

# The World At Your Fingertips: CD-ROM Atlases in 1998

by Péter Jacsó

The Internet has brought together millions of people from all corners of the world. It made many political, cultural, social, and geographical boundaries disappear. Interest in learning about people and their countries in another hemisphere or in the neighboring state has been growing along with the growth of the global village.

A quick search for maps in any of the Internet search engines, or even the casual browsing of the categories of the subject directories of Yahoo!, Excite, Infoseek, LookSmart, or BIG (Britannica Internet Guide) confirms the increasing popularity of these time-honored tools of exploration and learning. You may find thousands of maps of all types on the Web: city maps and road maps, weather maps and satellite maps, country maps and continental maps, world maps and ocean floor maps, subway maps and bus route maps, thematic maps and political maps, statistical maps and biome maps, historical maps and pub maps to locate watering holes in mid-Manhattan.

The amount, variety, uniqueness and/or high quality of most of the maps are impressive. Courtesy of MapQuest, there are now maps that can be personalized to pinpoint where you live or sell something. Customizable driving maps can spare you the embarrassment of asking for directions whether driving from San Diego up to Maine, or from downtown to midtown in Anytown. And all this for free (beyond the typical flat monthly rate—if any—payable to your Internet service provider).

## *Earlier CD-ROM-Based Geographic Reference Sources*

A few years ago there were many CD-ROM databases that were used as electronic geographic reference sources. As discussed in an earlier review,<sup>1</sup> many of them were disappointing or even appallingly unprofessional. Some of them were typographically challenged, others even topographically. Many used the primitive maps of the *CIA World Factbook*, and seemed to have hired a child to color the black-and-white maps as if they were in a coloring book. I recall with no pleasure the hollow maps of *Compton's* (until 1995), the grossly outdated maps of Quanta Press, the garishly colored ones of *Multimedia Factbook*, the maps of the *Webster Encyclopedia* and (the otherwise innovative) *Medio Magazine* that displaced cities by a few hundred miles, the map in the *Time Almanac* that did not bother to identify half a dozen countries on Europe's map, and the typo-ridden maps in *Wayzata World Factbook* that had Bangkok (the only city identified for Thailand) misspelled as Bankok in 14-point red type.

Even the most respected publishers often failed with their geographic CD-ROMs. Britannica grossly overpriced its mediocre Geopedia, but rebounded with a superb encyclopedia later. The National Geographic Society came out with an

embarrassingly primitive Picture Atlas of the World, but its recently released 30-disc Complete National Geographic CD-ROM collection proves that it knows how to make maps. Many of these sorry CD-ROMs are no longer being published. In some cases, the producers themselves went out of business.

Famous mapmakers (Magellan, Geosystems, the National Geographic Society) came to the Web in strides directly or indirectly (by licensing their maps to third parties). AVIS offers hundreds of nifty driving maps on the Web. If you want an inventory, enthusiastic Web users, nonprofit organizations (like the Perry-Castaneda Library), and for-profit entities (like all the search engine companies) provide well-organized pointers to all kinds of electronic maps on the Web. You may think that the days of CD-ROM map collections are numbered.

But that's not the case. The best have survived through innovations that are possible or feasible only on CD-ROM. Microsoft is a prime example. It not only renamed its excellent Encarta World Atlas that was introduced in 1995 to enhance the Hammond maps in the separate Encarta Encyclopedia, but kept enriching it, and released the splendid Encarta Virtual Globe '98 for about \$50. Creative Wonders offers an updated 3D Atlas '98 for about \$30. Finally, Rand McNally came in with a bang. Its New Millennium World Atlas Deluxe shows that this company's name will remain a household term after the year 2000, and it sells for less than \$50. These 1998 editions compete against the Internet and print maps and geographic reference sources with their sheer size and/or sophisticated integrated functions and multimedia enhancements.

### *Big Is Beautiful*

The longest river, the highest peak, the deepest ocean trench, the largest country, the most populated city always earn a place in the memory of intelligent men and women. We crave geographic superlatives. Both Microsoft and Rand McNally satisfy our cravings. Virtual Globe has 1.2 million geographic names on its maps and all of them are searchable even if you don't know the exact name or the correct spelling, using the "sounds like" search technique. (To put

things into perspective, even the largest printed gazetteers can only boast about 300,000 geographic names.)

