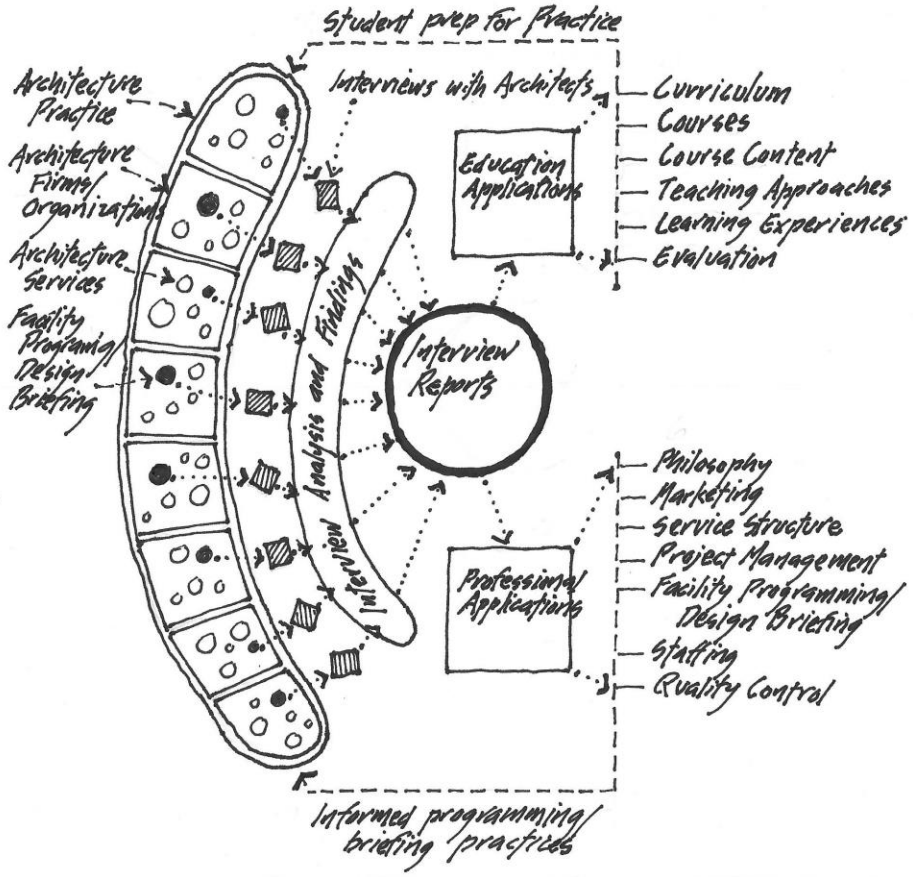
FACILITY PROGRAMMING IN THE UNITED STATES

INTERVIEWS WITH ARCHITECTS



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Facility Programming in the United States: Interviews with Architects

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INTRODUCTION

The study presented in this report was undertaken by The School of Architecture at Florida A&M University in Tallahassee to provide information for the development of graduate programming coursework. But it clearly has implications for the way architects practice their craft.

The architecture program at Florida A&M University emphasizes quality architecture for corporate, governmental, and institutional contexts in its graduate program. A key component of this graduate theme is facility programming. The project involved phone interviews with 73 architects in 55 firms about building facility programming. This report summarizes information from 252 pages of typed conference notes that resulted from those interviews.

REASONS FOR THE PROJECT. The interviews were undertaken for several purposes beyond the development of programming coursework:

1. Assess practitioner attitudes about, and support for, the idea of offering graduate coursework in architectural programming.
2. Ensure that the curriculum, coursework and graduate skills are relevant to the needs of firms that offer programming services.
3. Collect information about current programming practices and share it with firms that offer the service.
4. Uncover problems in programming practice that may serve as a basis for establishing a research agenda for the graduate program.
5. Inform architecture firms about the graduate program to facilitate the future development of student internship opportunities and graduate placement.
6. Expand the School's collection of professional programming material produced by firms as a learning resource for the students.

OVERVIEW OF RESULTS. The following general comments can be made about the responses of the participants to the interview questions. For a more complete and detailed description of the responses see "Results of the Study."

