

SIXTH ANNUAL REPORT  
OF THE STATE MAP ADVISORY COMMITTEE  
FOR OREGON  
1984

OPEN FILE REPORT O-85-1

January 1, 1984 - December 31, 1984

John D. Beaulieu, Chairman  
State Map Advisory Committee

State of Oregon  
Department of Geology & Mineral Industries

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## EXECUTIVE SUMMARY

The purposes of the State Map Advisory Committee (Executive Order E0-33-15) are: (1) to recognize and pursue mapping goals for Oregon, (2) to promote coordination of programs, policies, and resources with the intent of maximizing opportunities and minimizing duplication, and (3) to bring benefits of well directed mapping more effectively to the people of Oregon.

To accomplish these aims, the State Map Advisory Committee includes representation from Federal agencies, state agencies, and universities. Major accomplishments noted below are detailed in the body of this report.

- 1) The State Map Advisory Committee promoted effective coordination in hard copy and digital mapping through the planning and sponsorship of one full meeting of the Committee and one highly successful State/Federal Mapping Coordination Meeting in which Federal program direction was a major consideration:
  - a) The National Map Division (USGS) is the lead Federal agency for mapping, and in cooperation with the Interior Digital Cartography Coordinating Committee (IDCCC) is assuming a leadership role in digital mapping. Coordination considerations were emphasized at the February 23, 1984 and November 8, 1984 meetings.
  - b) The National Map Division maintains a wide variety of mapping programs of interest to the public and of significance to state map agency planning. Mutual program direction was emphasized in the February 23, 1984 meeting.
- 2) Owing to volumes of new data, enhanced legislative awareness, and the need to communicate effectively with Federal data collection efforts, digital map formats were given increased attention by SMAC in terms of coordination and cooperation. Details are provided in the meeting summaries.
- 3) The State Map Advisory Committee pursued cooperative completion of fundamental map bases for the State through effective planning, prioritized goal setting, and consistent communication with the U.S. Geological Survey. Progress is tabulated below:

PRODUCT	Published 1979	Published 1980	Published 1981	Published 1982	Published 1983	Published 1984	Total Complete
7½' topographic Maps (1911 total units)	10	46	76	50	88	46	1088
Orthophotoquads (1911 total units)	2	36	"1492"	"154"	113	3	1812
1:100,000 Base Maps (78 total units)	-	-	34	32	4	6	78 planimetric 31 topographic
Land use/Land cover 1:100,000 (65 total)							12
1:250,000 (22 total)						2	19
Digital Products (7½')							
Digital Elevation							300
Digital Line Graphs							
Land Lines							567
Boundaries							567
Transportation							94
Hydrography							99
Cultural							38

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(Note: 7½' topographic maps are now officially counted when received from the printer rather than when sent to the printer. An estimated 140 maps will be produced by three centers in FY 1985. The Land Use/Land Cover and orthophotoquad programs are coop driven. Indexes of digital products are routinely distributed to key agencies. The printing of the 1:100,000 topo series is delayed while the Bureau of Census coop pursues completion of the nonurban U.S. 1:100,000 series for transportation and hydrography in a preprint format.)

- 4) A survey of state agency digital map data needs was completed with emphasis on scale, location, topic, and existing agency capabilities. The survey provides valuable general information and will be useful in the development of cooperative data acquisition. The emphasis is on maps. The survey should not be confused with efforts to coordinate Geographic Information System development (DOGAMI OFR 0-84-6).
- 5) The Second Western Regional Interior Digital Cartographic Coordination Committee (IDCCC) Meeting of the National Map Division was attended by the SMAC Chairman for the purpose of general information and enhancement of SMAC effectiveness in digital map data areas.
- 6) At the Seventh Regional Map Workshop (hosted by Idaho and attended by representatives of the USGS and seven western states) Oregon provided input in budget priorities, NMD realignment, resident cartographer programs, and digital activities.
- 7) A need exists for a moderately thorough brochure which describes mapping products available in various formats for the public from state and Federal agencies in Oregon. In a joint effort with SMAC agencies such a report is being prepared by the State Resident Cartographer with publication to be done by DOGAMI.
- 8) The Oregon Department of Geology and Mineral Industries continued a cooperative agreement with the U.S. Geological Survey to support a Resident Cartographer to the State of Oregon whose major tasks now include: (1) the identification and linking of mapping capabilities through cooperative agreements, (2) promotion of more effective product dissemination, (3) elimination of unnecessary duplication of effort, and (4) technical assistance in matters of mapping and coordination. His annual summary is included in this report.
- 9) Significant progress has been made towards completing a family of thematic maps for Oregon of a scale of 1:500,000 depicting a variety of topics for general reference. Available maps include planimetric (USGS), topographic (USGS), LANDSAT imagery (ERSAL), Geothermal (DOGAMI), Congressional Districts (USGS limited edition), environmental (DEQ, 1978), land ownership (BLM), and Mineral Resources (DOGAMI/BLM/USFS).

