses.

Separate the multiple parameters/statements with a space, semicolon, space.

Precede the zone identifier by a space, semicolon, space.

Precede the secondary/related reference method by a space, colon, space.

**3.3G2. Horizontal coordinate system.** Identify the reference method system from which linear or angular quantities are measured and assigned to the position that a point occupies in space. See 3G4 for geodetic datum. Use one the following methods as appropriate:

- a) geographic systems
- b) map projection
- c) grid coordinate system
- d) local planar
- e) local.

**Geographic:** For a geographic reference method, using latitude and longitude to define the position of points with respect to a reference spheroid, give: the latitude resolution (the minimum difference between two adjacent latitude values); the longitude resolution (the minimum difference between two adjacent longitude values); and, the unit of measure used for the latitude and longitude values.

Geographic system: coordinates ; longitude resolution: 0.0004 ; latitude resolution: 0.0004 ; unit of measure: decimal degrees

**Map projection.** If the metadata includes projection-related information, give the name of the projection and the parameters associated with that projection.<sup>1</sup> If there is no parameter information provided, give only the name of the projection.

Projection: Lambert conformal conic (standard parallels: 38.3 ; 39.4 ; longitude of central meridian: -77 ; latitude of projection origin: 37.8333 ; false easting: 800000 ; false northing 0)

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1. *Albers conical equal area*: standard parallels (2), longitude of central meridian, latitude of projection origin, false easting, false northing

*Azimuthal equidistant*: longitude of central meridian, latitude of projection origin, false easting, false northing

*Equidistant conic*: standard parallels (2), longitude of central meridian, latitude of projection origin, false easting, false northing

*Equiarectangular*: standard parallel, longitude of central meridian, false easting, false northing

*General vertical near-sided perspective*

*Gnomonic*: longitude of projection center, latitude of projection center, false easting, false northing

*Lambert azimuthal equal area*: longitude of projection center, latitude of projection center, false easting, false northing

*Lambert conformal conic*: standard parallels (2), longitude of central meridian, latitude of projection origin, false easting, false northing

*Mercator*: standard parallel, scale factor at Equator, longitude of central meridian, false easting, false northing

*Miller cylindrical*: longitude of central meridian, false easting, false northing

*Modified stereographic for Alaska*: false easting, false northing

*Oblique Mercator*: scale factor at center line, oblique line azimuth, oblique line point, latitude of projection origin, false easting, false northing

*Oblique line azimuth*: azimuthal angle, azimuth measure point longitude

*Oblique line point*: oblique line latitudes (2), oblique line longitudes (2)

*Orthographic*: longitude of projection center, latitude of projection center, false easting, false northing

*Polar stereographic*: straight-vertical longitude from Pole, standard parallel, scale factor at projection origin, false easting, false northing

*Polar stereographic*: straight-vertical longitude from Pole, standard parallel, scale factor at projection origin, false easting, false northing

*Robinson*: longitude of projection center, false easting, false northing

*Sinusoidal*: longitude of central meridian, false easting, false northing

*Stereographic*: longitude of projection center, latitude of projection center, false easting, false northing

*Transverse Mercator*: scale factor at central meridian, longitude of central meridian, latitude of projection origin, false easting, false northing

*Van der Grinten*: longitude of central meridian, false easting, false northing

**Grid coordinate system.** For a grid coordinate system reference method (that is, a plane-rectangular system usually based on and mathematically adjusted to a map projection, so that geographic positions can be readily transformed to and from plane coordinates), give: the name of the grid system; the zone identifier; and, the related projection and its associated parameters, according to the following information. When a specific grid is not listed, provide only the name of the grid, unless grid parameters are clearly presented in the available information.<sup>2</sup>

Grid coordinate system: State planar coordinate system 1927 ; zone identifier: 0405 ; polyconic projection (longitude of central meridian: 0.9996 ; latitude of projection origin: 0 ; false easting: 500000 ; false northing: 0)

**Local planar.** Give a description of the local planar system and of the information provided to register the local planar system to the Earth (e.g., control points, satellite ephemeral data, etc.), when the information is readily available.

Local planar: coordinates are in Arc/Info form ; local planar georeference information: satellite ephemeral data.

**Local.** For a local system reference method (that is, any non-planar, non-geographic coordinate system), give a description of the coordinate system and its orientation to the surface of the Earth and of the information provided to register the local system to the Earth (e.g., control points, satellite ephemeral data, etc.).