1. There is generally strong support for the idea of offering graduate coursework in architectural programming.
2. For the firms that expressed reservations about the idea of offering programming coursework, the major concerns were that care be taken to avoid educating students too narrowly in the specialty and that the students be trained as competent whole architects.
3. The most important issues to consider when planning the curriculum are teaching programming methods, relating programming to design and to the whole building delivery process, and making sure that students are strong in analytic and communication skills.
4. The skills that firms expect graduates to have are communication, information processing, overall knowledge of the building delivery process, and human relations.

5. The types of work that firms would expect graduates to do when they were not programming are design, project management, marketing, and conducting other types of studies.
6. The building types that are predominant in the current work of the firms are health care/medical, office/corporate, education, and commercial/retail.
7. Very few of the firms ever program for other architecture firms.
8. The aspects of their programming processes that firms are most proud of are having a thorough, rigorous and analytical process, ensuring strong client participation, tailoring the process to the unique situation of each project, and strongly integrating programming with design.
9. The recurring problems in programming are finding out what the client's real needs are, getting clients to make decisions and getting clients to understand and appreciate the value of programming.
10. Beyond the major motive of getting the client a better building, reasons for offering programming services include facilitating the design process, using programming as a marketing tool and using programs as project organization and management devices.
11. Generally, the firms prefer to separate the programming fee and contract from the overall fee and contract for the other architectural services.
12. Programming costs and fees are estimated on the basis of a multiple of direct labor costs plus reimbursables.
13. Most clients seem to understand the value of programming and are willing to pay for the service.
14. Designers, project managers and principals are usually the ones in the firms who do the programming.
15. Those who program in the firm spend from 2% to 15% of their time in that activity.
16. When not programming, those who do the programming in the firm spend their time in the management of projects, design, promotion and management of the firm.
17. Most of those who program have architectural backgrounds (experience and training).

PARTICIPANTS. The firms and individuals that participated in the interviews are listed below. The list of candidate firms for the interviews was compiled with the counsel of the three advisors to the Architectural Programming Option (William Pena/C.R.S., Houston; Herbert Wheeler/International Union of Architects; and Herbert McLaughlin/Kaplan McLaughlin Diaz, San Francisco), by reviewing programing literature and by consulting with School of Architecture faculty.

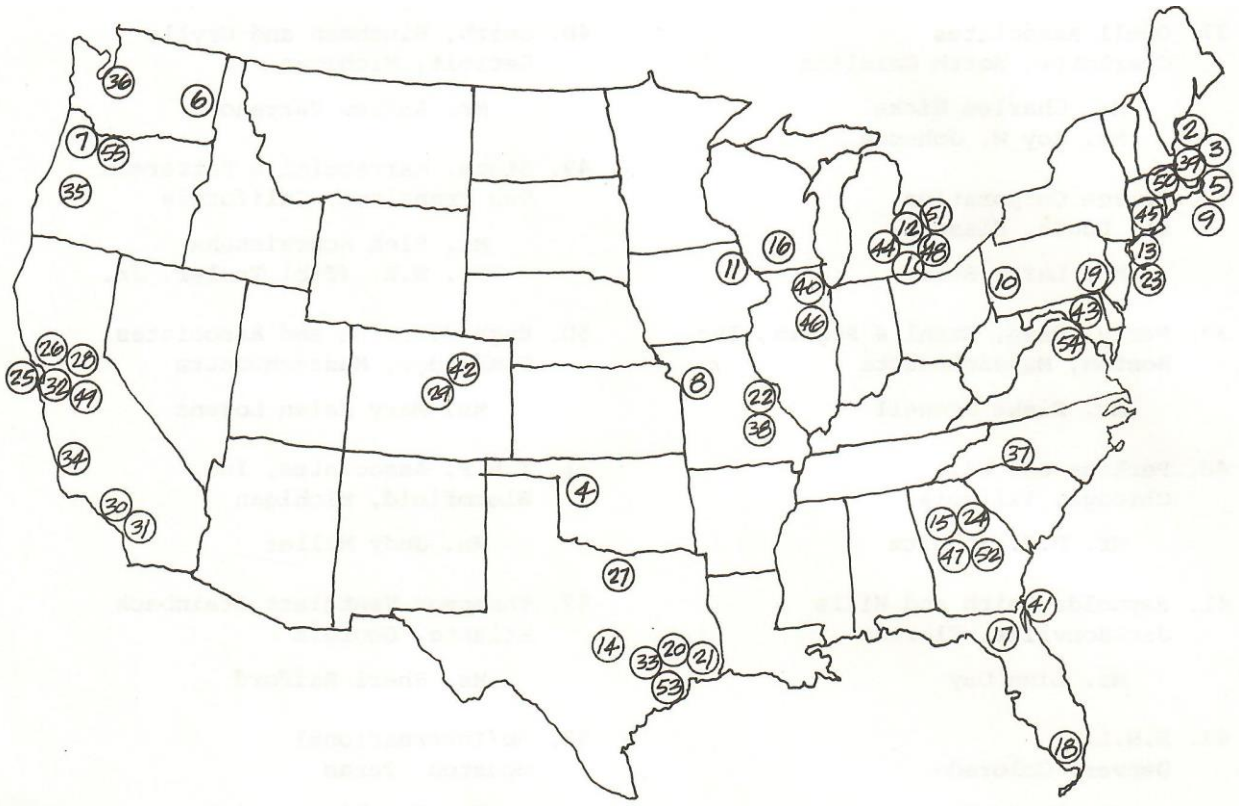
The firms selected were known to perform programming services and individuals within the firms who were interviewed were generally those who did the programming or who supervised it. As can be seen from the list, there were several occasions when more than one person was interviewed from a single firm.

