

## OREGON SCHOOL ATLAS: AN EXPERIMENT IN MULTIMEDIA

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### Abstract

An experimental atlas project that crosses the borders between cartography and multimedia has been started at the University of Oregon. Rather than create the usual hard-bound paper atlas in one volume according to the traditions of cartography, we are creating a full-color magazine style atlas, a collection of maps and other information that will remain unbound, and two CD-ROM products based on colored photographs. One CD-ROM will allow students to tour fifty places in Oregon; the other will be a comparison city atlas of Eugene, Oregon, and our sister city, Kakegawa, Japan. The magazine atlas, unbound materials, and two CD-ROMS will be packaged in a box.

### Discussion

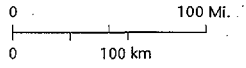
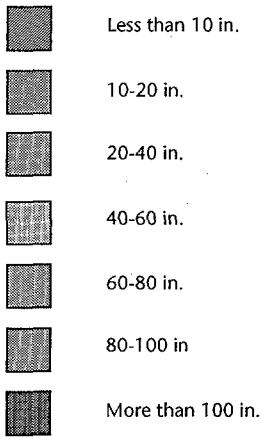
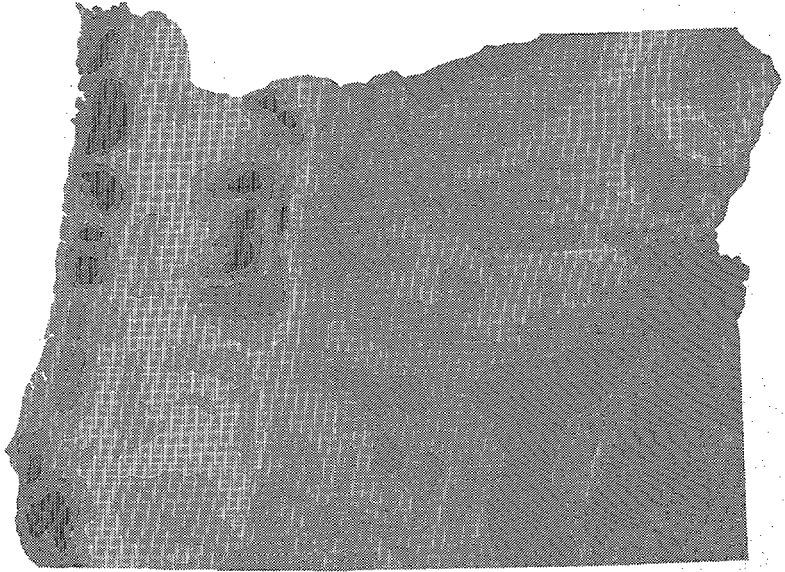
Cartographers have long been designing and constructing atlases to help the teaching of geography in various countries. Excellent examples of such atlases include the *Schweizerischer Mittelschulatlas* [1] of Eduard Imhof and his colleagues and *de Grote Bosatlas* [2], begun by P.R. Bos in 1877. Many other fine examples of the cartographers' art could be cited. Inspired by these fine atlases, the author directed a project that created an atlas that was designed to serve geographic education, the *Atlas of Oregon* [3], published in 1976. All of these atlases served the educational needs of both students and teachers well in the pre-computer age.

The advent of ubiquitous computer access requires a re-thinking of atlas-making for educational purposes. Is it possible to teach geography in a better way using new multimedia technology? Or, are we merely amusing the new generation of students without really imparting improved geographic knowledge?

In an effort to answer these questions and help the teaching of geography in Oregon, a multimedia school atlas project was begun in 1994 in Oregon. Rather than prepare a single volume in the traditional mode, the Oregon School Atlas will be a suite of products. We are preparing a full-color magazine-style atlas written for high school students. Later we hope to prepare a companion volume for primary school children. The contents of this high school atlas was determined by gathering suggestions from active teachers. We asked them what they needed to teach about Oregon and what they felt would interest their students. This is an important point. The Oregon School Atlas Project is driven by teacher needs and what they feel are their students' needs more than by what Professors of Geography and cartographers feel that the teachers and students should have.