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1. ARC coordinate system:

ARC system zone identifier; equirectangular or azimuthal equidistant projection plus appropriate parameters

State plane coordinate system: SPCS zone identifier; Lambert conformal conic, transverse Mercator, oblique Mercator, or polyconic projection, plus appropriate parameters

Universal polar stereographic: UPS zone identifier, polar stereographic projection plus appropriate parameters

Universal transverse Mercator: UTM zone number, transverse Mercator plus appropriate parameters

<u>GRID NAME</u>	<u>ZONE IDENTIFIER</u>	<u>RELATED PROJECTION</u>
<u>Universal transverse Mercator</u>	<u>UTM zone number</u>	<u>TransverseMercator</u>
<u>Universal polar stereographic</u>	<u>UPS zone identifier</u>	<u>Polar stereographic</u>
<u>ARC coordinate system</u>	<u>ARC system zone identifier</u>	<u>Equirectangular or Azimuthal</u>
<u>State planar coordinate system</u>	<u>SPCS zone identifier</u>	<u>Lambert conformal conic or Transverse Mercator or Oblique Mercator or Polyconic</u>

### **3.3G3. Geodetic model**

**Horizontal datum.** For a geodetic model reference method (that is, parameters for the shape of the Earth), give: horizontal datum name (the reference system used for defining the coordinate points); ellipsoid name (the established representation of the Earth's shape); the radius of the equatorial axis of the ellipsoid (semi-major axis); and, the denominator of the representative fraction of the difference between the equatorial and polar radii of the ellipsoid (flattening ratio).

Horizontal datum name: North American datum of 1927 ; ellipsoid name: Clarke 1866 (semi-major axis: 6378206.4 ; flattening ratio: 294.98)

**Vertical coordinate system.** When the information is readily available, identify the reference method system from which vertical distances are measured using one of the following methods:

- a) altitude  
or b) depth

**Altitude.** Give the altitude datum name (the level surface from which altitudes are measured); the altitude resolution (the minimum distance between two adjacent altitude values); the units of measurement (altitude distance units); and, the means used to encode the altitude (vertical encoding method), when the information is readily available.

Altitude datum name: National Geodetic Vertical Datum of 1929 ; altitude resolution: not given ; units of measurement: feet ; vertical encoding method: explicit elevation coordinate included with horizontal coordinates

**Depth.** Give the depth datum name (the level surface from which depths are measured); the depth resolution (the minimum distance between two adjacent depth values); the units of measurement (depth distance units); and, the means used to encode the depth (vertical encoding method).

Depth datum name: NGVD 1929 ; depth resolution: 0.01 ; units of measurement: feet ; vertical encoding method: explicit depth coordinate included with the horizontal coordinates.

**3.3H. Planar coordinate information.** For items which use a coordinate reference system on a planar surface (i.e., map projection, grid coordinate system, or local planar) give the planar coordinate system details in a separate note.

Record the means used to represent horizontal positions (planar coordinate encoding method) and the method of encoding the position of a point using one of the following methods:

- a) coordinate representation  
or b) distance and bearing representation

**Coordinate representation.** For an electronic resource which encodes the position of a point by measuring its distance from perpendicular reference axes (e.g., coordinate pairs or row and column methods) give: the minimum distance between the “x” or column values of two adjacent points (abscissa resolution); the minimum distance between the “y” or row values of two adjacent points (ordinate resolution); and, the unit of measure used for the distances, when the information is readily available.

Planar coordinate encoding method: coordinate pair ; abscissa resolution: 22 ; ordinate resolution: 22 ; planar distance units: meters

Planar coordinate encoding pairs: coordinate pair ; abscissa resolution: 0.01 ; ordinate resolution: 0.01 ; planar distance units: U.S. survey feet

**Distance and bearing representation.** For an electronic resource which encodes the position of a point by measuring its distance and direction (azimuth angle) from another point, give: the minimum distance measurable between two points (distance resolution); the unit of measure used for the distances; the minimum angle measurable between two points (bearing resolution); the unit of measure used for angles; the direction from which the bearing is measured (bearing reference direction); and, the axis from which the bearing is measured (bearing reference meridian), when the information is readily available.

