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namebrandcorporation
[venture based information/technology & new media startup incubator infrastructure]

by

Peter J. Koehler

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

Master of Architecture

Approved, Thesis Committee:

[Signatures]

Keith Krumwiede, Assistant Professor, Director
Architecture

[Signatures]

Gordon Wittenberg, Professor
Architecture

[Signatures]

Mark Wamble, Visiting Professor
Architecture

Houston, Texas

April, 2001
ABSTRACT

amebrandcorporation

[venture based information/technology & new media startup incubator infrastructure]

by

Peter J. Koehler

Attempts during the late twentieth century to create an office/work space containing an appropriate amount of flexibility, combined with generic-specificity (to make speculative developments economically viable) have failed. High-rise workplaces no longer work. [There's no room for fun and just being there is a drag]

The nature of work is changing [the nature of work is change]. As early as 1993, 21% of Fortune 500 companies had telecommuting programs in place. By 2000, 80% of all jobs in America will involve knowledge work. Today, 15% of active people work 50% of their time at home [or outside of what would be considered (traditional) office space]. Lines between formal and social programs within the workplace are beginning to blur.

The product of these changes in the economic climate, coupled with the continued advancement/development of mobile and information technologies necessitate evolution of the workplace.

Houston, Texas

April, 2001
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PREFACE

Having been involved in several thesis projects, including my own, during my studies at Rice and having read through many theses over the past few months, I decided that I would attempt to document my thesis pursuit in its entirety, including apparent dead ends and cul-de-sacs.

It's all about a process, and I hope that mine can be recognized by quickly reading over the text sections and more importantly through the images which, in many ways, document my final project more articulately than this text can. I took this approach because, like myself, the vast majority of people who look at and make the most use of theses documents in the library are current thesis students themselves.

The chapters that follow are broken down into stages correspond to my reviews over the course of my final semester at Rice and the final presentation of the project [in its most complete phase] in January of 2001.

*Additional information available @ www.namebrandcorp.com
When machines were first introduced to mass markets, the technology, although revolutionary, was very rigid; its engineering required people to conform to its parameters. The luxury of this rudimentary machinery was often seen only in its time & labor saving capabilities (from the electric washing machine and iron, to the car and airplane) not because of the luxury of comfort or flexibility. This condition has changed dramatically during the postindustrial age; machines are now customizable to the comfort and convenience of the user.

During this developmental period, the speed and duration of air travel was so far superior to that of rail or sea there were no expectations that the travel experience recall your living room in the sky. As air travel became a common mode of transportation for both leisure as well as business, the space of travel has evolved into a major marketing tool, and as a result has become an area of increasing customization. It is now evident in the advertising campaigns of nearly all airlines that personal comfort is crucial and has become a deciding factor in an airline’s ability to gain and maintain customers.

Hotel rooms, rental cars, office cubicles. Plane seats, just like any other rental space in which you spend time while travelling, become personalized in some way or another. Personalization occurs through the programming of your favorite radio stations into the rental Taurus’s stereo, pinning family photos to your cubicle partition walls, placing your clothes in the drawers at the holiday inn, regardless of the fact that you are only staying one night. Travelers constantly and instinctually customize [or try to] their environment.

The seat of an airplane, because of the length of time of use, physical characteristics, and built in constraints, is perhaps the most difficult thing for a traveler to successfully customize.

Nevertheless, while flying first class or supersaver-economy-coach, on Continental, British Airways, or Dragon Air, people find ways to make their seat at 33C ‘home’ for the next however many hours. Customization of seatspace happens regularly, whether through the use of provided individual video screens, reading lamps, adjustable air, or sky-phone, or by utilizing any number of purchasable gadgets for traveling [all of which are contained in magazines already placed in your seatback pocket, waiting to be ordered conveniently while in the air]. Catalogs such as Sky-Mall, Hammacher Schlemmer, and The Sharper Image all cater specifically to [affluent] frequent flyers wishing to customize this transitional space because the amount of time spent in these types of spaces often rivals the time they spend at their own fixed, personalized ‘home’.
In 1928, Boeing introduced America's first airliner designed specifically for passenger comfort and convenience. The Model 80's fuselage was made of welded-steel tubing covered with fabric, and its wooden wingtips were removable so the airplane could fit into hangars along its route. Despite complaints by pilots accustomed to flying in an open cockpit, the size of the Model 80 required a separate, enclosed flight deck.