1. *Albert Kahn & Associates*, Detroit, Michigan. Mr. Jay Pettit
2. *Anderson Notter Finegold*, Boston, Massachusetts. Mr. Jim Alexander
3. *The Architects Collaborative, Inc*., Cambridge, Massachusetts. Ms. Sherry Caplan
4. *Benham-Blair*, Oklahoma City, Oklahoma. Mr. David Winesett
5. *Benjamin Thompson & Associates, Inc*., Cambridge, Massachusetts. Mr. Marcus Rector
6. *Brooks Hensley Creager, Architects*, Spokane, Washington. Mr. Ken Brooks, Mr. Joseph Hensley
7. *Broome, Oringdulph, O'Toole, Rudolf and Associates*, Portland, Oregon. Mr. Robert Oringdulph,
8. *Burns and McDonnell*, Kansas City, Missouri. Mr. Jim Pettijohn

9. *Cambridge Seven Associates, Inc*., Cambridge, Massachusetts. Mr. Paul Dietrich
10. *Deeter Ritchey Sippel Associates*, Pittsburgh, Pennsylvania. Mr. Philip Hundley, Mr. Jeff Jenkins, Mr. Doug Jones, Mr. William Sippel
11. *Durrant Group, Inc.*, Dubuque, Iowa. Mr. Charles Kurt
12. *Eberle M. Smith Associates*, Detroit, Michigan. Mr. Harold Binder
13. *The Eggers Group*, New York, New York. Mr. Bryant Gould, Ms. April Tome
14. *Emerson-Fehr Architects*, Austin, Texas. Mr. Don Emerson
15. *F.A.B.R.A.P.*, Atlanta, Georgia. Mr. Bob Ahlstrand, Mr. Bill Pulgram
16. *FLAD and Associates*, Madison, Wisconsin. Mr. James K. Adams, Mr. Ralph H. Jackson, Mr. Thomas Nisbet
17. *FLAD and Associates*, Gainesville, Florida. Mr. Merlin Redfern
18. *Ferendino/Grafton/Spillis/Candela*, Coral Gables, Florida. Mr. Mark Ginsberg
19. *Geddes, Brecher, Qualls, Cunningham*, Philadelphia, Pennsylvania. Mr. Peter Piven
20. *Gensler and Associates*, Houston, Texas. Mr. David Wyckoff
21. Golemon and Rolfe, Houston, Texas. Mr. Allen Rice
22. *H.O.K.*, St. Louis, Missouri. Mr. Ray Celli
23. *H.O.K.*, New York, New York. Mr. Gary H. Silver
24. *Heery and Heery Architects*, Atlanta, Georgia. Mr. William Bell, Mr. Bill Craig, Ms. Merrill Elam, Mr. Al Morrison, Mr. W. Ennis Parker, Jr., Mr. Mack Scogin, Ms. Sheila G. Spriggs
25. *Hood-Miller Partnership*, San Francisco, California. Ms. Bobbie Sue Hood
26. *2G. Hope Consulting Group*, San Francisco, California. Mr. Edward Gee
27. *Jarvis, Putty, Jarvis*, Dallas, Texas. Mr. Donald Jarvis
28. *John Carl Warnecke & Associates* San Francisco, California. Mr. Donald Shaefer
29. *Lamar Kelsey Associates, Inc*., Colorado Springs, Colorado. Mr. Lamar Kelsey
30. *Leo A. Daly Company*, Los Angeles, California. Mr. Len Adams
31. *The Luckman Partnership, Inc*., Los Angeles, California. Mr. James M. Luckman
