

# Digital Chart of the World Line Data for Geocart

## Installation

To use these files first insert the disk into the CD-ROM drive of your Macintosh computer. Use the software that came with your CD-ROM drive to mount the disk on your computer's desk top.

You then can use Geocart's Data base command to add data bases contained on these CD-ROMs to your Geocart documents. If you have the disk space you may want to copy the files you are working with to your hard disk to improve Geocart's performance. You can also use the CropDataBase program located on the CD-ROM to copy just the data you want to your hard disk.

## Data source

The files on these CD-ROM disks are Geocart data bases extracted from Digital Chart of the World (DCW). These files contain all the line data from DCW. They include coastlines, international boundaries, contours, major road and rail networks, major drainage systems and major utility networks (cross-country pipelines and communication lines).

The Digital Chart of the World is a comprehensive 1 : 1,000,000-scale vector base map of the world (except for Antarctica, which is 1 : 2,000,000). The DCW was developed by: the United States Defense Mapping Agency, the Australian Army Survey Directorate, the Canadian Directorate of Geographic Operations, and the United Kingdom Military Survey. They were supported in the DCW design process by more than forty participating agencies.

## How the files are organized on disk

The DCW covers the entire world in four regions. The full set of Geocart DCW data bases comes on two CD-ROM disks with two regions on each.

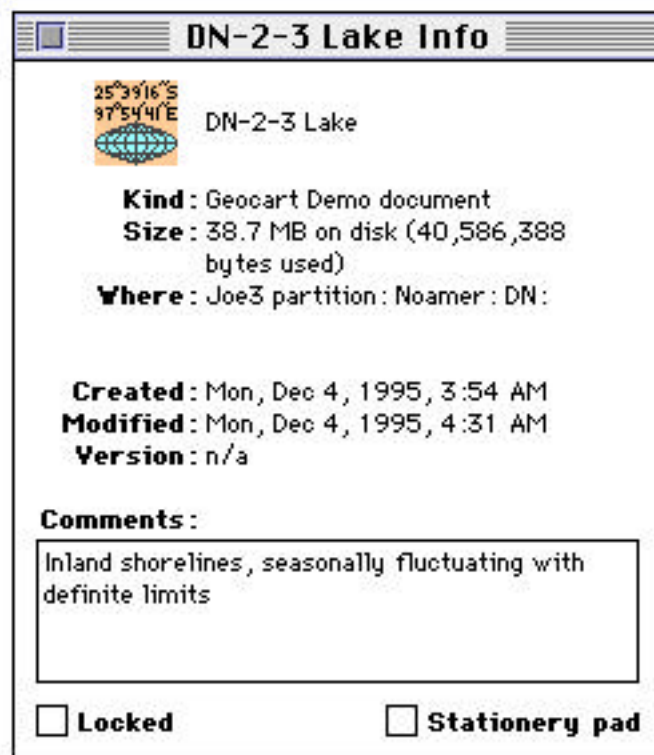
	Folder name	Area	Size
Disk 1	Noamer	North America	203 MB
	Soamafr	South America, Africa, and Antarctica	208 MB
Disk 2	Eurnasia	Europe and northern Asia	199 MB
	Sasaus	Southern Asia and Australia	220 MB

## Geocart DCW data base documentation

Each coverage folder contains 11 folders. Each of these contains one category of data:

Folder name	data in folder	Percentage of all data
CL	Cultural Landmarks	less than 1%
DN	Drainage	28% to 42%
HY	Hypsography	32% to 43%
HS	Hypsography (supplemental)	9% to 11%
OF	Ocean Features	less than 1%
PH	Physiography	less than 1%
PO	Political/Oceans	3% to 4%
RD	Roads	6% to 14%
RR	Railroads	1% to 3%
TS	Transportation Structure	less than 1%
UT	Utilities	1% to 2%

Each of these folders contains the specific databases. A description of each type of database follows. A description of each file on the CD-ROM can be found in its Get Info Comment, which can be displayed by selecting the file's icon from the Finder and choosing the *Get Info* command from the *File* menu.



---

# CL.....Cultural landmark

Brief description

File name example:

**CL-AERIALCABLEWAY**

## Cultural landmark line label.

Representative values include:

- Weir, jetty, and groin
- Boat ramp
- Pier, wharf, quay
- Breakwater
- Aerial cable way
- Wall, trench, tank trap
- Prominent fence
- Dams\*

\* The dams in this layer are those shown on the ONC with their true shape and extent. Those dams that are represented only by a graphic symbol are not included. These features are not always coincident with inland water shorelines

---

# DN .....Drainage line

Type                  Status                  Brief description

File name example:

**DN-1-1 River**

## Type Code Definition

- 1 = Stream, river, channelized river
- 2 = Inland water body shoreline
- 3 = Wet sand limit
- 4 = Canal, aqueduct, flume, penstock, kanat, or similar feature (clearly identified by ONC map annotation)
- 5 = Glacial limit
- 6 = Snow field, glacier, or land ice to water ice or ocean limit
- 7 = Ice free limit (land/ice line)
- 8 = Connector (used to separate inland water from open ocean or ocean ice)\*
- 9 = Tile boundary or null arc
- ? = Not described in DCW documentation.