The Model 80 carried passengers in a spacious cabin appointed with leather upholstery, reading lamps, forced-air ventilation, and hot and cold running water, and in-flight stewardesses ensured the utmost in passenger comfort during 23-hour flights from San Francisco to Chicago. The first Model 80 carried 12 people, and it was followed by the larger, 18-passenger Model 80A, which made its first flight in 1929.

In 1930, Boeing unveiled the Monomail, which made traditional biplane construction and design a thing of the past. The Monomail wing was smooth, set lower, made entirely of metal and had no struts (utilizing cantilevered construction). The Monomail Model 200 was a mail plane, and the Model 221 was a six-passenger transport. The Model 247, developed in 1933, was the first modern passenger airliner. It had an autopilot, pneumatically operated de-icing equipment, a variable-pitch propeller, and retractable landing gear. It took the Model 247 20 hours, with seven stops, to fly between New York and Los Angeles. However, because the 247 flew at 189 mph, its trip was seven and half hours shorter than that made by any previous airliners. The 247s remained in service until World War II; some were still flying in the late 1960s. Along with the Douglas DC-2 that supplanted it, the Model 247 ushered in the age of speed, reliability, safety, and comfort in air travel.

In 1935, two years after producing its first airliner, Douglas rolled out the DC-3. Originally conceived as a DC-2 derivative, the new airplane featured a wider fuselage, larger wing and lower operating costs. Passengers could purchase sleeping berths for cross-country flights. Within a few years, the DC-3 was the most popular airplane in the sky. By 1939, an estimated 90 percent of worldwide passenger traffic was serviced by DC-3s. Pan Am had started crossing the Pacific with the Boeing 314 Clipper. The flying boat, which carried up to 74 passengers, featured amenities such as passenger lounges and a bridal suite. Had it not been for World War II, the 1940s might have been known as the golden age of commercial aviation.

'Through the 1960s, when Boeing and the newly merged McDonnell Douglas Corp. began developing "jumbo jets," air travel was primarily for the rich. That changed dramatically when the Boeing 747 and the McDonnell Douglas DC-10 entered service in the early 1970s. The 747 reduced the per-passenger cost of flying across the Atlantic by 30 percent. DC-10s boasted similar performance.'

(www.boeing.com/companyoffices/history)
Boeing spokesperson Mary Jean Olsen admits: “For the next 25 years, you can expect planes to stay basically the same in terms of the speed and the way they look.” “Airlines feel they can crowd more people in, as long as they give them something to do in their seats,” says Wolf. That means not just 20 channels of movies-on-demand, but other forms of diversion - including gambling (seatback keno and blackjack screens are already being tested). The whole focus “is not to get you there faster,” says Wolf, “but to entertain you more, and get more revenue out of you, along the way.” The airlines, kind souls that they are, will provide one enhancement: They’re going to entertain the hell out of you on the plane.

Michael J. Wolf, a consultant with Booz-Allen & Hamilton and the author of *The Entertainment Economy*, points out that it’s already happening: Last year, Wolf notes, the airlines spent $2 billion on installing entertainment systems.

“Every attempt is being made to sequester high rollers from the rest of the airport. Directly below us, there’s a drive-up window; preferred customers pull up in their limos, and a Virgin attendant walks up to the car, takes the bags from the driver, and hands over the boarding pass. Then you’re hustled up a back staircase, like a movie star, into the Clubhouse, and then directly onto the plane. Onboard, the experience of separation continues. In the newest Virgin planes being built now, first-class passengers can descend a staircase into private chambers, with a bed and shower.”