The teachers asked for twenty topics related to the state of Oregon: Native Americans, Oregon Trail and Pioneers, Settlement and Population, Political Boundaries, Oregon Political Issues, Perceptions of Oregon, Geology, Landforms, Climate, Hydrology, Vegetation, Natural Resources, Oregon Outdoors, Land Use, Energy, Transportation, Communications, Oregon Festivals and Events, and World Trade. All of these topics are being prepared for the purpose of teaching young people, not from the viewpoint of writing a comprehensive atlas for adults. The vocabulary is limited, the sentence structure is relatively simple, and the graphics colorful and clear. Figure 1 is an example of a black-and-white version of a map prepared for the student atlas.

# Precipitation



Oregon School Atlas Project, 1995

Figure 1: Example of student atlas map

A second product in the Oregon School Atlas suite of products will be a looseleaf notebook of materials useful to the teachers of geography. Many base maps will be included that compare Oregon to a part of the world, like South America, Africa, or the Middle East. These base maps will be prepared in several versions, as the teachers request, to maximize their usefulness. They are designed to be photocopied and to be used as overhead transparencies. The notebooks will also contain lesson plans and tables of data to use with the base maps and lessons. Figure 2 is an example of one of these base maps.

Two CD-ROMS of Oregon images are being prepared using the multimedia authoring tool *Digital Chisel*. The first CD-ROM product is called *ExplOregon, A Geographic Tour of Oregon*. We have identified fifty places in Oregon-- such as Crater Lake. For each place information has been assembled in a multimedia mode. The information includes aerial photographs, maps, diagrams, ground photographs and explanatory text. For a few sites we also have prepared animations, like the building of the volcano Mount Hood, the uplifting of Steens Mountain, and the creation and collapse of the Crater Lake caldera. These special effects have been created for the Atlas Project by students in the Fine and Applied Arts Department at the University. Geographers and cartographers need to ally with artists in other disciplines to create these modern projects. A number of state-wide maps were created in our InfoGraphics Lab in support of the *ExplOregon* CD-ROM. The maps show the location of the sites in the state in relation to cities, roads, rivers, and the physiographic regions of Oregon. Figure 3 shows the black-and-white version of two of these colored maps. It should be noted that designing maps for display on a computer monitor screen is quite different from preparing a map to be printed on paper.

The second CD-ROM project involves international education. The city of Eugene, Oregon, is a sister city to Kakegawa, Japan. Since 1979 these cities have exchanged visitors, students, and teachers in an active relationship. As a part of the Oregon School Atlas Project we are preparing a comparison atlas between Eugene and Kakegawa that will help the people, and especially the students, of one city understand the geography of the sister city. Maps of both cities at the same scale will be made. More importantly, a CD-ROM of colored photographic images is being prepared to illustrate the similarities and differences in our visual landscapes and our cultures. We will have images of economic topics, like factories and businesses; movement of people and goods-- like trains, cars, and bicycles; historical topics, like old buildings; and images of celebrations. The geographic location in the context of the State of Oregon for Eugene and the Prefecture of Shizuoka for Kakegawa will also be shown. We will strive for equality in the presentation of information in both English and Japanese on the CD-ROM. Most of the development of this product is being done by geography students in Oregon advised by Japanese students at the University of Oregon and teachers at our local schools.

The new Oregon School Atlas, then, is a suite of materials-- a magazine-style atlas, unbound maps and materials for teachers, and two CD-ROM products. This atlas will come in a box, not a binding, as a product created by crossing the borders between cartography and the multimedia arts.

## References

- [1] Imhof, E., 1965. Schweizerischer Mittelschulatlant. Zürich: Kantons Zürich.
- [2] Orneling, F.J., 1976. de Grote Bosatlant. Groningen: Wolters-Noordhoff.
- [3] Loy, W.G., 1976. Atlas of Oregon. Eugene: University of Oregon.

