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Abstract

Among U.S. business schools, the Graduate School of Management (GSM) at UCLA was one of the pioneers in the field of information systems. The rise of IS at GSM from its early years (1950s and 1960s), through its formative years (1970s), and leadership years (1980s) is chronicled and factors contributing to this rise and success are identified.

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Introduction

The field of information systems emerged both in practice and in academia in the 1960s. Its roots were in the field of data processing. The Data Processing Management Association (DPMA), now the Association for Information Technology Professionals (AITP), had received its name in 1962. Aiming higher, The Society for Management Information Systems (SMIS), now the Society for Information Management (SIM), was formed for senior executives in 1969. Meanwhile, in academia, the University of Minnesota had put a full graduate program in MIS, the first of its kind, in place in 1968. Other schools were poised to follow.

Among U.S. business schools, the Graduate School of Management (GSM) at UCLA, now the UCLA Anderson School, was one of the pioneers. Its own academic Computers & Information Systems (C&IS) program was established in 1971. Consistently a top 20 or so business school, UCLA’s GSM became a major player in the development and institutionalization of academic IS. Not all top schools joined in. For this reason, while most pioneering stories are unique ones, we can no doubt learn from them. Because they represent early departures from established practices, they tell us something about innovation, in this case, academic innovation. In the present paper, I attempt to recount the UCLA story in its early years. I draw from a variety of sources, which I credit below under Acknowledgements.

How did IS arise and achieve prominence at UCLA? Here I trace the origins and identify the milestones along the way. I then provide a retrospective interpretation of the factors leading to this rise and success. The story spans four decades, 1950s-1980s. The milestones themselves are summarized below in Table 1.

Historical sketch

The roots of information systems at UCLA date to the 1950s, while its rise was substantially complete by the 1980s. We sketch the progress next, in three parts, from the early years (1950s and 1960s), to the formative years (1970s), to the leadership years (1980s). While the leadership years arguably extended into the 1990s, we do not cover this period.

Early years (1950s and 1960s)

UCLA’s early involvement in computing was marked by the building of the Standards Western Automatic Computer (SWAC) by the National Bureau of Standards on campus in 1950. The fastest computer in the world on its completion, it was designed by Harry Huskey. Directed by the Numerical Analysis Research Group, it immediately attracted those interested in computation from around the campus.

In 1951, Clay Sprowls, having completed his PhD at the University of Chicago, joined the then College of Business Administration to teach and develop a program in statistics. He soon discovered SWAC and became fascinated with it, teaching GSM’s first computing course in 1973 as a special topics course in statistics, programming the SWAC to do standard calculations. In 1955, Sprowls chaired a committee recommending to IBM that it establish a large-scale computing center at UCLA with its most advanced equipment. Under a ten-year contract, this became the Western Data Processing Center (WDPC), one of the world’s first university centers devoted primarily to business computation and problem solving. Sprowls ultimately became its director.

By 1960, Sprowls was thoroughly engaged in the field that would subsequently emerge as information systems. The next important academic developments, however, would come not from the management
science faculty to which he belonged, but from GSM’s accounting faculty. By the mid-1960s, the accounting program was judged to be in need of a reinvigoration. The faculty sought to rebuild itself around management accounting, more than financial accounting. And, under the direction of John Buckley, it seized upon information systems as its broader domain of interest, and began to hire new faculty accordingly. Ted Mock and Richard Mason, new PhDs from UC Berkeley, were hired in 1968. Mason, a student of West Churchman, quickly assumed leadership roles in the School. Ephraim McLean, with his PhD from MIT, joined one year later, and was charged with developing a computer-oriented curriculum. The faculty area as a whole was rebranded as Accounting Information Systems. The stage for the full emergence of IS at GSM was now set.

Formative years (1970s)

In the fall of 1970, McLean and Kenneth Siler offered hands-on instruction in interactive programming in the APL language to the entering MBA class. The choice of APL, a powerful computational language, was highly innovative, as it was not widely used at the time.