(http://www.wired.com/wired/archive/7.08/flying.html?pg=5&topic=&topic_set=)

Throughout its history, the commercial airliner has served to exemplify the principals of maximum density while maintaining a relatively fixed size. Customization, commonly seen as an event that occurs at the scale of the individual, such as the customization [by an individual or group] of a small area – plane seat, car, etc. These small scale efforts to effect a single object are often overlooked when the initially custom object is examined within a sea of identical objects. What becomes critical in these situations is the experience that surrounds the individual events of customization.

[Machines Expanded or Spaces Expanded Through Experience]

Planes, like so many other motion and travel oriented spaces, began at a scale where the driver was in some way attached to the object itself. A point of departure for passenger transport (plane, train, car, etc.) is that it has evolved into an environment that completely surrounds the driver and passengers. This condition creates a new type of travel space [for the passengers in particular] in which the act of traveling became a blurred waiting period between distinct moments of arrival and departure. Elevators share this condition of entry and exit events at either end of a period of inactivity. Other spaces, offices and cars, which also contain modular units (seats, cubicles, etc), contrast this system with an inherent demand for attention and interaction from the occupant.
Similar spaces of temporary occupation such as the stadium and theatre share the aspect of waiting that is present in air travel, but the purpose of the wait is definitively different, the wait or elapsed time is ameliorated through some form of entertainment. The perceived definition of air travel is evolving, with the help of airlines such as British Airways, into a comparable state – a defined period of entertainment.

**Initial Thesis Proposal:** To devise a unit, or environment composed of units, with the potential for customization, falling within the spectrum of the design of the seat itself and the architecture of waiting.

To use the study of an artifact, i.e. the plane seat, as a tool and a precedent for an environment. The experience of such an environment embodies at times, acute customizable characteristics, but when its component parts are found in multiples such as the entire coach / economy section of a Boeing 777, become homogenized. Each individual seat of the plane, however unique a traveler is able to make his or her own air borne living room, quickly becomes nothing more than a featureless clone of the adjacent seats, based solely on the fact that these surrounding units exist. The experience of air travel is thus distilled into an experience of entry, exit, and the waiting in between. By default, the period of waiting is the catalyst for customization.

*(Mass Customization – Letting the Contents Define the Wrapper)*

Upon entering the Club World or Coach section of British Air flight 1130 from LHR you would be hard pressed to see that seat 33A will be showing Tarzan in 1 hour while seat 33B will be fully reclined with its occupant comfortably sleeping, undisturbed by the private screening less than two feet away. In a similar instance, you probably wouldn't know that the blue Ford Expedition on the left has leather seats and the red one, two rows over, has fabric seats, a GPS system, and a sunroof, when you are confronted with a sea of literally thousands of similar vehicles at Car Max or Auto Nation USA parking field.

The extent to which the singular yet uniform seat component is customizable at this point becomes irrelevant when confronted with the same component in multiple. Even though airplane seats tilt a various four degrees backwards, in a plane full of seats, their similarities are far more evident than the difference in backrest position. Not only is the customization invisible at the level of the multiple, but it is completely secondary to the envelope. This is due to the separation between the primary structure of the space [the airplane, the car chassis, the stadium] and the secondary seat itself which means that current attempts at customization have no impact and no affect on the envelope of the space being customized.
[Ergo-generic]

The same seat, ergonomically designed, with its cup holder, tray table, sky phone, personal video screen, data port, flower holder, 20 channels of video programming, CD quality audio, fold out dividers so that my neighbor won't disturb my rest, that is made especially for me to customize as I see fit for my travel enjoyment are the same exact units that are required to fit everyone else.

