A Response to Evolving Technology...

Virtual Airport

...and its implications in the business environment.

Dale A. Vogel
Professor Andy Seager
Professor Stacy Norman
Lisa Smith - H.O.K Design

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# A Response to Evolving Technology

Virtual Airport

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<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01 Acknowledgments</td>
<td>0.00-0.01</td>
</tr>
<tr>
<td>0.02 Abstract/Intent</td>
<td>0.02-0.03</td>
</tr>
<tr>
<td>0.03 Precedents</td>
<td>0.04-0.09</td>
</tr>
<tr>
<td>0.04 Thesis Design</td>
<td></td>
</tr>
<tr>
<td><em>Site</em></td>
<td>0.10-0.11</td>
</tr>
<tr>
<td><em>Design Direction</em></td>
<td>0.12-0.13</td>
</tr>
<tr>
<td><em>Concepts</em></td>
<td>0.14-0.17</td>
</tr>
<tr>
<td><em>Schematic Design</em></td>
<td>0.18-0.21</td>
</tr>
<tr>
<td><em>Final Design</em></td>
<td>0.22-0.37</td>
</tr>
<tr>
<td>0.05 Delivery Method</td>
<td>0.38-0.39</td>
</tr>
<tr>
<td>0.06 Final Thoughts</td>
<td>0.40-0.41</td>
</tr>
<tr>
<td>0.07 Bibliography</td>
<td>0.42-0.43</td>
</tr>
</tbody>
</table>
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To all who had confidence in me.
The **CAPITALIZATION** of opportunities in the emerging **worldwide** marketplace is competitive and fierce. As we all know, **technology** is evolving as we speak, and organizations and companies worldwide often find it hard to budget for ever-changing methods of **COMMUNICATION**.
The purpose of the design thesis was to create a business information hub that incorporated on-going technological advancements. The design thesis has embarked on how architecture can adapt to new communication technology. The facility ACCOMMODATES a variety of organizations that are presented with up to date measures of virtual communications. A unique approach to form and personal interaction has acted as the glue in the approach of a successful business environment.

Areas of concentration included the elaboration of individual spaces not only through function, but also by using different forms of advanced technology displays and multiple building materials. This ultimately created a networked business hub with technological connections with not only the immediate community, but also the business community globally.
summary:
The attic conversion for a lawyer's practice in Vienna's historic city center proceeded slowly. The corner of the building, like the vertebrae of an exposed spine, it points like an energy vector down toward the street. Fixed to this cold bolt of lightning, which forms the principal element of the load-bearing structure, are folded plates, planar structures, and trussed struts. The whole resembles a snapshot of a disastrous collision, yet nothing actually moves. The schemes impenetrable deconstructivism obviously made the engineers uncomfortable. The various coverings on the exterior determine the views out and the ingress of daylight for the large conference room. - *(Big buildings)*
Derived knowledge:

The conference addition by coop himelblau has shown me the successful integration of different materials in relation to the contextual environment. The context is not defined here by proportion, material or color; in this project the context is the relation between street and roof.

The unique design approach takes the pre conceived notion of a conference room and stretches the limits. The use of glass and steel exemplify the concept of interplay between interior and exterior, while still providing for the intended use.

From this study I have concentrated on the elaboration of individual spaces not only through function, but also by using different forms of advanced technology displays and multiple building materials.
summary:
The New York Stock Exchange (NYSE) began five years ago to integrate computer data into one easy to use system. Asymptote is well recognized in architectural circles for competitions and installations that explore the relationship between the digital and physical worlds. The fully interactive 3-D Trading Floor (3DTF) consolidates several data streams. In the walls of the virtual world there are stock prices, news, indexes, and live video from major television networks, which are constantly flowing in real time. In the floor of the 3DTF the trade booths are arranged as they are in the real layout so it is easy for users to understand. The 3-DTF is depicted on nine 25-inch Pixel Vision flat-panel which allows users to access many types of information on the fly.  -(Alfredo Andia)
Derived knowledge:

The NYSE trading floor by Asymptote has presented me with a unique approach to the constant change in technology.

