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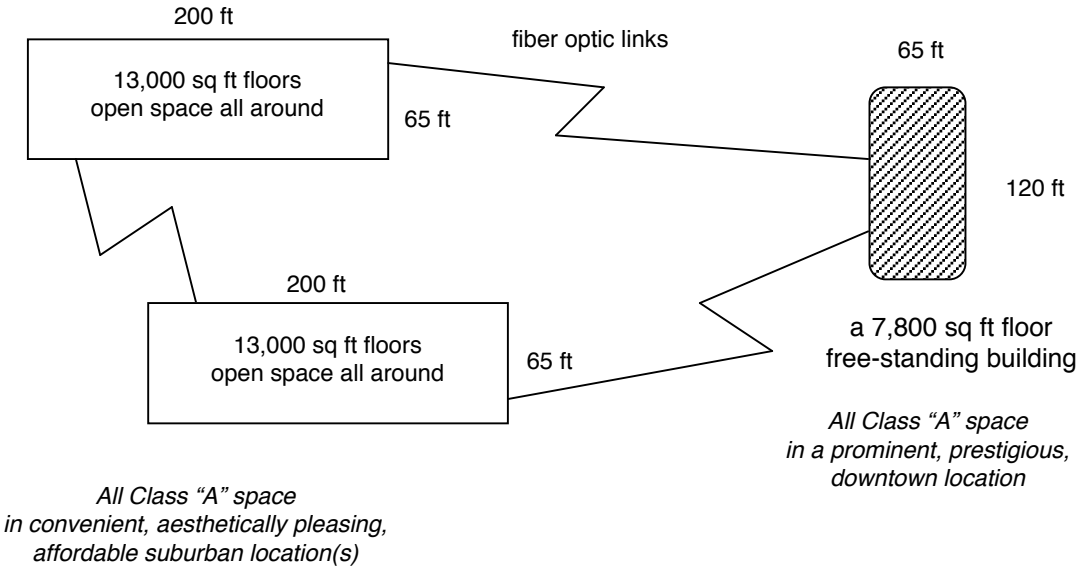
The "Virtual Office": Buildings / Cities / Suburbs

The evolution of technology has changed the nature of work, the physical character of buildings, and the patterns of land use. Suburban sprawl and traffic congestion are increasingly common consequences. The economic viability of urban centers has suffered. But as the predominant form of work has become the processing and communicating of information, the question arises: Do we have a transportation problem or do we have a communication problem?

"Virtual adjacency®," properly implemented, gives one the ability to perform a task as though on site without being physically present. The concept grew out of a research effort begun in 1980 that focused on the convergence of real estate and computer and communication technology. Implementation involves carrying reengineering to its next step, enabling us to redistribute what we do, where we do it when we do it and how we do it. When we say we are "in the office," we are no longer referring exclusively to a "space domain" notion. Virtual adjacency allows us to be in the office by being "in the network."

A derivative capability, "virtual consolidation" allows for the organization of office space into a network of facilities that are conveniently located near workers' homes.



A traditional single-office location can be broken into a multi-location configuration with all facilities linked to each other by high-bandwidth communication links so that electronically they are a single unit.

These facilities are linked to each other and to a strategic downtown centerpiece by high-bandwidth communication links such as fiberoptic cables and high-bandwidth switches so that electronically they are a single unit. Additional communication links, either wired or wireless, would allow workers to connect from a variety of workplaces, including their homes. Locating workplaces closer to where workers live would dramatically alter transportation patterns.

The physical consolidation of workers is much more expensive than is generally realized when costs for rent, commuting, pollution, energy consumption, daycare, and workforce productivity and availability are factored into the equation. For the past 30 years what we have called "modern" office buildings — large floorplate buildings — ironically are more properly seen as information-processing factories for office work that was *not modern*. The work is paper-based manual labor.

Buildings with large floor plates have three very different kinds of space on each floor: Class A space (street views), Class B space (alley views), and Class C space (no windows at all).

Employers currently are paying considerably more for the best space (Class A) than they realize. For example, a typical 31,250-square-foot rectangle has 10,976 square feet of A space, 8,928 square feet of B space, and 11,346 square feet of C space. If you rent the entire floor and pay an annual rent of $35 per square foot, the correct differential analysis is: Class C at $22, Class B at $28, and Class A at $55. Class C space is basement space even though it might physically be on the tenth floor, because all one sees are walls. The people with the longest commutes are often those working in Class C space. This is because issues of housing affordability and desirability force many workers farther out. These "hidden costs" to workers result in higher personnel costs to the employer and often reduced availability of qualified part-time help.