The units that make up the interior spaces of airplanes, theatres, offices, automobiles, stadiums, arenas, etc, are nothing more than add-ons. They fill the space, they allow for the workers, the travelers, the drivers, and the spectators to make an attempt to feel as if they are the one and only ideal occupants. They have cup holders for your beer, bulletin board walls for your family photos, programmable radios for your listening pleasure, and your choice of movies, edited for content of course. Every one of these things exists because we don't like to have to stand while waiting.

[Plug-ins]

Not a single office cubicle, airplane or venue seat fulfills a structural need for the envelope surrounding or supporting them. They are simply objects, wrapped in skin, supported by hidden skeletal systems. They do, however, have the potential to be defining factors of their respective envelopes.

Using the logic derived from a space of waiting such as the airplane, and considering the attempts at making such a thing basically customizable, I propose the design of an architectural environment or module which itself is (at least to some extent) structural and customizable. Moreover, one which ultimately is able to be assembled in such a way that space is created by a sea of those units which define it rather than becoming homogenized by their multiplicity.

*The relevance of an experiment such as the one proposed here is that it takes the idea of customization into a new realm and examines it at an unfamiliar scale.*
The relationship between collection and set (field and unit) represents the city. The city can be defined as a network - made up of a vast collection of overlapping open and closed systems, each made up of infinite subsystems, created by collections of sets and subsets, again composed of units that make up each set, continuing on to infinity.

Two types of collections (fields) comprise this network:

1. Semi-Lattice - a collection of sets, containing overlapping members, where the set created by the overlap is also a member of the collection.
2. Tree - a collection of sets, in which the member sets are completely contained within each other, or completely disjointed, containing no overlap.

The city is a Semi-Lattice, defined by the systems that hold it together, and is constantly undergoing processes of natural evolution as well as forced reinvention. The reinvention of the systems which define the city take place, not only through the physical reconfiguration of its elements, but through the planned evolution and institution of new concepts of urbanism put in place by its inhabitants.

One of the continued desires in urban architectural discourse is to define and synthesize new systems (read: technological advancements) for the city. The intent of many of these new systems is to continue to facilitate quality of life; however, we are still applying these technologies to fulfill traditional architectural goals. Technology has allowed for the creation of new landscapes (the WWW) and has reshaped the world marketplace. New technologies have also brought about the birth of an age of unparalleled mobility. As a result of the development the web and the effects of global shrinkage, location and proximity are no longer primary concerns.

When viewed as a group, the units which define urban systems must be connected to other units within their own set, as well as those within other overlapping sets/subsets, not as replicated elements within a static field/collection. The shortcoming of many (new) ideas regarding urbanism is that they are conceptually closed systems. With the potential for evolution predetermined, closed systems are destined to serve only as temporary solutions with finite levels of adaptability. Within the systems that define the city, unit/unit and unit/field relationships intertwine and are formed in ways that demand flexibility. In an open system, units are capable of limitless evolution and when changes occur, each altered unit has the ability to deform the field.
The exponential growth of technology has taught us new ways of looking at data, compelling us to reevaluate the way we work [our approach to problem solving]. Viewing architecture [especially in an urban context] by examining the unit/field dynamic posits an approach that relies on a continuously changing scale of investigation. This method of working can be used to simultaneously account for the overlapping connections between units, sets, collections, and systems [pieces of furniture within a space to each other, the space itself as it relates to adjacent spaces, as well as describing the relationship of the entire set to the surrounding site, the site to adjacent sites, or the site to the city].
THREE

Attempts during the late twentieth century to create an office/work space containing an appropriate amount of flexibility, combined with generic-specificity (to make speculative developments economically viable) have failed. *High-rise workplaces no longer work.*

In the early 1900s, speculative office projects were successful in large part because of the importance of proximity. To be successful was to be downtown – location within the business districts in cities throughout the US, meant the difference between success and failure to the vast majority of new corporations (regardless of size). With an abundance of available real estate, and few zoning restrictions, speculative office developments flourished, creating return rates that exceeded 10%. Development of high-rise offices continued at an unprecedented pace until the mid 1930s.