32. *MBT Associates*, San Francisco, California. Mr. Peter Hockaday
33. *McKittrick, Richardson & Wallace Architects, Inc*., Houston, Texas. Mr. Thomas McKittrick
34. *Merriam Deasy Whisenant*, San Luis Obispo, California. Mr. Jay Whisenant
35. *Moreland, Unruh, Smith*, Eugene, Oregon. Mr. Scott D. Pinkerton Mr. Donald Smith
36. *N.B.B.J.*, Seattle, Washington. Mr. Melvin Larson
37. *Odell Associates*, Charlotte, North Carolina. Mr. Charles Hicks, Mr. Roy W. Johnson
38. *Pearce Corporation*, St. Louis, Missouri. Mr. Larry Berri
39. *Perry, Dean, Stahl & Rogers, Inc*., Boston, Massachusetts. Mr. Fiske Crowell
40. *Perkins and Will*, Chicago, Illinois. Mr. D.J. Schultz
41. *Reynolds Smith and Hills* Jacksonville, Florida. Mr. Linn Day

42. *R.N.L.*, Denver, Colorado. Mr. Roger Crosby
43. *RTKL*, Baltimore, Maryland. Mr. Barry Graham
44. *Rossetti Associates/Architects Planners*, Detroit, Michigan. Mr. Louis A. Rossetti
45. *Roth and Moore Architects* New Haven, Connecticut. Mr. Harold Roth
46. *S.O.M.*, Chicago, Illinois. Mr. Bruce Graham
47. *Sizemore-Floyd* Atlanta, Georgia. Mr. Michael Sizemore
48. *Smith, Hinchman and Grylls* Detroit, Michigan. Mr. Andrew Vazzana
49. Stone, Marraccini & Patterson San Francisco, California. Mr. Rick Schraishuhn, Mr. W.H. (Tib) Tusler, Jr.
50. *Hugh Stubbins and Associates*, Cambridge, Massachusetts. Ms. Mary Helen Lorenz
51. *T.M.P. Associates, Inc*., Bloomfield, Michigan. Ms. Judy Miller
52. *Thompson Ventulett Stainback*, Atlanta, Georgia. Ms. Sheri Raiford
53. *3D/International*, Houston, Texas. Mr. Tom Fitzpatrick, Mr. Jeff Waters
54. *VVKR*, Alexandria, Virginia. Bonnie West
55. *Zimmer Gunsul Frasca Partnership*, Portland, Oregon. Mr. John Moll.

GEOGRAPHIC DISTRIBUTION OF FIRMS. The map below indicates the location of participating firms. The numbers in the circles on the map correspond to the numbers with the listed firms under "Participants."



INTERVIEWS AND QUESTION SET. Following some preliminary correspondence by mail, phone calls were made to the firms to identify and contact the appropriate individuals to be interviewed and to set up phone interview appointments that were convenient to those individuals.

On several occasions the interview was planned as a conference call, with more than one individual in the firm participating in the conversation. The total number of interviews with the 73 participants was 63.