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MEETING SUMMARY  
STATE MAP ADVISORY COMMITTEE

Room 357 State Capitol  
February 23, 1984

NAME	AFFILIATION
Glenn Ireland	State Cartographer ORE/NMD
Robert Sandstedt	City of Portland
Margaret McClements Lambie	Bonneville Power Administration
Herbert D. Lloyd	U.S. Bureau of Reclamation - P.N. Region
Larry Bright	Oregon Department of Fish & Wildlife
John E. Jackson	Department of Environmental Quality
Stephen R. Sander	Department of Environmental Quality
Craig A. Smith	Oregon State Library
Dick Myers	Oregon State Library
Eddie Schwertz	U.S. Geological Survey, Mid-Cont. MC - Rolla, MO
Wes Nicholson	Crown Zellerbach - Forestry Research
David Ringeisen	Oregon Dept. of Trans. - Mapping
Rudy Wellbrock	Oregon Dept. of Trans. - Mapping
Steve Renoud	Oregon Department of Forestry
John Price	Federal Highway Administration
Ray W. Miller	Oregon State Forestry Department
Mark Walsh	USDA Soil Conservation Service
Thor Thorson	USDA Soil Conservation Service
Judith A. Farmer	City of Lake Oswego
Tony Laenen	USGS, WRD Portland, OR
Tom Smith	USGS, Springfield, OR NMD
Bob Olson	USGS, Grants Pass, OR NMD
Allan Coker	BPA, Portland
Tom Jackson	BPA
Robert Bailey	Oregon Dept. of Land Conservation and Development
Gary M. Van Dusen	State Military Dept.
Edwin Gustafson	Cartographer, Graphic Designer, Freelance
Paul Staub	State Geology Dept.
Al Cardwell	Geo-Graphics, Portland
Steve Brutscher	Oregon Water Resources Dept.
Mike Seber	Dept. of Revenue, Oregon
Steve Herzon	Dept. Forest Management, OSU, Corvallis
Irv Iverson	Dept. of Revenue, Oregon
Frederick E. Wilson	Univ. of Oregon Geog. Dept.
David Marentette	Univ. of Oregon Geog. Dept.
Susan Trevitt-Clark	Map Library, Univ. of Oregon
Peter Eberhardt	Willamette National Forest/Eugene
Peter Stark	Map Library, University of Oregon
Mary Anne Szulist	USFS - Regional Office, Portland

George Shore  
Ted Albert  
Robert Wright  
William G. Loy  
Dennis Peters  
Gayle Barton  
Dennis Isaacson  
Chuck Rosenfeld  
Ken Stevens  
Lee Aggers  
Dick Swinnerton  
Keith Walrath  
Lewis MacArthur  
Gary Waltenbaugh  
Dave Yandell  
John Beaulieu

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Bureau of Indian Affairs, Portland  
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ERSAL - Oregon State Univ.  
Geography, Oregon State Univ.  
Pacific Power & Light - Transmission Design  
USGS - Menlo Park, CA  
USGS - Menlo Park, CA  
Pacific Power & Light, Portland  
Ore. Geog. Names Board  
Dept. of Energy  
Emergency Services  
Chairman - SMAC

A) Status of Selected Map Programs

1) National Map Division (Dick Swinnerton)

Dick introduced Lee Aggers, Ed Schwertz (Rolla, MO), Bob Olsen (Field), Tom Smith (Field) and Glenn Ireland (State Resident Cartographer).

The National Map Division realignment of Center responsibilities is a balancing act involving consolidation on the one hand and the desire for regional proximity on the other. Major concerns are programmatic effectiveness, economies in capital outlay purchases, and the growth into new areas in addition to topo mapping, which strongly influenced the original division structure. The Menlo Park effort will focus on revision, OQ, and digital and will not include small scale or intermediate scale mapping.