The technological advances that propelled the high-rise development booms of the 50s – 80s was largely due to post war economic upturns in combination with the emergence of new mechanical technologies – effective fluorescent lighting, improved elevator systems, and efficient climate control and air conditioners. These factors allowed office towers to mutate, growing in size vertically as well as horizontally. From 1940 - 1960 the number of white-collar workers in the US doubled. As did the average office area, occupying approximately 2622ft² in 1965, up from 1311 in 1952. The effects of new technology on the building envelope also increased the average amount of lease space on each floor from 65% in 1945 to almost 80% in 1965.

Although taller and wider, interior layout of office towers remained [remains] virtually unchanged since the emergence of the archetype. Although the tools have changed, what goes on inside office towers today is primarily the same type of activities that have gone on for years.

When the bottom fell out of the economy in the late 1980s, vacancy reached astronomical levels. The constraints built into high-rise construction made [make] alternate uses for the empty buildings impossible, while rendering lease payments economically unmanageable for almost all potential occupants.

As the end of the millennium approached and the economy began rebuilding strength, many vacant buildings were again filled, but as proximity has become less relevant, new construction is taking place outside of central business districts, where real estate remains at a premium. Speculative high-rise projects never leave the planning stages without at least 80% occupancy guaranteed prior to construction. The cost of new construction, and the lack of suitable office space have fostered an ever-increasing number of companies to locate outside of central business districts.
The nature of work is changing [the nature of work is change]. As early as 1993, 21% of Fortune 500 companies had telecommuting programs in place. By 2000, 80% of all jobs in America will involve knowledge work. Today 15% of active people work 50% of their time at home [or outside of what would be considered office space].

The product of these changes in the economic climate, coupled with the continued advancement / development of mobile communication and information technologies necessitate evolution of the workplace.

namebrand corporation mainframe [host] and modular office spaces designed from the inside out specifically for, and marketed to technology, new media, and dot-com start-ups.

namebrand corporation provides flexible workstations and deployable office environments designed to meet the rapidly changing needs of cutting / bleeding edge technology companies.

Provided:
- Dynamic Atmospheric Workspace [the structure itself reacts to use]
- Super Flow Lounge + Work Integration
- Enterprise Strength Reprographics
- Client Data Storage
- Videoconferencing & Tech Team Facilities
- On-Site Modular Workstation and Computer Systems Repair & Recycle
- Wireless & Satellite Communications
[now who's the dean?]

My initial investigation was into dynamic unit/field relationships, which is to say that what I was looking at were conditions where a single unit is present in multiplicity. More specifically, I was trying to find scenarios ("architectural" in the broadest sense of the word), in which several criteria were met. The first of these conditions was the existence of a repeated element within in a field. Second, that the unit be occupied only in a temporary manner (we don't live in it). The third condition was that the unit be generic, but still possessing aspects of flexibility or potential for alteration that can be effected by the user (i.e. airplane seat, office cubicle, etc.). The final condition is that the relationship between the unit and the field is such that a change in a single unit would initiate a change throughout the field.

After my initial research into unit/field relationships, I began to look at urban architecture, in an attempt to identify some of these characteristics as they are present within the city. My focus during this stage of my research shifted to the office building as an archetype because it embodies both unit and field conditions simultaneously.

The vast majority of office buildings are little more than a stack of identical floors, each containing subtle variations of plans which have been used repeatedly since the early 20th century. What becomes crucial to the design of a new workplace is the understanding that until the late 1990's and the beginning of what we now call the new economy, companies were based on very strict hierarchies. The prevailing office-building layout, complete with corner offices, cubical floors and open atrium or elevator core was a viable solution to the rigid hierarchy of a company's organizational structure. Consequently, typical office space available on the real estate market was able to fulfill the needs of companies moving into them.