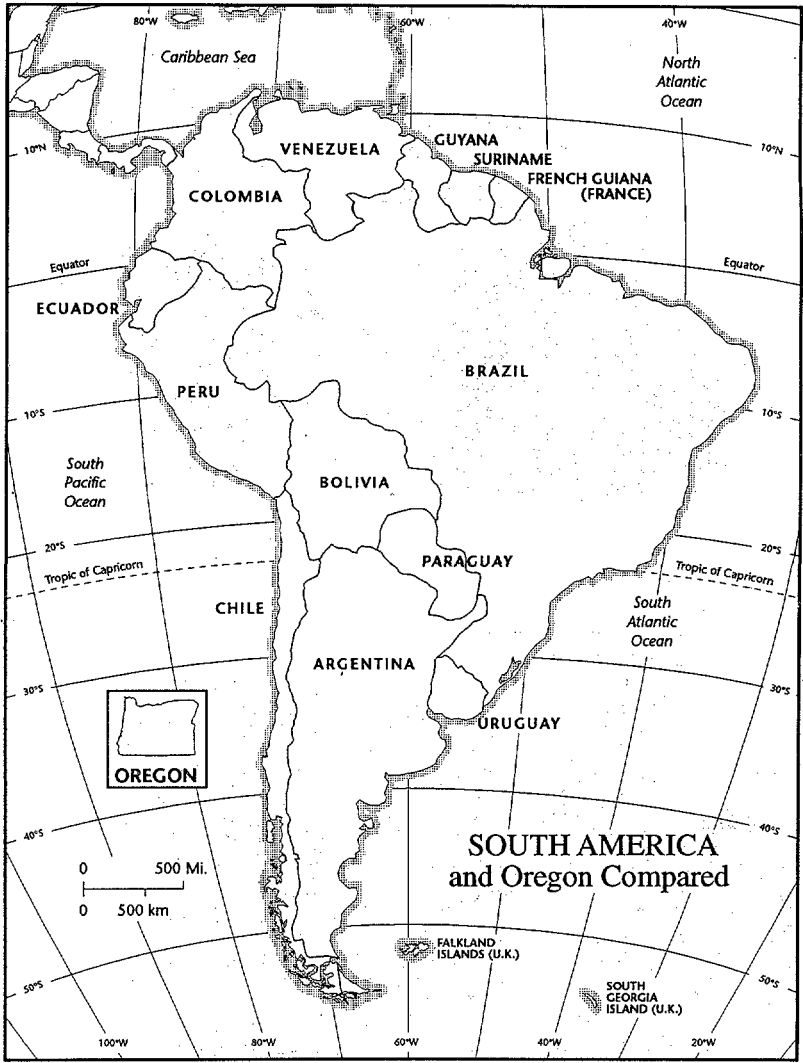
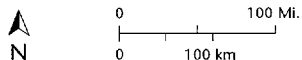
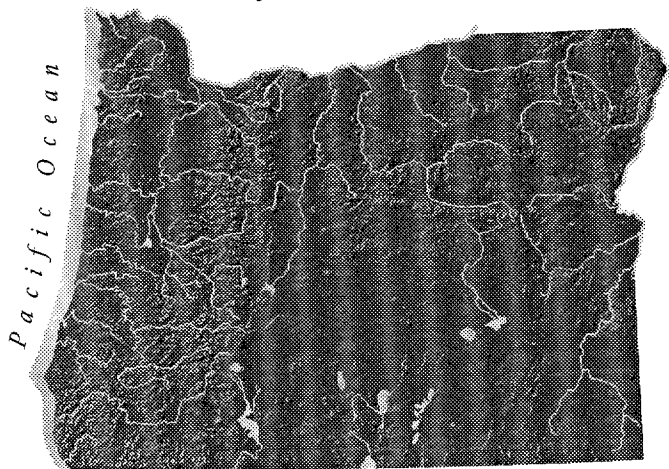


Figure 2: Example of comparison base map

### Major Water Features



### Major Cities and Highways

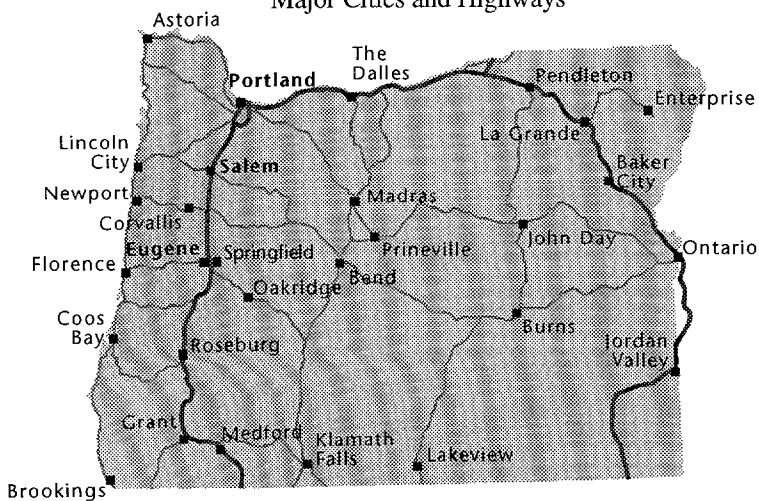


Figure 3: Example of CD-ROM maps