The 1985 presidential budget is tight, but provides good treatment in a relative sense. P-Map funding is holding steady and digital received a large increase to \$11.3 M. Receiving cuts are LU/LC, NCIC, SLAR, and modernization.

Major program directions include completing the P-map for the country by the end of the decade and digitizing the non-urban country (hydrography, transportation at a scale of 1:100 K by 1987. Digitizing at 1:24,000 and mapping at 1:100,000 will suffer short term, but cooperative efforts are welcome. Special projects in the Menlo Park office include the Oregon Water Data effort and production of shaded relief bathymetric coastal maps in the Exclusive Economic Zone at a scale of 1:250,000 using a British sonar system.

Digital mapping now is coordinated by the SMACS, IDCCC (Interior Digital Coordinating Committee), FIDCCC (Federal Interagency Digital Coordinating Committee), and local subsidiary committees.

2) Status of Mapping in Oregon (Glenn Ireland)

P-map progress was reviewed; a standardized request form for general data on mapping programs was distributed; the 1:100,000 Mt. Hood map was described and the completion of Phase I of the GNIS was noted.

3) Cooperative Land Ownership Map (Ted Albert)

The SMAC effort to produce a cooperative land ownership map for Oregon at a scale of 1:500,000 is complete and was displayed. Cooperating agencies included State Lands, Geology, USFS, USGS, and BLM. A 1986 revision is contemplated. BLM will maintain a correction file. If coop funding is available a press run without BLM district boundaries would be possible. Resolution is in 160-acre cells.

4) NCIC Affiliate (Craig Smith)

The NCIC Affiliate was described with emphasis placed on the establishment of a satellite office at the University of Oregon Map Library, state budget difficulties, a desire to develop greater visibility, and free access to the EROS computer center.

5) Provisional Map Series

In selecting contour intervals the need for detail must be balanced against practical considerations with minimal impact on the utility of the map. Specific needs and desires of SMAC members vary between 5' and 40' intervals depending on terrain. The USFS prefers 20' intervals and is contrasting work with this specification in the Coast Range.

B) Digital Map Activities (Dennis Isaacson)

- 1) The evolution of ERSAL from its 1972 research inception to its contract operational mode was reviewed. Current efforts are focused on a plan to consolidate multiple user needs and lab capabilities into a planned and scheduled statewide effort.

The lab specializes in 7½' format output with 60 spectral classes of nonenhanced data. Ground truthing and strategic signature sorting allow the production of specially purpose maps for a wide variety of users. Tabulation is provided and crude teletype access is operational. Soon 7½' data packages for land cover may be available on floppy disk. (The program has the potential to provide systematic Level 3 and Level 4 detail to the nationwide USGS LU/LC effort for topics such as irrigated land or to provide a totally different statewide digital land cover map for Oregon.)

- 2) Computerized Industrial Property Inventory (Norm Solomon)

This is a questionnaire based data system designed to sort and locate available industrial property according to the specifications of prospective clients approaching the State Department of Economic Development. Approximately 1200 sites involving 58,000 acres are on file. Dial-up access now allows for remote usage from distant points.

Analogous efforts are underway in Kansas City and Dayton County, Wisconsin. Ed Schwertz (USGS-Rolla) provided contacts.

- 3) S.B. 523 Water Planning for Oregon (John Beaulieu)

The broadbased state effort to address water planning involves a computerized data effort on a pilot basis coordinated by State Geology. The project will utilize a wide variety of existing data, but contemplates some digitizing at scales of 1:100,000 and 1:250,000 to round out data files. The effort is in cooperation with the USGS.

4) Digital Needs Survey (Glenn Ireland)

A major priority for the State Map Advisory Committee in 1984 is to complete a digital data needs survey of state agencies through the efforts of Glenn Ireland. The effort will be built upon the more general survey, completed last year and will provide specific data on 1) agency, 2) geographic area, 3) scale of input, 4) and topic.

The needs will be related to short products to yield information of value for 1) A-16 input if appropriate, 2) general SMAC activities, 3) individual agency planning, and 4) cooperative contract development in areas of common agency interest.

C) Agency Activities

1) Emergency Services (Dave Yandell)

For emergency related government functions there is a need for a uniform, commonly accepted base map capability to meet the needs of Health, DOE, fire districts, local government, and 911 service units. Consistent rural addressing or indexing is an additional interest.