Today, the economy places new demands on a limited supply of tired, typical office space.

In this product-less, technology driven economy, the nature of work is changing, as have the desires of the companies who fuel it. Proximity to other businesses and city infrastructure is no longer as important as it was a century ago. Businesses have restructured – where outsourcing has become a common practice. The cost of new construction, advancement of mobile technologies and lack of suitable office space has bred a culture that forces businesses in need of a customized workspace to locate outside of central business districts. The constant advancements of communication and mobile technologies continue to bring about the evolution of work, and the workplace is constantly taking on new, more social and
team-oriented roles. As the structure of business evolves, so should the space of the workplace.

The model I chose to use for my project is part venture capital and part incubator. Recognizing the role of technology startups, being the reason in part for the success of the new economy, as well a major contributor to its volatility [over 50% of tech-startups fail within their first year], I chose to focus on these companies as clients/occupants for my project.

What I set out to do with the design was to take incubator and venture capital based business models a step further by creating a speculative work environment that was generic, but still contained a level of specificity to give its client companies an advantage in the new economy.

Essentially, what my project does is establish an identity for each startup within the system, providing an infrastructure that will foster creativity as well as potentially generating new ideas and opportunities for new partnerships between clients. This is achieved by allowing the project’s programs to blend together through spatial relationships, strategic adjacencies and technologies designed to integrate dynamic atmospheric conditions. The environment within the namebrandcorporation mainframe [the name of the structure itself] is one where lounge and social programs overlap workspaces, barriers no longer exist, and privacy is attained through gradations of opacity and through spatial manipulations of scale (creating larger [loose-fit] public and smaller/more intimate private spaces).

The standard services [those not defined specifically by the architecture] which are available to the startups chosen to enter the namebrandcorporation include marketing and identity consultants & designers, continuously front line computers and hardware, client data storage, enterprise strength reprographic facilities, video conferencing stations and an in-house I.T. staff. These services reinforce the growth of a startup by allowing workers to concentrate fully on their work, rather than spending time and money [an average of over 50% of their initial invested capital] developing an image for the product, often before it even exists.

[the super-box]

The structural system used in the namebrandcorporation mainframe is absolutely crucial to its success. Made up, essentially, of a system of 12\(^{\circ}\)x12\(^{\circ}\)x12\(^{\circ}\) frames, which are then bolted together and post tensioned using steel cables [similar to bridge construction]. The resulting structure is a giant three-dimensional truss.

The structural system of the mainframe provides a completely open / unobstructed floor atop a floor
within the truss system resulting in columns every 12 feet. An advantage of this system is that the resulting sub-floor sections within the truss are extremely thin and no space is lost to structure. The hollow sections of the cubical frames serve as electrical chases for the entire structure’s hard wiring. This set up permits the networked devices and other tools of the office to become highly mobile, with the option to plug in anywhere within the system.

The modular nature of the box level [inter-frame level] provides an easy way to have re-configurable work and program spaces, while leaving the floors above each totally unobstructed. The openness of the work floors is emphasized by removal of the stair cores and mechanical systems to the rear wall, within a slot between the vertical structural members.

[atmospherics]

The open space on each work floor is organized programmatically using several methods: pinching, drop-in, and pull-down. Rather than separate individual/team work and/or lounge zones using partitions, spaces are created by pinching the floor and ceiling of some areas on each floor, creating a distinction in scale between the open spaces and more intimate spaces which can be easily controlled. As the occasional need for a private office will never be negated, private spaces are inserted within the modular box floors below each open floor, which are accessed from above. This technique creates variation in the sectional qualities of each floor while maintaining the uninterrupted space experienced on the work floors. Retractable connection hubs are placed regularly throughout each work floor [shown in plan as colored radii] and can be used for impromptu teamwork sessions, or for checking in on the market in private. The connection hubs can be pulled down [extended] from the ceiling and are flexible with a 10th radius so that every inch of every open floor is connected.