In 1971, McLean acted to formally label the new computer-oriented curriculum as Computers & Information Systems (C&IS) courses, and a small group of faculty came together to teach it as a distinct area within the School. A small overlap with what became Accounting & Information Systems (A&IS) remained. Such overlaps in the one-department School were not then uncommon. Importantly, Clay Sprowls moved from Management Science to join the new C&IS faculty. Under Sprowls’ direction, Lew Leeburg, on leave from IBM, received what is recognized as the first IS doctorate from GSM that same year.

In 1973, the C&IS Research Program was established under a new Information Systems Study Center, which also included the A&IS Research Program. In 1974, Bennet Lientz, then at USC, was hired as a new C&IS faculty member. Richard Mason took leave to direct a National Science Foundation program and Burt Swanson came to GSM as a visitor and ultimately remained. Student demand for the C&IS courses was by then very strong.

In 1978, McLean and Leeburg, returned to IBM, acted to found the C&IS Associates Program, a group of leading practitioners committed to supporting IS research and instruction at GSM. Leeburg chaired the new group, under McLean’s direction. Initial members were: Carter, Hawley, Hale Stores; Ernst & Ernst; Hunt-Wesson Foods; IBM; Security Pacific National Bank; and Xerox Computing Services. The Associates program would prove to be one of the strongest components of IS at GSM over many years, providing an important direct link to the practitioner community.

In January, 1979, the C&IS Colloquium Series, coordinated by Burt Swanson, was inaugurated. Barry Boehm, Director of Software Research and Technology for the TRW Systems Group, spoke on “Software Productivity and Cost Estimation.” The Colloquium Series would also have a long life at GSM, bringing many speakers to the School on a wide range of IS topics, attracting a diverse audience from on and off the UCLA campus.

Also in 1979, the first (International) Conference on the Entity Relationship Approach, chaired by new faculty member Peter Chen, was held at GSM. The conference was the first of many and continues to be held annually at locations around the world.

Leadership years (1980s)
Now well established at GSM, the C&IS group played an important leadership role among its peers in the 1980s. Most notably, on May 16-17, 1980, GSM hosted the historic planning meeting for the first (International) Conference on Information Systems, held later that year, December 8-10, in Philadelphia. The meeting was convened by Eph McLean, Gary Dickson, and Marty Bariff, and brought leading IS academics together for the first time. C&IS faculty then played important roles in early ICIS meetings, McLean as conference Co-Chair in 1981 and Chair in 1986, Swanson as Program Chair in 1983 and Doctoral Consortium Chair in 1989, and Leeburg as Vice Chair in 1986, and later as Secretary/Treasurer from 1987 to 1993.

In January, 1980, the C&IS group also launched its first Executive Education offering of Managing the Information Resource (MIR) in collaboration with Nolan, Norton, Inc. Eph McLean and Richard Nolan directed the week-long program, which proved popular and was the first of many offered over subsequent years to senior IS executives from around the world.

GSM’s leadership in IS was also recognized through further institutional support. In 1981, the IBM Corporation established a Chair in Information Systems at GSM, to which Martin Greenberger was subsequently appointed. In 1985, GSM became one of 13 schools awarded a $2M grant from IBM in the management of information systems, which furthered research and instruction throughout the School. Also with IBM support, Jason Frand, GSM’s Director of Computing Services, in 1984 undertook the first annual computing survey of North American business schools.

The C&IS group was also augmented by new junior faculty, with Lynne Markus joining in 1985 and Mark Silver arriving in 1987. Together they advanced the research profile of the group and also worked to make the C&IS MBA core course more appealing to students, eventually, with Cynthia Beath, publishing their instructional model in the *MIS Quarterly*.