The Firescope Project of Southern California has evolved within these general guidelines and now allows a uniform mapping capability with "focusing" capabilities to 100-acre cells. A contact in the Riverside Office of Cal. Emergency Services was provided.

2) Water Resources Department (Steve Brutscher)

The land use maps (variable scale, 8 categories with manual planimetric tabulation) designed for water planning purposes were described. Large scale data consolidation was on available bases (15', 7½', 00 etc.). One category is irrigated land. Fifteen of 18 basins were completed and 6 are in printed form. Cessation of PNWRC funding essentially terminated the effort although some work has continued.

As a broad issue of concern to all agencies it was noted that internal administrative geographic names used by agencies often find their way into the public sector even though they violate broadly recognized specifications of geographic names under the wings of State Geographic Names Boards.

3) State Department of Forestry (George Shore and Ray Miller)

In 1980 the Department adopted the 1:100,000 USGS base map series as the basis for ½" to the mile unit map series. Problems have been experienced with line weight standards, particularly in relation to roads. In-house modifications are made. The ortho series on the township and half township basis continues, but financial coops are needed.

- 4) State Energy/LCDC/Department of Transportation  
(Bob Bailey and Gary Waltenbaugh)

These agencies have entered into a joint coop to conduct a pilot GIS project on the coast with CEIP funds probably using MOSS (public sector) software. The project will utilize USGS digital base map data and will, therefore, be compatible with other similar state agency efforts in state.

- 5) Oregon State University Geography Dept. (Chuck Rosenfeld)

The recently acquired Image Processing-GIS System facility purchased with Department of Defense funds for training purposes was presented in an impressive slide show. The capability is research oriented with the short-term goal of mainstreaming into the educational thrust of the Department.

The system is a 3267 "super mini" computer with vector and raster scanning optics and state-of-the-art capabilities and peripherals. A present limitation is the small format of the output hard copy products and expanded capabilities are being sought either through additional acquisitions or linkup with the OSU mainframe printers.

- 6) Geographic Names Information System (Lewis MacArthur)

Phase I - utilizing names on USGS maps - is complete and Phase II - using DOT, WRD, USFS, BLM, special interest data sets - is underway. Use of proprietary name data may bring with it the need to utilize subsidiary data tapes with limited access. Use of GNIS data in the P-map process requires coordination in the field and pre-edit map stages. Coordination will become more of an issue as P-map efforts shift into more heavily populated (and named) areas. Rudy Wellbrock (DOT) maintains a state name correction file.

- 7) Department of Transportation (Rudy Wellbrock, David Ringeisen)

Rudy noted that the agency possesses massive map and name records of cities for 1936 and the 1950s and much of the information is available on microfilm.

The major emphasis was on providing an update on the Computerized Map Acquisition process involving a VACS 780 system and Intergraph Software, for which negotiations are still underway. A slide show describing system capabilities and peripherals was presented.

- 8) State Fish and Wildlife (Larry Bright)

The effort to inventory game habitats was initiated to better plan for wildlife needs and to react to or guide land use decisions impacting habitat. Using knowledge of the wildlife objective habitat parameters were defined and groundtruthed as an intermediate step for utilizing LANDSAT imagery for inventorying. The present desire is to use automated techniques to replace manual image analysis

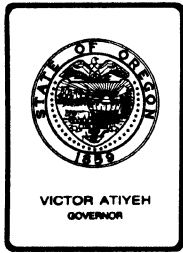
and to provide greater potential for scenario evaluation using basic digital data bases (DEM, Transportation, Hydrography) in addition to LANDSAT imagery.

9) U.S. Fish and Wildlife (Dennis Peters)

The Regional Wetlands Inventory is 35% complete for the U.S. and is utilizing classification schemes developed by a multi-agency task force. At present trends the country loses 312 m<sup>2</sup> of wetland annually. The inventory is based on NHAP and LANDSAT imagery and provides 1-3 acre resolution. The Agency is investigating the possibility of a liaison with a sister state agency to distribute the map products.

10) Bureau of Indian Affairs (Bob Wright)

The Bureau utilized MOSS for research on the HOPA Indian Reservation and now is giving similar attention to the Warm Springs Reservation, the Burns "Allotments," coastal areas, and the Umatilla Reservation (leasing data base). A subject for further consideration by SMAC is the need for a centralized index of digital map data. Discussion on the subject was open ended and incomplete.