The facades also play an active role in how the programs within the structure work. Composed of smart glass panels, the level of opacity can be regulated based on occupancy and better suit the program of adjacent interior spaces [as well as being optimized for the particular light levels and daily weather conditions]. In contrast to the static, blank glass and steel faces of traditional office architecture, the facade of the namebrand corporation not only is able to change dynamically, blending in with its surroundings, but also to stream real-time evidence of interior activities on to the city beyond.

[nowhere!]

Within the mainframe, the void is the most aggressive organizational element, providing [physical] links from program to program and business to business. By creating a large slot that penetrates the entire
height of the structure, all programs were linked together, visually, spatially, and through floor-to-floor circulation – catwalks and the main elevator cores. The void shifts gradually in elevation from one side to the other, further reinforcing the notion that through the implemented structural system, the relationship of served vs. service floors has been eliminated. In plan, the more social / semi-public spaces radiate outward from the slot, further defining zones of activity.

[you want fries with that?]

The version of the namebrandcorporation mainframe that I focused primarily on in the text, and represented on the following pages of images is the central business district model. With parking below grade, it is designed specifically for one half a typical downtown Houston city block, with one party wall. Alternatively, I know that there could just as easily be a suburban model with parking on grade, and a similar [but not identical] layout and organizational structure.

Once a startup is selected for participation, the notion of branding becomes critical. In this scenario, namebrandcorporation exists as a recognizable identity/brand itself, and thereby provides clients with an instant level of credibility, through association. One of the most basic services provided within the incubator is the support of the namebrandcorporation identity, which allows each startup to gradually develop their own identity during their time in the system.

Ultimately, the goal of namebrandcorporation is to nurture and then launch successful businesses into the new economy.
INFORMATION SYSTEM
a collection of procedures, activities and technology that has been set up in order to collect relevant data, to process this data, to provide answers to specific questions and to transmit information to the people that have to take further action in response.

INFORMATION TECHNOLOGY
refers to computer, digital and other electronic tools that support the sharing of information.
FREE ADDRESS
a term first used by the Japanese to describe space not assigned to a particular worker but shared by any number of people who require use of a workspace for a specified period of time, also known as hot desking.

HOT DESKING
describes sharing workstations on a first-come-first-serve basis, also known as free address.
COCON
Term developed in the Netherlands and similar in concept to the combi-office in that it aims to provide distinct facilities for communication and concentration, or spaciousness and privacy. When used for individual workrooms, it refers to the cocoon aspect of employee withdrawal into cockpits.

BUROLANDSHAFT
German for "office landscape." 1950s term coined by Eberhard and Wolfgang Schonell, seeking to provide flexible, interesting interiors that could easily be adapted to individual tastes and group needs. Layouts were spacious and used high-quality furnishings. Arrangements of live plants, artwork, and other unconventional devices were employed to divide the space into individual work areas. Underlying concept that the physical layout should reflect a democratic and egalitarian style of management and provide high-quality interiors tailored to occupants' needs.
INTELLIGENT BUILDING
represents an integration of automated building control technology, advanced telecommunications and office automation. Describes less than 1% of North American office buildings today.

INTELLIGENT WORKSPACE
cyber-savvy office, tailor-fitted with customized computer systems, software and communications equipment.
TELECOMMUTING
working from an offsite location electronically connected to the organization

TELEWORK CENTER
provides a middle ground between working in location and commuting to a remote central office. A re-created central office in the suburbs, a telework center may be occupied by one or several companies.

SATELLITE OFFICE
usually sited in a suburban or rural area so that employees can clock in without commuting into a city center.
VIRTUAL CORPORATION

represents an integration of automated building control technology, advanced telecommunications and office automation. Describes less than 1% of North American office buildings today.