The phone interviews themselves each lasted from 30 to 40 minutes with detailed notes kept by the interviewer. These notes were later rewritten, typed and mailed to the participants for review and returned by the participants either approved or amended. Each participant reviewed the notes from their own interview only.

The question set was planned to produce information related to the "Reasons for the Project" and to minimize the advance preparation needed by the participants prior to the interviews. For the most part, the participants were not aware of the specific questions to be asked prior to the interviews and simply reacted to the questions spontaneously as they were asked.

Most of the questions were open-ended with each interview taking the form of a semi-structured informal conversation rather than a formal, meticulously executed survey.

The questions asked of each participant were:

1. What is your overall reaction to the idea of offering coursework at the graduate level in architectural programming?
2. Do you have any concerns or reservations about offering coursework in programming?
3. What are the major considerations in organizing a curriculum to teach architectural programming?
4. What skills, attitudes and knowledge would you expect these students to have at graduation?
5. Given the fact that most of these graduates will probably not program full time for the firms where they work, what other skills should the graduate have to remain valuable to a firm on a full time basis?
6. Which building types are predominant in the current projects within your firm?
7. Does your firm ever perform programming services for other architecture firms?
8. What are the strong points of your firm's programming process?
9. What seem to be the major recurring problems that your firm encounters during programming?
10. Beyond the obvious reason of providing the client a better building, what other motives are behind your firm's involvement in programming services?
11. Does your firm normally separate the programming contract and fee from the other fees and contracts for a project or integrate the programming fee and contract within the overall contract/fee?
12. How do you normally calculate the fees required to cover programming services?
13. Do most clients understand the value of programming and willingly pay for it or are they reluctant to invest in it?
14. Who in your firm normally participates in the programming work?
15. For those who do programming, what percentage of their time is normally devoted to that activity?
16. For those who program in the firm, how do they spend their time when they are not programming?
17. What are the backgrounds (training/experience) of those who program in the firm?

ANALYSIS AND PRESENTATION OF RESULTS. After the typed interview notes were approved or amended, the responses of all the participants to each question were tabulated in terms of the number of times they occurred. Responses to a question that represented essentially the same idea were combined under general headings.

The frequency of responses to the interview questions is presented under "Results of the Study." The numbers beside the responses indicate the number of times a response occurred. The underlined statements are the general headings under which the various responses were organized and the statements within the parentheses are specific examples of responses to the question.

A more extensive analysis beyond the tabulation of response frequency such as correlating responses with firm size or building type emphases was beyond the scope of this study.

The "Results of the Study" also includes selected comments made by the participants to each question. These are identified as "Selected Comments from Respondents."

The study of the implications of the interview results for the Architectural Programming Option curriculum and coursework and for the other purposes related to the project is underway. This effort is not completed and is not presented in this report.

FUTURE PLANS. The School of Architecture intends to expand the information base for developing the Architectural Programming Option curriculum by conducting similar interviews in the future with:

1. Consultants who specialize in programming particular building types.
2. Architects in government and industry who program.
3. Clients who have recently participated in programming projects.
4. Consultants who specialize in studies related to programming such as post occupancy evaluation, economic feasibility analysis and long range planning.

RESPONSES TO THE QUESTIONS

What do you think of offering coursework at the graduate level in architectural programming?

FREQUENCY OF RESPONSES

53	**Positive**
9	**Mixed**
1	**Negative**

SELECTED COMMENTS FROM RESPONDENTS

The idea of having an option oriented to programming is excellent. This skill is too often missing from architectural practice. It would also be valuable to include post occupancy evaluation in the curriculum. Architects never get enough feedback on their work.

Architects today find themselves doing a lot more front-end work than they did ten years ago. Very few students today have any knowledge at all about programming.

Programming is generally less formalized and less developed as a discipline in architecture than it should be.

Architecture as a profession is going through a change. A key component of that change is the area of programmatic analysis in the early stages of project organization.

Programming will become a more significant component of architectural practice in the next ten to fifteen years.

In the future there will be more firms that do nothing but programming. Programming will become more and more important to architecture over time. Even the provision of the building envelope and the technical factors involved are becoming more complex.

Even when programming is done by an outside consultant, the architect is still faced with the task of asking, verifying and clarifying questions of the client. There is no escaping the need for this skill if the architect wants to do the best job possible.