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Meeting Summary

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November 8, 1984

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Larry Bright	Ore. Dept. of Fish and Wildlife	229-5453
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Ed Schoaps	Oregon State Parks - Design Unit	378-6290
David R. Haugh (SFC)	Operations & Training, Mil. Dept.	378-3903
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Peter Eberhardt	Long Range Planning Willamette National Forest - Eugene	687-6595
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Judy Mikowski	USFS PNW Exp Station Forest Inventory	231-2190
J.D. Lloyd	USFS PNW Exp Station Forest Inventory	231-2124
Hal Arbogast	USGS PNW Exp Station Forest Inventory	231-2124



Toby Atterbury	Crown Zellerbach - Portland	221-7189
Richard Huxley	US Fish & Wildlife - Portland	231-6208
David MacMillan	GLADS Mapping/Salem	588-6511
Beverly Vogt	Oreg. Dept. Geology & Mineral Indus.	229-5580
Paul Staub	Oreg. Dept. Geology & Mineral Indus.	229-5580
Ray Miller	Oregon Department of Forestry	378-5033
Bud Roberts	Land Data, Inc.	297-5655
Bob Olson	USGS, Topo Div; Grants Pass, OR	476-0633
Ken Osborn	USGS, Natl Mapping Div. Grants Pass OR	476-0633
Tom Jackson	BPA - Photogrammetry	230-4645
Gale Sickler	BPA - Photogrammetry	230-4643
Steve Brutscher	Oregon Water Resources Dept.	378-3671
Vivienne Torgeson	Oregon Water Resources Dept.	378-3671
Robert Keith	U of O	686-5232
Malinda Feely	Exec. Dept., Data Systems Div.	378-4126
Judy Nisperos	BLM - Oregon State Office	231-6888
Ted Albert	BLM - Oregon State Office - Carto	231-6887
Robert Wright	GIS Coordinator - BIA, Portland Area Office	231-6931
Peter Stark	Map Library - Univ of Oregon	686-3051
Dick Dodge	USDA Forest Service - Portland	221-3614
Rudy Wellbrock	ODOT Mapping Section Rm 22 Trans Bldg. Salem Or	378-6256
George Shore	OSDF Mapping 2600 State St. Salem	378-2504
George Y. G. Lee	USGS Mapping	415/323-8111
John Beaulieu	Oregon Geology/SMAC Chairman	229-5580
Lewis McArthur	Board of Geographic Names	
Ken Deuker	Portland State University	
Bob Bailey	LCDC	
Norm Solomon	Oregon Dept. Econ. Dev.	

#### 1) National Map Division (USGS) - Highlights of Programs

George Lee and Glenn Ireland summarized major elements of the NMD mapping program.

The eastern branch houses the bulk of digital equipment; midcontinent has responsibilities for Land Use - Land Cover (LU/LC); and Menlo Park is realigning towards reduction of field mapping efforts. Geometronics and Cartometrics will be combined for administrative efficiency. The 1:100 K effort will be picked up by the Rocky Mountain Center. Digital, P maps, and specialty maps will be retained at Menlo Park.

As P maps are completed revisions will be increased. Coops with other mapping entities are actively sought. For 1984 Oregon had 46 P-maps completed. This figure involves a new counting strategy. Next year 140-150 will be completed.

A statistical summary was distributed. The USGS must finance part of its operation through sales - a factor which results in ongoing price adjustments with the next one scheduled for January 1985.

Innovative Mapping projects in the west currently include the Oregon GIS, 1:100 K workshare projects in Idaho, and a pilot urban map revision project in San Bernadino County, California. The Ortho Program is coop driven.

The National High Altitude Photo Program (NHAP - 1:80,000 B + W, 1:58,000 Color/Infrared) is complete for Oregon. Nationwide the 1:100 K map project is stalled pending completion of the 1:100 K Census Project. Advance materials are available for many areas, however.

Field efforts in Oregon for the P Map Series were described by Tom Smith (Sisters), Bill Kaiser (Vancouver), and Sam Bardelson (Grants Pass).

Coops are actively sought by the USGS in their mapping efforts.

## 2) Digital Activities

Glenn Ireland provided an update on the survey of state agency digital map needs that he is preparing. Information is being developed on need in terms of scale, theme, and geographic location. A total of 28 entities have been queried. The report will be completed by December 1, 1984 and will serve as a resource document by agencies in developing coops, planning, or informing staff about other agencies.