First and foremost the design has enlightened me with interesting integrations between the digital and physical worlds. The 3D trading floor proves how you can take a action or language of the user and integrate it through the design.

Not only the design concepts, but the virtual qualities of Pixel Vision flat-panels, and constant digital display reminders aided me in the research and discovery of a business environment.

"The idea was to create a visual environment through which traders can navigate, analyze, and act upon at-a-glance."

-Rashid and Couture
summary:
Occupying a full floor of One IBM Plaza, this new division of the company needed to distinguish itself as a creative think. The open, collaborative, non-hierarchical work environment features overlapping, interconnected forms and surfaces that suggest a three-dimensional representation of the Internet. The jury found the project to be beautifully executed, with a nice rhythm and clarity to the plan.
IBM brings potential clients to these centers to help develop and launch their new online businesses. The building houses a blend of creative studio workspace and custom areas for client service, marketing, and sophisticated media presentations.-(IBM Global Services)
Derived knowledge:

The IBM e-business center by HOK was the keystone of my research process. The center combines both increasing technology, and a customer centric environment.

From the innovation center you can see how an array of up to speed products can serve to institutions that may not be capable of funding such a large budget.

This sort of capability was the driving force in the design thesis. Similar to the innovation center, an upgrade in technology has served as the key component, while other previously mentioned business accommodations have acted as support measures. A unique approach to form and personal interaction have acted as the glue in the approach of a successful business environment.

“The vision for the space was that it should not look like your father’s IBM, We wanted a completely new look.”
-Project Manager Brett Shwery
The virtual airport is located towards the southwest end of Indianapolis, IN. The city continues to undergo a development boom that, along with a unique combination of big-city amenities, small-town hospitality and affordability, is bolstering the city's reputation as an unparalleled tourism and convention destination. For means of transportation, Indianapolis is known as the Crossroads of America; making it accessible from many locations and playing host for more than five million annual visitors.
The direct designated site is, a 1,500-acre business park south of Indianapolis International Airport. It will gain direct access to Interstate 70 under a new state and local plan. A proposed monorail system will aid in transportation for downtown visitors and a link to the Indianapolis area and more specifically the Indianapolis International Airport. The complex currently includes two completed buildings and construction of a third building has begun.
A living expression of our digital age…
…networked to the world, yet hard-wired to urban fabric. Digitation destroys physical boundaries, but has not yet reached its outer limits.

An experiment...
...deciphering relationships between reality and cyberspace, focusing on the exchange of both physical and non-physical information.

Design Strategy:
To provide a dynamic and versatile environment that accommodates a variety of users and events that may otherwise be avoided either due to the convenience of our technological environment or lack of monetary support.

Current Approach:
A concentration has been given to user interaction and systematic relationships. Thus providing the viewer of a clear picture of an interactive environment that can exist worldwide without ever leaving the city limits.
The business center represents the greatest innovation in office efficiency since the sticky pad. The proposed plan includes a network of professional sites that offers all the advantages and resources of a traditional office - for a fraction of the usual costs. No matter what the scale of the business needs - whether you’re a large corporation seeking efficient, flexible alternatives or a smaller enterprise with a watchful eye on unnecessary expenses.

The space has adapted to new technology, and business needs in several ways including the following:

- Fully-furnished private offices and multiple office suites
- Highly-skilled receptionists and trained staff for clerical, word processing, data entry, etc.
- Personalized telephone answering, plus telecommunications services.
- Spacious conference and meeting rooms; impressive reception areas
- Mail handling, courier, packaging, and shipping and receiving services
- Office equipment, including high-speed copiers, fax machines, and printers
- Internet access and e-mail capabilities
- Specialized facilities for multi-media presentations and teleconferencing
- Room for instant expansion, from one office to fifty, or from one location to many - you will have the space to grow
design concepts

**in]tr.vert**

(ˈɪn tròrˌvurt, ˈɪn tròrˌvurt)

