

User's Manual for Digital Chart of the World 1 World Overview Map

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Abstract

An electronic map in WHEAT format was prepared from the Digital Chart of the World BROWSE database, a 1:32,000,000 electronic map that provides a global overview. The electronic map contains all the data available in the original Digital Chart of the World BROWSE database and a set of prepared themes and other tables to allow immediate use in WHEAT EMAPKGS2. Data layers include borders, hydrology, cities, and the quadrangles used in the complete Digital Chart of the World. Maps at this scale are particularly well-suited for showing areas of 300 kilometers to 10000 kilometers, such as locating a field area on a continent.

Two editions of this electronic map are provided. WORLDMRC.MDB has coordinate data in a Mercator coordinate system in kilometers, and Antarctica has been omitted. WORLDLL.MDB has coordinate data in Geographic Angular coordinates (longitude-latitude in decimal degrees) and includes the complete data set. The horizontal datum is the World Geodetic System 1984 (WGS84).

The original DCW data included only land areas and not country. Country identification was assigned by hand, and is known to be incomplete and in places inaccurate.

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Last Modified by Greg Pouch, 01/08/97 11:36 AM

Overview

This manual describes a series of very small-scale – 1:32,000,000 scale – electronic maps derived from the US Defense Mapping Agency's Digital Chart of the World (DCW), Version 1 (See DMA 1992) BROWSE database. This database provides a global overview for locating more specific study areas. Among the civilian uses of base maps at this scale are plate-scale geologic mapping, disaster/famine relief, expedition/travel, social science and logistics. The level of detail is comparable to an atlas' world map.

The overview electronic maps include the data originally in the DCW BROWSE database: land areas, cities, and hydrology. Another layer contains 5° by 5° quadrangles from the DCW sub-sets. The original DCW database did not attach country names to individual land areas: this was done by hand by the author using atlases and is doubtlessly inaccurate in places.

The overview map includes a set of prepared themes and other tables to allow immediate use in WHEAT EMAPKGS2 (Pouch, 1994, 1996a-d). (To get WHEAT, use the World Wide Web to get to www.kgs.ukans.edu, choose Kansas Geological Survey, then Software, then WHEAT, or try going directly to <http://crude2.kgs.ukans.edu/software/Wheat/whtmain.htm>.) The user can modify these themes or design new ones to tailor the map for particular purposes. Loading all the pre-designed themes produces a cluttered map; suppressing the text labels produces a much clearer map.

Each edition of the map is in a separate Microsoft Access MDB format database stored in a pkZip file of the same name. These data are available on the KGS World Wide Server. At time of publication, the URL was <ftp://crude2.kgs.ukans.edu/pub/wheat/datasets/dcw/worldmrc.zip>.

The World Overview electronic maps were prepared to provide 1) a useful synoptic map of the world and as 2) an example dataset for use with WHEAT.

Data

Most data in the World Overview maps came directly from the Digital Chart of the World. This includes the following tables: LandAreasText; Drainage_Areas and Drainage_Lines; Cities; and TileReference_DigitalChartOfTheWorld1.

In addition, the outlines of countries in the LandAreas table came from the DCW. The DCW did not originally assign a country to the polygons as a property, and relied on label text stored as points for that purpose. The author assigned country names to land areas by hand using atlases and doubtlessly made mistakes. In addition, not every island was labeled, so the South Pacific is particularly inaccurate. If you find errors, please print a copy of the map, indicate the error, and mail it to the author at Kansas Geological Survey/ 1930 Constant Ave./ Lawrence, Kansas 66049/USA. If you decide to re-label the countries by running spatial queries in WHEAT and specifying the country names, please send me a copy of the corrected database.

In order to help development efforts in the Third World, a large number of quadrangles were imported. These are available for free download from the KGS's

WHEAT web site, and an inventory (as of 9 July 1996) is stored in the table zListOfImportedCells_GLOBAL and attached to tiles as query TilesImported global QDF.

Any errors in the original DCW data propagated into the quadrangle maps. Additional errors due to problems importing the files may have occurred. Read the disclaimer below.

Because electronic maps allow nearly infinite magnification, it is important to remember that this is a digitized version of maps prepared at a particular scale. Magnifying a 1:32,000,000 map to 1:100,000 increases its size, not its data content or accuracy. Do not be surprised by horizontal mis-locations of the order of several kilometers, particularly for features of military significance.

Disclaimer

These databases may and probably do contain errors. USE AT YOUR OWN RISK. The Kansas Geological Survey, University of Kansas, DOES NOT PROVIDE FREE TECHNICAL SUPPORT for using these databases.

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Acknowledgments

I would like to thank my fiancée, Becky Roesner, for putting up with me while I was preparing these maps; Steve Yoder, Jinwu Ma, and the DASC staff for alerting me to and helping me find and duplicate the Digital Chart of the World CDs; Marios Sophocleous for his support while I was working on these maps; and Fathers Phil Bauer, M.M., Walter Conlan, S.J., and Bob Brungs, S.J. for providing much of the original impetus for preparing these maps and designing a GIS for use in international development.

This project was undertaken while at the Kansas Geological Survey. It was not supported with State of Kansas funds.

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