

Urban Decision Systems (UDS)

is sixteen years old going on six.

For although we recently celebrated our fifth birthday, our experience in transportation studies, urban planning, statistics, and data processing dates back to 1961. Here's how it all began.

First Use of Census Data in Tape Format

Then associate research director of the Penn-Jersey Transportation Study, UDS President Vlad Almendinger coordinated the first use of Census data on tapes outside the Bureau of the Census. That was in 1961.

Working with the large masses of survey and census data that were accumulated by Penn-Jersey, he conceived the idea of a system that "provides an integrated file processing and multivariate analysis capability for problems involving large data matrices with large numbers of variables." This system — SPAN — received a boost when Vlad joined the Urban Systems Project at System Development Corporation (SDC) in 1963 and put up an operational version on the IBM 7094.

A SPAN for the Bay Area

At the same time that Vlad was settling in at SDC, UDS Vice President Jay McBride, then technical director of the Bay Area Transportation Study Commission (BATSC), was facing the problem of analyzing vast amounts of travel survey, land use, census, and other urban data. To help expedite the process, he brought Vlad in as a consultant.

BATSC became the first study to use a generalized system for large scale processing of vast amounts of data. SPAN was augmented for matrix operations, survey data reduction, and graphic displays on a plotter.

In another part of the Bay Area, UDS Vice President Ken Needham, then a graduate student in urban planning at Berkeley, was processing the Santa Clara County 1965 Special Census as a research project. It was during this time that he met Vlad and Jay.

Urban Systems at SDC: The Project Years

Back at System Development Corporation, Vlad became head of the Urban Systems Project in 1967. After modifying SPAN to run on the IBM System/360, Vlad and his associates started moving out of transportation studies into new areas.

In 1969, Jay McBride and Ken Needham joined Vlad at SDC. That year, Vlad's group consulted with the Bureau of the Census to help design the format and study the use of the 1970 Census Summary Tapes. Urban Systems worked with the Bureau's Census Use Study on test data generated by the 1969 New Haven test census.

The first large-scale project involving both DIME (Dual Independent Map Encoding) files and census information was the NAPS model (short for Network Allocation of Population to Shelters). Created by Urban Systems, NAPS is still used for community shelter and national disaster planning.

An ODE for Reapportionment

In 1970, Vlad, Jay, and Ken left SDC to form the Urban Systems Department at Becker and Hayes, a subsidiary of John Wiley & Sons. Several months later, Jim Paris, a programmer from Statistical Services at SDC, joined the staff.

Beginning in the Spring of 1971, the reconstituted Urban Systems' staff created a database for the reapportionment of the California State Senate. In three months, a statewide DIME file was created at the block group and precinct boundary level. The 300,000 boundary segments covering the state were divided into 730 map files, with each map having its own network of boundary segments — allowing each to be corrected independently of the others before the final merge.

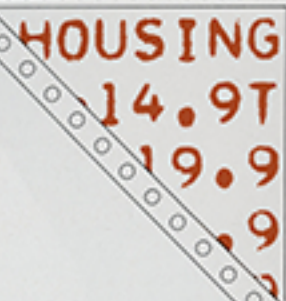
Concurrently, Vlad and Jay designed and implemented the ODE (Online DIME Edit) system for interactive editing of the DIME map files to complete topological accuracy.



Vlad Almendinger
President



Jay McBride
Vice President



Ken Needham
Vice President



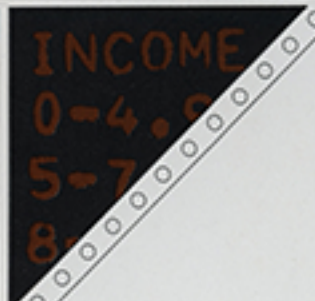
Jim Paris
Senior Associate



Dana Simmons
Marketing



Mike Wright
Research



A New Company and a New Orientation

On June 26, 1972, a new California corporation was formed from the core of the Urban Systems Department. Calling itself Urban Decision Systems, the new company moved to quarters over a laundromat and Swiss pastry shop. The staff numbered five: Vlad (President), Jay and Ken (Vice Presidents), Jim (Senior Associate), and Joyce Graves (Secretary).

With the new company came a new orientation. Previously, the emphasis had been on providing services for the public sector. As more and more banks, supermarket chains, and fast-food restaurants approached us, we began to see a new and larger market for our demographic data products.

The first two years of Urban Decision Systems' life were characterized by a determined effort to serve this vast new market. Out of our formative period came the products that, even today, account for the major portion of the company's revenue: CENSAC, ONSITE, and the closely related TELE/SITE service.

CENSAC: Census Databases Made to Order

With the release of the 1970 Census Summary Tapes, the need arose for an inexpensive online system for creating a database of selected tabulations for selected units of geography. But why write (and compile, and debug) a different computer program each time one wants to retrieve census data?

Urban Decision Systems' solution to this problem was CENSAC, the Census Access System. Written by Vlad and Jim, CENSAC was made available to the public in 1972 as a surcharged access product on the National CSS timesharing network. All 1970 Census data at the tract and block group/enumeration district level of census geography can be accessed by CENSAC.

From TELE/SITE to ONSITE

Almost as soon as CENSAC was ready, we began taking orders for trade area reports. First, we used tract outline maps to determine which census tracts were within a trade area. Then we created a data file of the tracts (and fractions for tracts which were partially included) to feed to CENSAC, which in turn generated our one and only standard report. The name we gave to this trade area report service was TELE/SITE.

To enable ourselves and others to produce trade area reports more efficiently, Vlad designed and implemented a system that would automatically retrieve the census geography for a study area and generate detailed demographic summary and component geography reports for it or any of its subdivisions. The new system, called ONSITE for Online Site Evaluation System, cut the time required to fill an average TELE/SITE request from over an hour to less than fifteen minutes. ONSITE joined CENSAC in 1973 as a product available on the National CSS timesharing network.

ONSITE's retrieval capabilities were the subject of a paper given by Ken Needham at the Census Use Study's Executive Seminar on Data Uses in the Private Sector in October 1973. His paper, "Trade Area Analysis Using the Coordinate MEDList," is available on request from Urban Decision Systems.

That year, Dana Simmons, a former bank locations analyst from Security Pacific National Bank, joined Urban Decision Systems as director of marketing. From him came the idea of the bank and S&L branch retrieval option of ONSITE.

In 1974, ONSITE was adapted to assist in computerized carpooling and commuter bus planning for the Aircraft Division of the Northrop Corporation.

ONPASS: A School Planning Model

Ever since the days of the NAPS model (1969) and ODE (1971), Ken Needham had been evolving a school master planning system based on the allocation of students to schools by distance along a computer-defined street network. In general terms, "the procedure assists in analyzing the relationship between an existing or proposed activity and the spatially distributed demand for the activity."

As a successor to his original ISPP (Interactive School Planning Procedure) System, Ken created the ONPASS (Online Pupil Assignment) System. ONPASS has been used by a number of school districts to help decide where to open new schools or close existing ones. Among them are the Newport-Mesa Unified School District, Cupertino Union School District, and Grossmont Union High School District.