\*These lines were derived from the border between the shade for inland water (dark blue) and open ocean or ocean ice (light blue) on the ONC sheets. The cartographic judgments applied to the use of open ocean versus inland water shading in near shore situations varies from sheet to sheet.

## Status Code Definition

- 1 = Perennial (used for rivers and streams only)
- 2 = Non perennial (used for rivers and streams only)
- 3 = Definite (used for inland shorelines only)
- 4 = Indefinite (used for inland shorelines only)
- 5 = UN surveyed perennial
- 6 = UN surveyed non perennial
- 7 = Abandoned
- 8 = Under construction
- 9 = Suspended or elevated
- 10 = Underground
- 11 = Above ground
- 88 = Tile boundary
- 99 = None (no status attribute associated with feature)

---

## HY ..... Hypsography

Contour elevation in feet      Type      Brief description

File name example:      **HY 01000-1 Closed**

### Elevation

This number contains the elevation value of the contour line expressed as feet above mean sea level. When contour lines for different elevations become coincident, as in areas of steep local relief, only a single carrying contour is shown and is coded for the value for the highest elevation present. Valid contour line codes range from -1,000 feet to 29,000 feet incrementing by 1,000 feet. Boundaries associated with no data areas are assigned a value of 99999.

### Type Code Definition

- 0 = Not described in DCW documentation.
- 1 = Closed contour.
- 2 = Depression contour.
- 3 = Closed contour, approximate.
- 4 = Carrying contour, coalescence of two or more contour lines with different elevation values.
- 5 = Depression contour, approximate.
- 8 = Connector (an arbitrary connector of the contour network, used to define no data or irreconcilable source data areas. These connections were made to establish elevation zones as polygons.
- 9 = 5-degree by 5-degree tile boundary.
- 88 = Used in situations during the edge matching process in which a polygon is contained on one ONC mapping module due to compilation differences and the automation module boundary is needed for closure.
- ? = Not described in DCW documentation.

# HS .....Supplemental hypsography



File name example: **HS 05000-1 Inter**

## Elevation

This number contains the elevation value of the contour line in feet above mean sea level (MSL). The code 99999 is used when an elevation value is not applicable.

## Supplemental hypsography line type

This item indicates the specific type of the supplemental contour line. This coverage contains unclosed contours and/or contours at intervals other than 1,000 feet.

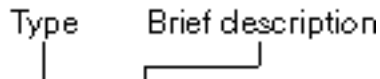
## Type Code Definition

- 1 = Intermediate or auxiliary contour\*
- 2 = Depression contour
- 3 = Approximate intermediate or approximate auxiliary contour\*
- 4 = Carrying contour, coalescence of two or more contour lines with different elevation values
- 5 = Cut within one contour interval, and fill within one contour interval
- 6 = Unreliable (present in Antarctic tiles only)
- 7 = Transition or erroneous contour
- 8 = Approximate depression contour

\*An intermediate contour is one that is required between basic contours to portray form, degree of slope, and elevation not shown by the basic contour interval. An auxiliary contour is one that is used to portray configuration and relative relief significance of additional land forms not adequately portrayed by basic and/or intermediate contours.

---

# OF .....Ocean features



File name example: **OF-2 Reef**

## Type Code Definition

- 1 = Miscellaneous ocean feature
- 2 = Reef
- 3 = Maritime area limit

---

# PH ..... Physiography

File name example: **PH-1 Levee**

Type      Brief description

## Type Code Definition

- 1 = Levee\*, dike\*, or esker
- 2 = Rock strata outcrop
- 3 = Escarpment, bluff, cliff, etc.\*1
- 4 = Earthquake fault
- 5 = Ice cliff on land
- 6 = Crater

\* May be visually coincident with railroads or roads.

\*1 In some situations, they may be coordinate and coincide with elevation carrying contour lines.