The year 1987 also marked the appointment of Burt Swanson to serve as founding Editor-in-Chief of a new IS journal established by The Institute of Management Sciences (TIMS), now INFORMS, with its office at GSM. In consultation with its Advisory Board, the journal was named *Information Systems Research* (ISR) and would, after a substantial start-up period, make its first appearance in 1990. Neil Ramiller, an IS doctoral student, served as Managing Editor under Swanson. Housing ISR at GSM was a substantial accomplishment.

Finally, 1987 was also a year of loss for the C&IS group, as Eph McLean departed to take a chaired professorship at Georgia State University. He would go on to provide the same institutional leadership at GSU, as he had at UCLA.

The C&IS academic area also became the Information Systems area in 1987, as Accounting dropped the reference to IS in its own name, having reverted to an area focused substantially on financial accounting.

**Retrospective**

With the benefit of hindsight, what were the important factors contributing to the rise of IS at GSM? I identify seven.

First, UCLA had a long history of institutional leadership in computing, dating back to the early 1950s. Clay Sprowls’ involvement with computing on campus provided a crucial link for the business school, in particular.
Second, GSM was engaged in significant academic innovation as the late 1960s turned to the early 1970s. A pioneering MBA program was developed, with a core curriculum that included cross-disciplinary systems studies. GSM was also a one-department school with fluid boundaries between traditional academic areas. These were fertile grounds for doing new and adventuresome things.

Third, GSM had a knack for recruiting bright young faculty with leadership and entrepreneurial skills, in addition to research and teaching promise. One group of these, in Accounting, acted first to innovate with information systems in mind, opening the door for a few to then push through and establish their own independent C&IS area.

Fourth, the initiative to establish information systems at GSM received strong support from the practitioner and business community. IBM, in particular, provided historic institutional support over many years. This community support did not come automatically. Eph McLean and Lew Leeburg played important roles in nurturing it.

Fifth, once the C&IS curriculum was put in place, there was strong student demand for course offerings. MIS career nights attracted many participants. Too, the IS doctoral program received heavy applications from highly qualified students. It prospered accordingly.

Sixth, the C&IS faculty achieved early success in establishing its research credibility, publishing in leading journals. Richard Mason’s article, “A Program for Research in Management Information Systems,” co-authored with Ian Mitroff, published in Management Science, in 1973, achieved prominence in the emergent IS field, in particular.

Seventh, once the C&IS program established a foothold at GSM, the reputation of UCLA no doubt helped it to further success, in attracting top faculty and students. Interestingly, while not all leading schools innovate, as their reputations after all rest heavily on their histories and present positions, not what they envision for the future, those few that do innovate do so with a marked institutional advantage in attracting faculty and students. GSM and IS at UCLA clearly benefitted from this, even as other schools benefitted from following GSM’s and other’s leadership.

Still, it was not easy to establish IS leadership at UCLA’s GSM. The student-faculty population was set by formula and growth in one area was at the expense of another. The rise of IS at GSM as described here was in the end a credit to the individual faculty who made it happen.

Afterward
While IS at UCLA Anderson continued to be a leading program well into the 1990s, faculty attrition and other school developments eventually came to undermine its position. At the Millennium, only three senior IS faculty members remained. With the retirement of the last of these, Swanson, in 2013, the IS academic area and its curriculum were discontinued. Today, only the Information Systems Research Program (directed by Swanson under a limited recall arrangement) and the UCLA Information Systems Associates survive. Happily, the ISA (now under the direction of the UCLA Office of Information Technology) has recently been successfully rejuvenated (see https://isassociates.org). The story of the academic decline and fall of IS at UCLA Anderson remains to be written.

Acknowledgements
This paper is dedicated to all the IS faculty at GSM with whom I had the pleasure of working during my own years there, 1974 to the present. In preparing the paper, I had access to a variety of documents
and sources, listed below as references. *Channel*, a newsletter of the IS group, published 1974-85, was particularly rich as a source. Individually, Eph McLean, Richard Mason, and Lew Leeburg, whose careers at UCLA began before mine, were especially helpful in enabling me to piece together the important early years in which IS at GSM came together. Clay Sprowls’ personal history was also invaluable and is a reminder of how deep the roots of IS at UCLA went, namely, to the early days of electronic computing itself.