VIRTUAL OFFICE

cyber-savvy office, tailored with customized computer systems, software and communications equipment.
CONVERGENCE FACTOR

A term coined by Patrick Hanney in 1981 to describe more tasks being undertaken by fewer machines. According to Hanney, the integrated electronic office will ultimately be reduced to three major components: an intelligent processor, electronic mail, and videoconferences.

FRACTAL OFFICE

A concept originating in Stuttgart which describes the organization as made up of a series of independent and entrepreneurial fractal or units.
1. Superfusionlab
   multimedia, graphics, web/design
   no. employees: 1-5

2. Avel Technologies
   builds software that enables mutual funds to be traded according to financial information exchange protocol [fix]
   no. employees: 10 - 15

3. Xdegrees.com
   provides a variety of web based forums for multiplying individual networks by networks of friends and family
   no. employees: 14 - 19

4. I-net Medium
   internet media consulting and internet-centric brand management
   no. employees: 9 - 15
Primary Sources:


- Amazing ergonomic charts, diagrams, and graphics.


Muller, Willy. “Cars?” in Quaderns 218 - Rethinking Mobility. 1997.


- In an in-depth look at the partnership of British Airways with the design firm Tangerine. Extensive reaffirmation of the hypothesis that airlines are looking to custom design options to revamp the experience of air travel, as well as the tendency of people to make an effort to customize their travel spaces.


Primary Electronic Sources [Grouped By Site]:

http://www.wired.com/wired/archive/7.08/flying.html
- An interesting article that discusses the evolution of the interior spaces air carriers
  and the trend towards custom features and transformation of the time spent in-flight
  into highly developed period of entertainment.

Fulenwider, Anne."Wired Magazine 7.08: Seven Days On The Vapor Trail With The Hyper Class" Wired
August, 1999
www.wired.com/wired/archive/7.08/itineraries.html
- If there was ever any doubt that travelers, especially business travelers, spend an
  enormous amount of time in the air, the information complied here will put that issue
  to rest.

Boeing Company, The. The Boeing Company.
http://www.boeing.com/
- Boeing is the airline industry.

Boeing Company History, The. The Boeing Company.
www.boeing.com/companyoffices/history/
- Information from Boeing was used to discuss the developments of the commercial
  airplane and commercial air travel over the past 75 years and gather relevant images.
  Boeing, being the producer of just about all of the world’s passenger aircraft, has a
  history that reflects that of the development of passenger air craft and travel extremely
  well.

Club World. British Airways.
www.britishairways.com/flights/flyus/clubwrd/docs/cbw1.shtml
- British Airways is in the midst of one of the largest fleet wide interior makeovers in
  the history of commercial air carriers, so they are an excellent case study for methods
  of seat customization and examples of ways to make the period of waiting that defines
  the majority of the air travel experience a little more like home.

www.delta-air.com/prog_serv/bus_elite/demo.htm
- Delta, after a long period of neglect, is making over its image in order to better
  compete with the other major air carriers. Their web site didn’t have too much infor-
  mation, but it does have quite a few nice little animations of their seats in various
  configurations.

Hamman, Robin B. Rhizome @ Internet: Using The Internet As An Example Of Deleuze And Guattari’s
www.socio.demon.co.uk/rhizome.html

Virgin Atlantic Travel Classes. Virgin Atlantic.
- Virgin Atlantic’s web site is designed really well and they have gone to unprecedented
  lengths to define their services as superior in every area of personal service. Virgin
  takes the executive flying experience to another level of luxury – everything from
  showers to full beds, personal massages, and a first class lounge with swanky bar stools.
  They provided quite a few interesting images that I’ve been able to incorporate.
Assessing Workplace Intangibles: Technologies For Understanding. Steelcase Workplace Knowledge Library.
www.steelcase.com/knowledgebase/intang2.htm

Balance Between Privacy And Collaboration In Knowledge Worker Teams, The. Steelcase Workplace Knowledge Library.
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