Lewis McArthur reported that a contract is in process to supercede Phase I (USGS map data) of the Geographic Names Information System (GNIS) with Phase II (variant names). The pre-edit names review activity is an aid to ongoing P Map Field Activity in Oregon. Public access to proprietary data cooperation is a continuing concern.

Executive Department: The GIS overview committee will formulate a coherent policy for reference in addressing various agency needs. Agency directors are involved. The GIS focus is distinct from the digital map interests of SMAC, but also has many common elements. Close coordination of the GIS effort and SMAC activities is essential. Emphasis must be placed on cooperative data capture and use since this is where much of the costs of automated geographic information systems is.

Emergency Services (Dave Yandell): Glenn Ireland will coordinate a meeting of agencies interested in resolving map issues related to Emergency response functions. Agencies rarely involved with SMAC, such as Police, may be involved. Input from FIRESCOPE and/or the Okanogan Forest will be solicited. The committee will report to SMAC at the next meeting.

LCDC/DOE (Bob Bailey, Scott Smith): The Department of Land Conservation and Development and Department of Energy presented a mid course status report on their joint microcomputer GIS project focused on 8-7½' quadrangles in Clatsop County, CREST, US F&W and various sources of shelf data bases. Completion is scheduled for the end of the year. A list of problems is being maintained for future reference and guidance to others. The major software package is MOSS. Equipment includes a Data General 20 desk top micro and used Tektronix plotters.

Department of Transportation (Rudy Wellbrock): The Agency Intergraph has been up and running for 8 weeks. Applications are aimed at Agency highway engineering needs and mapping is only one of many functions. Funding is primarily federal. Coops are being put into place with counties for data collection, and expansion to 30 work stations is contemplated. A U.S.G.S. DLG manager will visit soon to pursue work share cooperatives in the 1:100 K digital data layer.

Bonneville Power - Small hydro (Margaret Lambie): The goal of the program is to assist the power potential of small hydro projects as an aid to the agency in its broader energy planning. The digital effort relies on the USGS 1:2M national map data base and is coop oriented having gained assistance from the SRC and also Tennessee Valley Authority. Data are structured to provide 7½' quadrangle corner point matching. Various Geographic Information Systems are being reviewed with the goal of coordinating in the future.

Oregon Strategic Water Management GIS: The fundamental attributes of the system were described to provide a basis for understanding decisions that have been made to date and the ultimate uses of the system. The attributes are 1) statewide scope, 2) reliance on passive data update, 3) coordination of individual agency efforts, and 4) reliance on long term natural resource considerations in formulating decisions on residence and institutional framework for the effort in the future.

In general terms Phase II probably will include completion of decision making for the John Day Basin, input of data for 3 new basins, software enhancement and comparisons, input of some data bases statewide, and securing of in-state residence.

Discussion centered on the kinds of questions the system will answer, and the central role of scenarios in deriving full utility for the system. It is clear that some kinds of dynamic or local questions are possibly handled by specialized peripheral microcomputer approaches, which ideally would rely on the major system for certain kinds of raw data.

BLM/BIA Digital Service Center (Bob Wright, Ted Albert): There now are at least twelve agencies interested in participating in the concept of a digital service center within BLM and BIA. Emphasis will be on digitizing thematic data and attention will be given to the coordination of digital activities through the Interior Digital Cartographic Coordination Committee (IDCCC). The intent is to promote data exchange and to provide digitizing services in accordance with USGS standards (DLG level 3). A handout probably will be available at the next SMAC meeting. From the standpoint of state agency needs, which may be topical and piecemeal, the availability of a service center for quality digitizing on a contract basis can be quite valuable.

### 3) Information Items

The Ohio style index will be available for Oregon in late 1985. Interest in state clearly is for the simpler one-sheet map index of published quadrangles that has traditionally been available. Current options include the possibility of DOT developing an index of published maps or the possibility of making wider use of the in-house index currently being used by BIA.