---

# PO ..... Political/Oceans

File name example: **PO-1-1 Nation, def**

Type      Status      Brief description

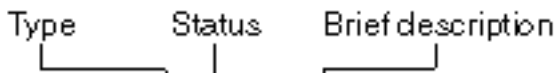
## Type Code Definition

- ? = Miscellaneous lines
- 1 = International boundary, de jure
- 2 = International boundary, de facto
- 3 = International boundary, de jure and de facto
- 4 = Sub national administrative boundary, first order
- 5 = Sub national administrative boundary, second order
- 6 = Treaty or occupancy line (demilitarized zones)
- 7 = Coastal closure line (used to connect ocean shoreline across river mouths, glaciers, lagoons, fjords, and so forth)
- 8 = Ocean demarcation line (used to separate ocean aggregations)
- 9 = Ice line (used to separate types of sea ice--see figure 3-2)
- 10 = Coastline
- 11 = Ocean/Sea ice boundary (see figure 3-2)
- 12 = Sea wall
- 13 = International date line
- 88 = Arbitrary connector (if needed)
- 99 = None (used for tile border)

### Status Code Definition

- 1 = Definite (boundary or coastline)
- 2 = Approximate (boundary) or fluctuating (coastline)
- 3 = Indefinite (boundary) or unsurveyed (coastline)
- 4 = Man-made (coastline) (dike)
- 5 = Indeterminable (coastline)
- 6 = Ice cliff (when coincident with coastline or ice line)
- 7 = Political boundary (that is, based on single-line river or stream location)
- 8 = Connector (international or administrative boundary extensions through inland water areas)
- 9 = 5-degree by 5-degree tile boundary
- 88 = ONC module boundary section retained to provide "edge match" connection across ONC sheets

## RD .....Road



File name example: **RD-1-1 Highway**

### Type Code Definition

- 0 = Unknown type
- 1 = Dual lane (divided) highway\*
- 2 = Primary and secondary road\*
- 3 = Track, trail, or footpath
- 8 = Added road connector within urbanized area polygons

\*Included in these categories are roads symbolized or annotated on the ONCs as the following: under construction, approximate alignment, existence doubtful, railroad in road, and cloverleaf.

### Status Code Definition

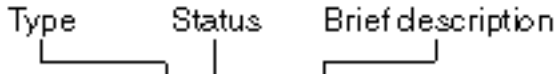
- 0 = Not described in DCW documentation
- 1 = Functioning\*
- 2 = Under construction
- 3 = Existence doubtful or "reported" to exist
- 4 = Compiled road connector (used for arcs added from other source materials in order to provide cartographically correct connectivity within urbanized area polygons)
- 5 = Compiled from adjacent, more recent sheet (used for arcs added for edge match or network connectivity in the ONC sheet overlap areas)
- 6 = Compiled, under construction (used for arcs added for edge match or network connectivity in the ONC sheet overlap areas)
- 9 = Schematic road (used for arcs added within the urbanized area polygons for network connectivity only)

\*There was no special symbolization or marking on the source materials indicating functional lines. This code was added so that all arcs in the coverage would have an explicit code for this item.

---

# RR ..... Railroad

File name example: **RR-1-1 Rail single, func**



## Type Code Definition

- 0 = Not described in DCW documentation
- 1 = Single track railroad\*
- 2 = Multiple track railroad\*
- 3 = Light-duty railroad, including carlines, tramways, and other similar light-load-bearing railways
- 8 = Added railroad connector within urbanized area polygons

\*ONC railroads in these categories, include lines annotated or symbolized as electric, in-street; in juxtaposition, nonoperating, approximate alignment, existence doubtful, sidings and short spurs, overpass, and underpass.

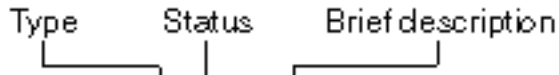
## Status Code Definition

- 0 = Not described in DCW documentation
- 1 = Functioning\*
- 2 = Nonoperating, abandoned, destroyed, or under construction
- 3 = Existence doubtful or "reported" to exist
- 4 = Compiled railroads (used for arcs added from other source materials in order to provide cartographically correct connectivity within the urbanized area polygons)
- 5 = Compiled from adjacent, more recent map sheet (used for arcs added for edge match or connectivity in the ONC sheet overlap areas)
- 6 = Compiled, under construction (used for arcs added for edge match or connectivity in the ONC sheet overlap areas)
- 9 = Schematic rail line (used for arcs added within the urbanized area polygons for network connectivity only)

\*There was no special symbolization or marking on the source materials indicating functional lines. This code was added so that all arcs in the coverage would have an explicit code for this item.

---

# TS.....Transportation structure



File name example: **TS-1-2 Bridge**

## Type Code Definition

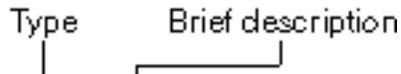
- 1 = Road structure
- 2 = Railroad structure

## Status Code Definition

- 1 = Snowshed
- 2 = Bridge
- 3 = Causeway
- 4 = Tunnel
- 5 = Ferry
- 6 = Ford

---

# UT..... Utility line type.



File name example: **UT-1 Power**

## Type Code Definition

- 1 = Power transmission line
- 2 = Telephone or telegraph line
- 3 = Above-ground pipeline
- 4 = Underground pipeline