Rand McNally outdoes Microsoft—depending on the version you choose to install. In a novel approach, the New Millennium World Atlas offers three alternatives during installation. The complete, standard, and compact versions will display and make searchable 1.7 million, 750,000, or 170,000 geographic names, and require 91 MB, 68 MB, or 40 MB of hard disk space, respectively. Rand McNally also has a series of top 10 geographical, population, climate, and disaster lists that can be filtered by continents to learn, for example, the largest death toll caused by cyclones in Asia. The geographic names are hotlinked to the maps.

This extraordinary richness of the two CD-ROMs makes it possible to get detailed information for all the countries and territories. (3D Atlas '98 has a very modest number of geographic names—about 6,000.) And in the Microsoft and Rand McNally CD-ROMs all these are searchable, many with hotlinks from the former to the current name (such as Bombay/Mumbai), and from the vernacular name to the Anglicized name (Firenze/Florence, Napoli/Naples, Zaragoza/Saragossa). The names searched are highlighted on the map with a white outline.

It is impressive that even the most current geographic name changes are reflected in the CD-ROMs (while almost not at all in the Internet geographic Web site indexes and in the country name indexes of map collections, let alone on the maps themselves). Zaire appears with a cross reference to the Democratic Republic of Congo, and in Virtual Globe you also find this change in the captions of all the images and audio clips. Microsoft also correctly identifies the currency as the Congolese franc (that replaced the zaire in the summer of 1997). The 3D Atlas '98 that has no cross references and lists the country under Congo-Kinshasa (a form preferred in African Internet sites) also uses the correct formal name in the text but did not change the name of the currency in the country briefing. Rand McNally uses the new names in the index, but on the maps you still find Bombay, and the country guide text still refers to Zaire (even though it mentions the military coup in the country in May 1997).

### *Integrated Atlases, Not Just Distinct Maps*

All three of the CD-ROMs share the common thread of integrating their map collections into atlases. All of them allow seamless navigation across countries, continents, and oceans. Microsoft does this the most efficiently, allowing both panning and zooming (horizontal and vertical movement) almost instantaneously. Microsoft's globe moves faster, but Rand McNally's Atlas offers better locator clues for positioning yourself and options for floating legends and a tool set. All three CD-ROM atlases offer a variety of maps from topographical to political to statistical, with many other styles in between. Again, this variety is not available for all the countries at any of the geographic Web sites.

The variety of the map styles and the zoom in/out features allow these CD-ROM atlases to show varying amounts of details of a country or a region. On the Internet, static maps dominate. On the CD-ROM atlases, user-defined customization, such as using pushpins and symbols to mark certain points of interest, is routine. The question is, how many symbols and pushpins are available? (The online extensions of the CD-ROM atlases offer pushpin downloads and promote pushpin exchanges and swaps that will make stamp collectors turn green with envy.) 3D Atlas '98 lets the users select what they want to display on the maps (only major cities, with or without rivers, mountains, etc.). This is not the same kind of selectivity that the zoom operation provides—here the user is somewhat more in control.

### *Make Your Own Map*

Rand McNally offers personalization beyond anyone's wildest dreams. Right out of the box, it comes with more than a dozen map styles, including antique, classic, landform, ocean depth, outline, physical, political, and transportation maps, to name only a few. But all these are dwarfed by the fact that you can specify the features of your own map styles, and can save them for later use. The number of options and the way this operation is done make this feature a textbook example of smart, elegant, and user-friendly design.

The user is taken through a series of menus to pick options of what to display

on the maps. Menus are offered to choose for display of cities by size or importance (capitals, more than 5 million people, more than 1 million people, etc.), boundaries (national, state, provincial, county), points of interest (national parks, reservations, caves), physical features (hills,