**References**

*Channel, Computers & Information Systems Newsletter, 1-10, 1974-1985, accessible at [www.anderson.ucla.edu/programs-and-outreach/information-systems-research-program](http://www.anderson.ucla.edu/programs-and-outreach/information-systems-research-program).*

Clay Sprowls passes away at age 89, obituary, accessible at [www.anderson.ucla.edu/programs-and-outreach/information-systems-research-program/clay](http://www.anderson.ucla.edu/programs-and-outreach/information-systems-research-program/clay).


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Table 1
Milestones in the Rise of Information Systems at the Graduate School of Management, UCLA

<table>
<thead>
<tr>
<th>Year</th>
<th>Milestone</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>1953</td>
<td>Clay Sprowls teaches first computing course at GSM</td>
<td>Used SWAC computer</td>
</tr>
<tr>
<td>1956</td>
<td>Establishment of Western Data Processing Center (WDPC) at UCLA</td>
<td>In cooperation with IBM</td>
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<tr>
<td>1968</td>
<td>Accounting Area hires new faculty and introduces new courses in information systems</td>
<td>Richard Mason joins GSM</td>
</tr>
<tr>
<td>1968</td>
<td>Establishment of Accounting Information Systems Research Program</td>
<td>Directed by Ted Mock</td>
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<tr>
<td>1969</td>
<td>Eph McLean joins faculty to develop computing coursework</td>
<td></td>
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<tr>
<td>1970</td>
<td>Introduction of interactive computing to MBA program</td>
<td>Made use of APL</td>
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<tr>
<td>1971</td>
<td>Establishment of Computers &amp; Information Systems (C&amp;IS) academic area</td>
<td>Clay Sprowls joins area</td>
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<tr>
<td>1971</td>
<td>Lew Leeburg receives school’s first IS Ph.D.</td>
<td>Clay Sprowls chairs committee</td>
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<tr>
<td>1973</td>
<td>Establishment of Computers &amp; Information Systems Research Program</td>
<td>Directed by Eph McLean</td>
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<tr>
<td>1974</td>
<td>Ben Lientz joins faculty, as does Burt Swanson, as a visitor</td>
<td>Richard Mason takes leave to direct NSF program</td>
</tr>
<tr>
<td>1978</td>
<td>Establishment of Computers &amp; Information Systems Associates Program</td>
<td>Lew Leeburg serves as first chair</td>
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<tr>
<td>1979</td>
<td>Inauguration of Computers &amp; Information Systems Colloquium Series</td>
<td>Coordinated by Burt Swanson</td>
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<td>1979</td>
<td>First (International) Conference on the Entity Relationship Approach held at GSM</td>
<td>Peter Chen chaired program</td>
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<td>First offering of Managing the Information Resource (MIR) in Executive Education</td>
<td>Offered in collaboration with Nolan, Norton &amp; Associates</td>
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<td>Planning meeting for the first (International) Conference on Information Systems (ICIS) held at UCLA</td>
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<td>1981</td>
<td>IBM Chair in Information Systems established</td>
<td>Martin Greenberger appointed to chair in 1982</td>
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<td>1984</td>
<td>First annual UCLA computing survey of North American business schools</td>
<td>Directed by Jason Frand</td>
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<td>1985</td>
<td>School awarded $2M IBM grant in management of information systems</td>
<td>13 schools received this grant</td>
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<td>1985</td>
<td>Lynne Markus joins faculty</td>
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<tr>
<td>1987</td>
<td>Office of Editor-in-Chief of new IS journal founded by TIMS established at GSM</td>
<td>Information Systems Research (ISR) debuts in 1990</td>
</tr>
<tr>
<td>1987</td>
<td>Eph McLean departs faculty</td>
<td>Accepts chaired position at Georgia State University</td>
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