Programming is vital to practice. Every firm uses it in one form or another. It is a natural preparation for design and important to sizing the building and determining other critical design parameters.

The profession tends to underrate programming as an important activity. This is reinforced by many schools of architecture and by some prominent design architects. Programming is currently unfashionable: a building is somehow supposed to stand on its own merits regardless of how it responds to the needs of its occupants. This may be due to the fact that some feel that "programming" requires a formal process with extensive formal documentation. All architects program in some form whether they will admit it or not.

More design is set in the programmatic phase than at any other phase in the delivery process. If a program is written well, it governs design activity. Programming is one of the most important aspects of architectural practice.

Programming is the part of the job where so many of the important parameters and constraints are fixed (site, budget, client operations). Once these are determined there is little freedom to explore design alternatives. Traditionally, architects have been handed the problem with these constraints already fixed. Today more architects are getting involved in front end services, doing programming, and helping to shape these important parameters.

Clients expect this service from architects and assume that architects have these skills.

Programming involves the early determination of the important project parameters. If an architect wants to control his design destiny he must get involved in programming.

Programs are important to the success of buildings. They describe the functions to be housed, the social interaction which will take place and help to avoid the view of design as "object making."

Often a firm takes the attitude that experience in a building type eliminates the need to approach similar projects in a fresh way. Programming helps to eliminate or reduce this problem by looking at what is unique and special in each project.

The focusing of the option on programmatic skills is an opportunity to broaden the students, not narrow them. They will be better architects because of this experience.

Most students get out of school with very little exposure to programming and are thrown into it with no preparation. Programming is becoming very complex with larger projects and larger user groups to program for.

Participation in the programming process is one of the most valuable things a design architect can do. Often there are key ideas that come out of programming that serve as the essence of form-making in design. Even if he/she has no major role in the programming (done by client, outside consultants or others in the firm) the project designer should be present during programming. The designer learns things by being there that he/she would never sense just by reading the programming report.

It is important that designers get as close to the inception of the project as they can get. This means they must be involved in programming.

Many graduates today are generally familiar with what a program is and how to use one, but not how to put one together.

Architects are best suited to do programming rather than consultants without architectural backgrounds. The firm has worked with professional hospital programmers who approach programming as an occult science.

Programming is not done by one person but by a team. It is important to involve the engineers in the programming stage to address the environmental standards issues. This becomes especially complex and important when doing projects in foreign countries where standards may vary from country to country (lighting levels, air changes, etc.). It is also important for the engineer to know the type of equipment and the technologies used in those countries to meet the environmental requirements.

Graduates today are somewhat different from those of the past. An example of this is the attitude of today's graduates toward keyboards. In the past, keyboards (typewriters, etc.) were considered secretarial in nature and beneath the dignity of the architect. Today, graduates are comfortable at computer keyboards, are able to enter data directly into computers and save a step in the programming process (translating handwritten data into typed form).

Most programmers in firms have had to teach themselves programming. There are weaknesses to the self-taught approach.

It is of value for students to recognize their strengths and leanings early and to cultivate those. The time has past when architects can expect to be equally competent in all areas of practice. The romantic view of the architect as being in control of the whole process is a misconception.

There are many building types that may require programming specialists but architecture firms prefer the versatility of graduates who can contribute in many ways. This doesn't mean that architects cannot lean toward certain aspects of practice in terms of skill strengths and preferred involvements.

There is a growing need for people who can gather, sort, quantify and display information pertinent to the planning of projects.

The firm has had difficulty in the past finding good people to fill programming positions. This isn't as much of a problem now as it used to be. There would be no problem hiring young people if they were properly trained.

The firm is interested in graduates who know something about programming.

There have been a number of substantial programming commissions done by the firm in the last 15-20 years. The firm has developed sophisticated procedures, forms, etc. to support its programming work. These procedures are designed to assemble meaningful information for the client so he can respond to it.

The graduates of the option can be of great help in raising the level of quality of programming in firms around the country. They will have been trained in programming, will know the tools (computers, etc.), and will stimulate their employers to incorporate new techniques.