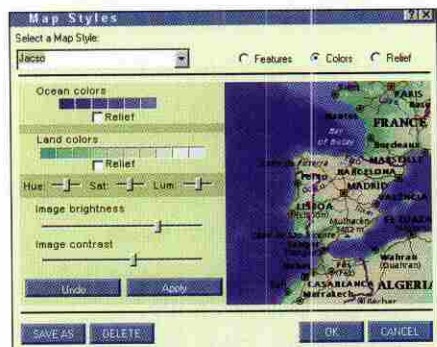


Figure 1

passes, canyons), waters (lakes, reservoirs, rivers, dams, canals, streams), and other features. One may decide to use relief representation of heights and depths. All the above choices are checkbox options to turn the feature on or off. As if these were not enough, there are additional choices for the hue, luminescence, saturation, and contrast for the colors using sliders to indicate points of preferences. (See Figure 1.) You can use drawing tools to personalize the maps. You can save maps and texts in personalized notebooks, a better solution than Microsoft's Favorites. (If you have the deluxe edition of Encarta '98 it came with a third disc with Research Organizer that provides functions similar to the Notebook feature of Rand McNally). Users may choose superbly demonstrated and narrated guided tours to learn the process. The narration can also be turned off.

### Statistical Data Available

All three CD-ROM atlases offer numerous statistical datasets ranging from the routine (literacy rate) to the esoteric (total number of goats). The form of presentation of the data is impressive, although each disc has its pros and cons. Microsoft offers a choice of listing the countries by rank or alphabetically with the push of a button. (See Figure 2.) It can display the statistics in a chart format (using either normal or logarithmic scale). As you pass your cursor through the chart the name of the country and its statistics show up in a small window. In the same window you can keep a reference country stationary to compare it against the others. (See Figure 3.)

Rand McNally and Creative Wonders have statistical time series for many of the indicators and can display the data in scattergram, line chart, column chart, or ranked list format. Rand McNally does not offer an alphabetical list, and the 3-dimensional column charts look odd, but the choice of up to four countries and the selection of the time series on a slide bar are impressive features. (See Figure 4.) Surprisingly, the ranked lists do not identify the unit of measurement when displayed (even though they appear in the chart formats, and in all formats when printed). While it can be guessed from the numbers that the number of phones are given for 100 inhabitants, and TV sets for 1,000, I could not figure out the unit of measurement for fax machines, which turned out to be—rather illogically—the absolute number.

3D Atlas '98 may have the largest number of datasets (depending on how you count), but the labeling of many of the timelines with two-digit run-on numbers can be confusing, and is unnecessary given the pop-up pointer with four-digit years. (See Figure 5.) Though statistical lists are not offered in alphabetical order by country, it is easy to find a country by clicking on its name in the small Find window displayed alphabetically to the right of the rank list. Six countries may be selected for comparison.

The statistical data among the products isn't always comparable, because they have used different sources that in turn used different

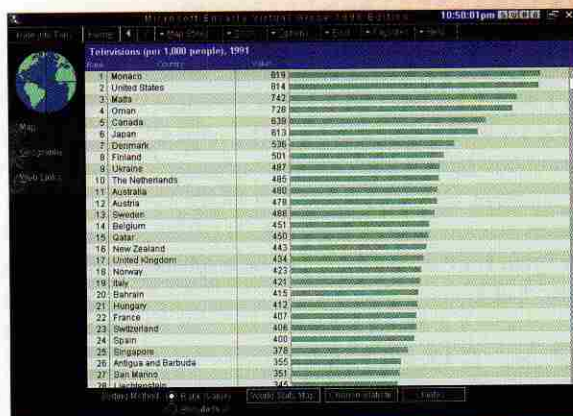


Figure 2



Figure 3

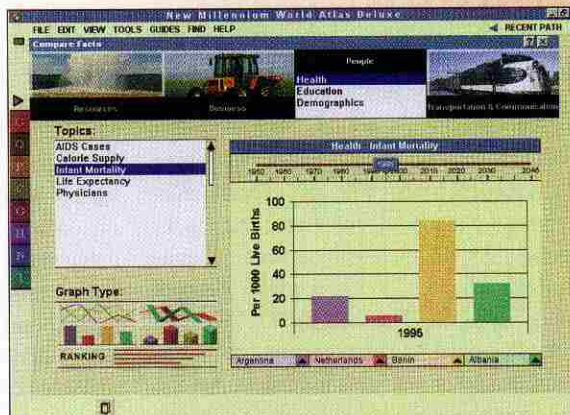


Figure 4



Figure 5

methodologies in different years. Some of the data seem odd even without comparison. I cannot believe that Sweden, Denmark, and Canada have the largest homicide rates in the world as suggested by Virtual Globe. Neither can I take at face value the data presented in 3D Atlas '98 that Bolivia has more public airports than Canada.