With resource interests offshore increasing, the need for reliable, broadly used offshore bathymetric maps increases. An earlier survey of state agency SMAC members showed generally that needs inside the three mile limit were for 1:24,000 topobathy maps tying onto the USGS 7½' series and for smaller scale (1:100 K, 1:250 K, 1:500 K) bathymetric maps outside the three mile limit. The USGS and NOAA have developed cooperative M.O.U.'s over the years and now are midway in an attempt to generate reconnaissance maps using GLORIA data. Larger scale local maps are generated cooperatively using ALVIN. Other mapping efforts of small scale include those of Ocean Margin Drilling Program and the Circum-Pacific Council for Mineral and Energy Exploration, a consortium of 150

scientific entities in approximately 50 countries.

4) Regional Meeting Highlights

The Western Regional IDCCC met in Portland on October 18, 1984 and had about 60 participants from federal agencies in the west plus representatives for the states of Washington, Idaho, and Oregon. The goal of the Committee and related Committees at the federal level is to coordinate and to standardize digital activities. To the extent that federal data bases are relevant to state needs the direction of this effort is of great interest to the State of Oregon. Major elements of discussion were the GIS capabilities of USGS - Sioux Falls, the BLM/BIA Service Center, and the Oregon Water GIS effort. The next IDCCC Regional Meeting will be in Portland in coordination with a meeting of regional chapters of the American Society of Photogrammetry in May, 1985 (Puget Sound Region and Columbia Region).

The Seventh Regional Mapping Workshop was conducted at Boise, Idaho September 25-28, 1984. Highlights briefly reviewed at the SMAC meeting were a general description of the Airborne Profiling of Terrain System (APTS), highlights of various state presentations (Nevada, Idaho, Oregon, Washington, Arizona, California, Hawaii), temporary slowdown of the 1:100 K printed map schedule owing to cooperative 1:100 K digital efforts (NMD/Census Bureau), pilot urban mapping/imagery in San Bernadino County California, and the Oregon Water GIS effort. Recommendations of state representatives highlighted the need to stay on course for the P Map Series, to reconsider tenure durations of resident cartographers, to provide technical digital assistance to states, and to provide 1:24,000 printed T map data as soon as possible.

5) Highlights of Agency Activites in addition to information presented above included the following:

State Forestry (George Shore) has completed 11 new 1:100 K maps in northeast Oregon with accented line weights on roads to enhance readability.

U.S. Forest Services (Dick Dodge) distributed price lists and noted that negative engraving is contracted, while in-house attention is now focused on administrative maps. In-house road up-dates feed into the internal 7½ quad series. A map of new wilderness areas has been prepared. An agency moratorium of GIS development exists pending systematic definition of Agency needs. Boundary definition of the recent Wilderness Bill is underway.

Oregon State University (Bill Ripple) - (ERSAL and Geography) currently is participating an Elk habitat study for the BIA on the Umatilla Reservation, has acquired SAGIS (MOSS predecessor) software, and is working on a spatial data transfer project for RIMS (LCDC/DOE).

Geology (DOGAMI) Bev Vogt - briefly announced the opening of a Cartographer position for the generation of complex multicolor printed geologic maps.

Experimental Station - USFS (Hal Arbogast) reported the need for current aerial photos for use in mosaics for the east half of the state. Leads which surfaced included the OSU map library and the SCS.

Bonneville Power (Tom Jackson) reported ongoing efforts to acquire an image processing system to interface with CADs. In terms of GIS software MOSS is not feasible given limitations of existing hardware (KBM, CDC, VACS) at the present time.

Willamette National Forest (Peter Eberhardt) reported on recent progress on output technology in-house. A grid cell planning base at 1"/mile can now be output at ¼"/mile in color in 20 acre cells.

U of Oregon Map Library (Peter Stark) is reinventorying their holdings of 330,000 aeriAls and are restructuring access and inventorying. A grant request in the future will address imagery gaps. The library also houses all Wilderness Bill resource maps utilized in the development of the Weaver Wilderness Bill.

BLM (Ted Albert) announced specialized large scale map efforts near Burns, cyclic aerial photography in western Oregon, and updated land status maps in southeastern Oregon. An update land ownership file is being maintained for use in eventual reprinting of the 1:500 K land ownership map. Of the 5 1:100 K BLM Oregon maps not yet in print the Vancouver and Astoria Sheets are at the printer and the Hermiston, Wallowa, and Pendleton Sheets will be sent to the printer in Spring 1985.

