

UIC John Marshall Journal of Information Technology & Privacy Law

Volume 6
Issue 2 *Computer/Law Journal - Fall 1985*

Article 11

Fall 1985

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Recommended Citation

Michael E. Durkin, Some Planning and Design Considerations for the Home Office, 6 Computer L.J. 361 (1985)

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SOME PLANNING AND DESIGN CONSIDERATIONS FOR THE HOME OFFICE

by MICHAEL E. DURKIN *

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I would like to present some design implications of the home office trend, which focus on implications for the dwelling unit and the surrounding neighborhood. In keeping with the general state of knowledge on home offices, some of these implications are purely speculative, some are moderately speculative, and several are mildly empirical. They result from a study of residential offices, which the USC School of Architecture is conducting for the National Endowment for the Arts.

First, some information on home office use generally. We do not know how many people currently work at home in the United States. Different researchers and agencies place the number of homeworkers at between five and ten million. Most of the current stock of full-time workers in residences run home-based, small businesses. Interestingly, probably less than one percent of this number are "electronic cottagers." Most work in the home presently does not utilize computers. Instead, most of our present stock of businesses are craft industries like pottery and cabinetmaking, services such as beauty parlors, or professional services like those provided by doctors, dentists, and accountants. Architects have long known the benefits of working at home, perhaps from uncanny foresight, perhaps from economic necessity.

Part-time work is more frequently done in the home. One major form is "overflow work," work done outside of regular office hours. It

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is often brought home by professionals and managers to escape distractions at their place of employment.

Even though there are currently only about twenty to thirty thousand people in the United States actually working with computers at home, futurists envision a staggering potential for rapid growth of this sector. Some predict that as many as twenty-five million white collar workers could be working at home in the next decade.

For all the attention to the amount and kind of work relocating to the home, not much has been said about the design implications of the home office. How is the character of traditional residential areas likely to change with the proliferation of this new residential use? While the following general comments on planning and design are appropriate for all home offices, several are more relevant for home offices with computers.

I. THE CHANGING NEIGHBORHOOD

First, infill is likely to increase the density of the built environment both on the residential site and in the surrounding community. New structures may change lot coverage ratios. Additional on-site parking for clients and customers may be required.

In addition, the community infrastructure might change with the introduction of satellite work centers, eating establishments, and support services (such as accounting, printing, and stores) along major streets. While some services will support work functions, others will respond to the social needs once satisfied by the traditional office setting. For example, cafes, coffeehouses, bars, and restaurants will become places for gatherings, discussions, and business meetings.

Multiple unit residential buildings will take on shared office functions, such as reception secretarial support, xerox, telecommunications, and conferencing, thus changing the architectural requirements for this building type.

Secondly, environmental symbolism—the messages that a building sends to friends, business associates, and passersby concerning its function—will change. As the home begins to take on some of the characteristics of the office, some of the office symbols may be transferred to the home. For example, exterior elements of the residence (entrances, facade, etc.) may be designed to indicate to passersby that an office exists, while at the same time preserving the character of the surrounding neighborhood.

II. MAJOR PLANNING AND DESIGN CONSIDERATIONS FOR THE HOME OFFICE

Two of the most crucial points that determine design requirements

for the home office, regardless of whether computers are used, are: (1) whether or not the function requires visitors; and (2) whether or not the business requires employees.

So far, the overwhelming majority of home businesses are self-contained within the family, requiring no visitors. Functions are usually performed by one, sometimes by two persons, and can occur anywhere in the home (bedroom, living room, etc.). The requirements are simply that the chosen work setting provide adequate space and privacy, and that the location fit the lifestyle of the occupants.

The businesses that do require contact with the public, or which retain employees, have additional requirements that influence design. These might include a different relationship with the street, as well as separate circulation paths and multiple entries. The creation of reception and waiting areas, alternative circulation routes within the dwelling unit, and the zoning of activities, might be additional requirements. Furthermore, the number of employees has obvious implications for the total amount of required work space, its organization to support business functions, the placement of utilities, and demands for future expansion.

Our NEA study has unveiled no single ideal prototype for the home office. Instead, design requirements remain extremely variable, and are highly dependent on factors such as the type and nature of the work activities, and their relationship to household activities. Some implications, however, are already apparent.

The most important planning decision is the location of the office within the home. Requirements of privacy and interaction prove key determinants of this decision. For example, analytical work, which requires a high degree of concentration and, therefore, visual and acoustical privacy, can best be accomplished in a separate space such as a bedroom. In another home, the office is separated from the residence by a library which acts as a buffer. In other situations, the necessity of household activities such as the supervision of small children sometimes overrides the need for privacy. This situation might require visual connection between the work area and other living areas within the house. Fitting office work to home life provides challenges for many households. For example, in some homes children are only allowed to enter the work area during "non-work" hours. In others, the entire family works on projects at the same time. The office location needs to reflect these social trade-offs.

Design can address a number of potential physical setting conflicts. For example, although the family room is adjacent to the front door and its size increases its desirability as a residential office, its visibility and accessibility from the outside pose security problems for expensive

electronic equipment. Therefore, the design could focus on securing valuable equipment by locating computers so they are not visible from the outside, creating safe places within the room, or simply installing better locks on exterior doors. In addition, although many current residential workers have modest space needs, many home-based professionals and craft industries have highly specialized spatial requirements for functional work areas and equipment.

The growing use of the personal computer is already creating a number of planning and design challenges. For example, a home worker must alter an existing work setting to accommodate additions or modifications in computer hardware. Second, a home worker must incorporate ergonomic requirements such as lighting, acoustics, and physical comfort in settings not traditionally amenable to work functions. Third, access to the microcomputer for both entertainment and work by different family members presents utilization problems, which can be solved by a combination of locational and scheduling decisions.

Homeworkers vary considerably in their ability to make the best use of their physical settings. It is clear that knowledgeable design professionals can be very helpful to those who have or are contemplating a residential work setting. It is equally apparent that environmental designers can learn a lot from the way that different residential environments either support or hinder specific work related activities.

Architects have traditionally created new physical settings without much concern for past experience. Because virtually all of today's homeworkers, and a good deal of tomorrow's workers, will work in structures that have already been built, we feel that our present residential offices hold many valuable lessons for enhancing the design of tomorrow's homes and neighborhoods. By studying the adequacy of these physical settings, we can gain important insights for the future.