### Many Textual and Multimedia Enhancements

All three of the CD-ROM atlases offer far more textual information than the largest printed atlases, as well as multimedia elements. Virtual Globe has the best geographical articles and a glossary with splendid illustrations (See Figure 6.), and its "culturgrams" about the countries give excellent insights into the everyday social customs. The authentic pronunciations of common sentences by native speakers superbly illustrate the characteristics of the language or the traits of a dialect of, say, English from Zimbabwe to Scotland to New Zealand. The music samples are first class. These complement very well the standard country profiles of historical, geographical, economical, demographic, and political snapshots.

Rand McNally's textual and multimedia enhancements are also nice but don't rival those of Microsoft, except for the beautiful maps of 65 city centers. Surprisingly, the hotlinks from the background text do not highlight the city mentioned in the text, and may make locating a city difficult. The text in 3D Atlas '98 is rather hard to read against the background and is not well indented, but the photos are excellent, and so are the country, state, and city flags. The sound effects quickly become irritating, but luck-

ily they can be turned off while retaining the voice-over capability. I spotted one glaring mistake—a reference to "the island of Mauana Kea." The island is Hawaii (or the Big Island), Mauna Kea is the volcano. Animated and narrated sequences illustrate geological concepts (continental drift) and environmental problems (ozone layer damage) in all three atlases. Virtual Globe and 3D Atlas have videos and an interesting fly-through terrain map feature.

### Links to the Web

No matter how impressively current these CD-ROM atlases were at the time of publication, they would be somewhat outdated after a few months. All of them have links from the CD-ROM to their Web sites to solve this problem. Microsoft has the most elegant solution. Even when logging online you remain within the Virtual Globe interface—a feat that will be characteristic of the Windows 98 and Internet Explorer 4.0 combo in a few months' time. The Web sites recommended based on the search you linked from are well chosen. Creative Wonders has a very good home page, including a teacher guide, a glossary, and hotlinks to relevant Web sites, including MapQuest. Rand McNally's home page offers sites for students, travelers, and geo-enthusiasts. The idea is good, but I was not enthused when my online click from Davao, Philippines, came up with the response "no Internet index records matching your criteria were found." The result for the click from San Diego was also underwhelming. This may—and I am sure will—change, and the online site will match Rand McNally's superb CD-ROM.

### Facing the Competitors

These three publishers will have to face fierce competition from Web publishers and other CD-ROM publishers. Dorling Kindersley is to release a new version of its top-notch Cartopedia. Compton's, which had deeply disappointing maps until 1995, then bundled a good, but non-integrated, third-party atlas in 1996, finally got it right, incorporated a good atlas in its 1998 encyclopedia, and published a stand-alone atlas in 1997. It is likely to be updated and enhanced for 1998. Hammond released a

### For more information about the products reviewed, contact the companies:

#### Encarta Virtual Globe

Microsoft  
One Microsoft Way  
Redmond, WA 98052-6399  
800/531-6758  
<http://encarta.msn.com>

#### New Millennium World Atlas

Rand McNally  
8255 North Central Park Avenue  
Skokie, IL 60076-2970  
847/329-8100  
<http://www.randmcnally.com>

#### 3D Atlas '98

Creative Wonders/ABC  
P.O. Box 9017  
Redwood City, CA 94063  
800/KID-XPRT  
<http://www.3datlas.com>

stand-alone atlas on CD-ROM too late for inclusion here. I would not be surprised if the National Geographic Society and Britannica, after the launch of their impressive CD-ROM products and Web sites in late 1997, release stand-alone CD-ROM atlases.

While the Internet is an intimidating competitor, Rand McNally, Creative Wonders, and Microsoft have proven how CD-ROM can offer superior quantity, quality, functionality, and fun for comprehensive geographic reference sources, and at a very reasonable price. ★

*Péter Jacsó is associate professor of library and information science at the department of information and computer science at the University of Hawaii. He writes for this and other professional magazines, speaks at professional conferences, and regularly offers his online/CD-ROM workshop series. His e-mail address is [jacsop@hawaii.edu](mailto:jacsop@hawaii.edu).*

### Reference

- Jacsó, Péter, and Tiszai, Judit (1996). It's All About Maps: The Good, the Bad, and the Ugly. *MultiMedia Schools* 3(3): 28-38.



Figure 6