A study comparing the cost of consolidating 2,000 employees in a single downtown location of 600,000 square feet (an annual cost of $61,275,000) with the cost for the same amount of space spread out over four work locations (an annual cost of $29,029,000) showed an annual cost savings of $32,246,000.

Virtual adjacency would electronically link a prominent downtown location with all-Class A space to several all-Class A spaces in convenient, affordable, suburban locations. "The downtown building would be designed for marketing, training, and other groupthink spaces," said **Michael John Pittas**, former director of comprehensive planning for New York City and director of architecture and planning for the National Endowment for the Arts, at a Loeb Fellowship Forum a year ago. Its primary purpose would be to maximize the diversity and quality of face-to-face interactions. As **Charles Handy** has stated in the *Harvard Business Review*, "Paradoxically, the more virtual the organization, the more its people need to meet in person. This office would be more like a club: a place for eating, meeting, and greeting, with rooms reserved for activities, not people." The office in the city would then become the strategic centerpiece of the newly reengineered organization. And the city would become attractive, environmentally sustainable, and people friendly. For cities to survive, better yet thrive, they must reinvent themselves in a marketing mode.

When the **American Association for the Advancement of Science** (AAAS) celebrates its 150th anniversary in 1998, the festivities will take place in its new headquarters at 1200 New York Avenue, N.W., Washington, D.C. Envisioned as more than a place to conduct association business, the new headquarters will be a publicly oriented science center—in the nation's capital. This new program and design represent a significant first step in the reengineering of the downtown office building. The building itself will act as a communications tool to bring people together; the presence of information technology will only enhance that interaction.

Twelve stories and a concourse level will provide 200,000 square feet of office and meeting space. The top seven floors (the "private spaces" of the building) will be devoted to AAAS internal business operations and will include two three-floor atria and a library. The "public spaces" of the building are those most accessible and visible. They are incredibly inviting and interesting. The first floor will house a prominent exhibition area, a model scientific classroom or "teacher's lab,' and a science store where visitors can purchase books and other materials. On the second floor, the building's patrons will have access to a 180-seat multimedia auditorium and three formal conference rooms. In addition, there will be a working lounge for AAAS members. The building is built for people not processes. Two ten-story incisions will cut vertically into the building, resulting in more windowed offices (with windows that actually open) than possible with a traditionally designed building.

Federally sponsored demonstration projects creating satellite workplaces have proven more successful than many expected. The **InTeleWork Center** in Charles County, Maryland, in concert with Charles County Community College (CCCC), where the new **Center for Business and Industry** is being built, offers critical workplace examples and workforce retraining facilities that encourage the implementation of virtual adjacency. In 1994, the U.S. General Services Administration contracted with CCCC to establish a three-center InTeleWorkNet in the three Southern Maryland counties.

Of the five centers in the Washington, D.C., area, the Waldorf InTeleWorkCenter, a 14-workstation center that accommodates 56 users from eight federal agencies, is the closest to downtown Washington and the most used. According to a report developed by the **Schaefer Center for Public Policy** at the **University of Baltimore**, an average Waldorf teleworker who telecommutes just one day per week will save more than $200 per year in gasoline costs and more than $1,000 in automobile wear and tear. Waldorf teleworkers currently spend 67 minutes on average commuting to their regular workplaces compared with 16 minutes commuting to the InTeleWorkCenter. One-third of the telecommuters have considered leaving a job because of the commute, while nearly 30 percent considered moving because of the commute. Nine out of ten participants believe telecommuting will improve their productivity and morale. Nearly all believe telecommuting will have a positive impact on the quality of their lives.

By the end of fiscal year 1996, a 26-workstation center in Calvert County and a 20-workstation center in St. Marys County are expected to be operational. The Waldorf center will be expanded by approximately ten or 11 stations during this period. Other areas will be explored to add to this Maryland network.

Today's cities and suburbs too often compete with one another. Instead, they should be complementary. But the synergy is missing. There is a considerable price paid for this failure.

Virtual consolidation, achieved through virtual adjacency, would lead to significant improvements in infrastructure functioning, organizational effectiveness, quality of life, and economy of operation. — **Jay Hellman**, *president of The Hellman Company, inc., a development, leasing, counseling, brokerage, and management firm in Washington, D.C. [His firm is in the process of applying the concept of virtual adjacency in a new office building to be constructed at 500 New Jersey Avenue, N. W., in Washington, D.C., and in a 500-acre, mixed-use community to be built in La Plata, Maryland. Virtual adjacency is a registered trademark licensed to The Hellman Company, inc.]*

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