Planar coordinates encoding pair: distance and bearing; minimum distance measurable between two pairs: 30.0 ; planar distance units: U.S. feet ; 0.0001. ; bearing units: degrees, minutes, and decimal seconds ; bearing-reference direction: north ; bearing-reference meridian: magnetic

## CURRENT RULE

**3.5B1.** Give the extent of a cartographic item. In the case of atlases and globes, give the number of physical units. In the case of other cartographic items, give the number of maps, etc. Use arabic numerals and one of the following terms.

atlas  
diagram  
globe  
map  
map section  
profile  
relief model  
remote-sensing image  
view

If a cartographic item is not comprehended by one of the above terms, use an appropriate term taken from subrule .5B of one of the chapters of part I.

7 wall charts  
52 playing cards

If the parts of an item are very numerous and the exact number cannot be readily ascertained, give an approximate number.

ca. 800 maps

If a cartographic item contains, or consists of, tactile data, follow the instructions in 3.5B5.

## PROPOSED RULE

**3.5B1.** Give the extent of a cartographic item. In the case of atlases and globes, give the number of physical units. In the case of other cartographic items, give the number of maps, etc. Use arabic numerals and one of the following terms.

atlas  
diagram  
geospatial database  
globe  
map  
~~relief~~ relief model  
profile  
remote-sensing image  
~~map~~ map section  
view

If a cartographic item is not comprehended by one of the above terms, use an appropriate term taken from subrule .5B of one of the chapters of part I.

7 wall charts

52 playing cards

If the ~~parts~~ sheets or volumes of ~~an~~ the item are very numerous and the exact number cannot be readily ascertained, give an approximate number.

ca. 800 maps

If a cartographic item contains, or consists of, tactile data, follow the instructions in 3.5B5.

**CURRENT RULE**

**3.5B2.** If there is more than one map, etc. on one or more sheets, specify the number of maps, etc., and the number of sheets.

6 maps on 1 sheet

8 map sections on 3 sheets

**PROPOSED RULE**

**3.5B2.** If there is more than one map, etc. on one or more sheets, specify the number of maps, etc., and the number of sheets.

6 maps on 1 sheet

8 ~~map~~ sections on 3 sheets

## NEW RULE

3.5B6. If a cartographic electronic resource is on a physical carrier (e.g., computer disk, computer optical disc) record the number of carriers and the specific material designation of carrier (see 9.5B1), as appropriate.

3 maps on 1 computer disk

1 geospatial database on computer optical disc

Optional addition, if readily available, give the total file size enclosed in parentheses, using the appropriate abbreviation.

1 map (5.2 MB) on 1 computer disk

Optionally, if the general material designations are used (see 1.1C1), omit *computer* from the specific material designation of the carrier.

Give a trade name or other similar specification for the carrier in a note (see 3.7B1).

### **CURRENT RULE**

**3.5C1.** Give the following details, as appropriate, in the order set out here:

number of maps in an atlas  
colour  
material  
mounting

### **PROPOSED RULE**

**3.5C1.** Give the following details, as appropriate, in the order set out here:

number of maps in an atlas and other illustrative matter  
layout (e.g., both sides) for maps  
colour  
medium  
reproduction method  
material  
mounting

Renumber current **3.5C4** and **3.5C5** as **3.5C6** and **3.5C7** respectively.

## NEW RULES

**3.5C4. Medium.** Optionally, give the medium (e.g., pencil, ink) used to draw and colour manuscript cartographic materials. If a printed work is hand coloured, the medium may be recorded after the indication of colour.

1 map : hand col. in pencil

54 maps : ms., col., pencil and ink on mylar

**3.5C5. Production method.** Give the method of production (other than printing), or reproduction, if considered significant. For photomechanical reproductions either use a general term (*photocopy*), or give the generic name of the process (e.g., *blueprint*, *blueline*, *white print*).

## CURRENT RULE

**3.7B3. Source of title proper.** Make notes on the source of the title proper if it is other than the chief source of information.

Title from container

Title from separate wrapper

Title from: A list of maps of America / P.L. Phillips. P. 502

## PROPOSED RULE

**3.7B3. Source of title proper.** Make notes on the source of the title proper if it is other than the chief source of information.

~~Title from container~~

~~Title from separate wrapper~~

~~Title from: A list of maps of America / P.L. Phillips. P. 502~~

Give the source of the title proper in a note (see 3.7B3) when the title proper is taken from the verso of the item, or from its container or cover, or when the title proper is a panel title.

Title from container

Panel title