OREGON STATISTICAL SUMMARY FY 84

PROGRAM	Total No. of Units *	Completed to Date		Completed
		#	%	FY 84
NEW MAPPING				
7.5-Minute Standard Topographic	1911	1088	57%	46
MAP REVISION				
7.5-Minute Photorevision	////	////	////	17
7.5-Minute Limited Revision	////	////	////	0
7.5-Minute Complete Revision	////	////	////	0
ORTHOPHOTOQUADS				
7.5-Minute Orthophotoquad	1911	1812	95%	3
INTERMEDIATE SCALE				
T:100,000-Scale Quads Planimetric		78	100%	////
T:100,000-Scale Quads Topographic	78	31	40%	6
T:100,000-Scale County Plan		7	19%	0
T:100,000-Scale County Topo	36	0	0%	0
T:50,000-Scale DMA	473	0	0%	0
LAND USE AND LAND COVER SERIES				
T:100,000-Scale	65	12	19	0
T:250,000-Scale	22	19	86	2
SMALL SCALE & SPECIAL				
T:500,000-Scale State Base Rev.	1	////	////	0
T:250,000 Scale Revision	27	////	////	0
National Park Maps	1	////	////	0
DIGITAL PRODUCTS				
Digital Elevation Models (DEM)	1911	300	16%	53
Digital Line Graphics (DLG)	1911	////	////	////
Land Lines	1911	567	30%	455
Boundaries	1911	567	30%	458
Transportation	1911	94	5%	66
Hydrography	1911	99	5%	116
Cultural Features	1911	38	2%	0

\* Includes border quads



# United States Department of the Interior

GEOLOGICAL SURVEY

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State Resident Cartographer - Oregon

REPORT TO THE STATE

1984 ANNUAL REPORT

This year the State Resident Cartographer has been called upon to provide assistance in several areas of critical concern within the State. Geographic information systems using map information in a digital form has come into prominence this year. The SRC has continued to be a focal point of coordination between the governmental agencies whether they be state, federal, county or municipal.

One of the SRC's most prominent projects this year has been the John Day Basin Strategic Water Plan Geographic Information System. Materials were gathered from various agencies to be included in this GIS. The SRC represented the USGS, National Mapping Division at several policy planning meetings. In September the SRC accompanied 16 State agency representatives to the AMES Research Center, Mountain View, California, for a 2-day orientation by the USGS NMD and WRD concerning the John Day GIS. The USGS NMD-WRD portion of the study is scheduled to be completed January 31, 1985.

A survey of the state agencies' digital needs was completed in December. This digital survey tabulated and described each agency's needs in the area of digital mapping and computerized geographic information systems. Twenty-one agencies and other organizations were surveyed. This report will be published by the State Department of Geology and Mineral Industries.

Two State Mapping Advisory Committee meetings were held in Salem on February 23rd and November 8th. Fifty five people attended each meeting. The February meeting included an impressive show of Oregon State University Geography Department's digital and computer graphic skill, the unveiling of BLM's State Land Ownership map, and we heard about the need to use a geographic information system in the study of Oregon's water problems. The November meeting included how the Department of Transportation was using their new Intergraph computer mapping system, and BPAs use of digital map information.

In October a meeting was held of the IDCCC. This committee consists of federal agencies and the SMAC Chairman. The purpose of this committee is to coordinate digital mapping activities. Fifty-three participants attended the meeting.

The USGS production of 7½-minute quadrangles continued at an accelerated pace with the use of the provisional map format. This year field crews were active in the Bly-Chiloquin Area of South-Central Oregon; the I-5 corridor from Grants Pass to Roseburg; the McKenzie River - Willamette Pass Area; in the vicinity of Mt. Jefferson and on the Lookout Mountain quadrangle at the mouth of the Columbia Gorge. Published maps rolled off the USGS presses in the vicinity of Medford and the Central Oregon Coast. This was the first year in which field crews from the Mid-Continent Mapping Center, Rolla, Missouri, worked in Oregon. This partial redistribution of responsibility within the National Mapping Division will assure that the goal of completing the 7½-minute mapping of the nation by 1989 will be met.

The National High Altitude Photography program was completed for Oregon in 1984. This program provides statewide coverage with 1:80,000 scale black and white and 1:56,000 scale color-infrared photography. Oregon is the first state in the nation to have complete coverage.

The State Resident Cartographer's office continues to be a key information source for mapping activity. Over 500 requests from State and Federal agencies and the public were serviced through the SRC's office.

*Glenn W. Ireland*

Glenn W. Ireland