*tr.v. introverted, introverting, introverts*

1. To turn or direct inward.

__circulation that pushes and pulls viewers__

__Inside that spills out to the surrounds__
[ex].tro.vert

(e k str -vürt )

tr.v. ex-tro-vert also extra-vert

1. A concentration more with exterior realities than with inward focus

_exterior focus that screams innovation

_obscure forms that entice a closer look
[blur] of technology

v. blurred, blurring, blurs

1. To make indistinct and hazy in outline or appearance; obscure.

2. To lessen the perception of; dim
Force: Erosion by the mass transportation of the interstate

Connection Reaching out and pulling into a central hierarchy
The early design phase concentrated on the buildings approach to form. Attention was directed to the diverse shapes that could be formed to promote the curb appeal of the structure. Additional discoveries included:

- Spatial arrangement that provided views into and out of the building enticing a closer look.
- Exterior signage in the form of digital media display, and how their position promotes the structure.
- Metamorphic form that expressed the uniqueness of the building.
- Concentration on monorail connection to the facility.
Additional studies led to research in a structure that reacted more effectively to the force of the interstate traffic. Concentration on this scheme focused on the following:

- Continued use of sun shields and an open atrium space to promote interaction within.
- Inclusion of the monorail into the building in order to fully integrate the passenger in the experience of arrival.

Public promotion of the interstate façade in order to create a 24-hour display.
schematic design
venture to

...where YOU have

...between the realms of architecture

...where the

...and worldwide BUSINESS and
a place... never been before... and business...

power of technology knows no limits...

COMMUNICATION are a single click away.
01-IRC [Information Resource Center]
This transitory space will function for the time being as a point of direct information access. As the information undergoes its eventual transfiguration and our global connection bandwidth increases, the purpose of the space will shift to preservation.

02-[Virtual Café]
This space serves as an individualized relaxation space. Wireless connections allow for various types of interaction through several types of audiences.

03-[Study Rooms]
The study rooms provide the general visitor the opportunity to escape physical interaction and accommodate private needs. Activities may vary from continuing education programs to lunch conferences with Tokyo.

04-[Facility Reception]
The space should help facilitate the daily operation of the business information center. Welcoming of guests and booking of events are specific duties that might take place here. It should provide private closure for the occupant, but at the same time, be easily accessible by other members of the staff.

05-[Super Computer Room]
The SCR is the backbone of the facility. A transparent shell allows the facility users to view the mainframe computer system and visually make a connection with the inner workings of the building. Exposed infrastructure additionally allows for a constant reminder of the paradox of a wireless world.

06-[Digital Gallery Display]
The Digital gallery extends the principals of the virtual airport in a more formal manner. The gallery allows artists of the Digital Age to give their works temporary physical form for the purpose of exhibition. The space remains flexible to allow individual exhibits to express their work in a unique way. Pivoting display panels also allow for individualized display areas for a more private display or the opportunity exists for a full panel display.

07-[Office/Retail]
Office/Retail spaces within the Virtual Airport may accommodate either temporary or long-term tenancy, providing an equally appropriate environment for permanent retail outlets and traveling businesspeople that need access office space for a day or two. Every space is maximized for interaction.

08-[Internet/Kiosks]
As an integral part of the facility separate display kiosks will provide information relating to worldwide businesses. Such kiosks may include stock quotes that allow for individual notebook access and online brokerage trading.
01-SPT [Secondary presentation Theater]  
The Secondary presentation theater is a space allocated for more specific pre qualified briefings on a more regular basis. Being used primarily for more familiarized business personnel.

02-[Galley Space]  
An area designed with a holistic approach so food can be brought in, prepared and heated for briefings as well as other events. Examples may include dinner cocktail parties, beverage service, and daily briefings.

03-[Briefing Rooms]  
The briefing rooms provide for three to six resources, and have accommodations such as display monitors for pre-conference trials, and space for group meetings.

04-[main Reception]  
An ample space for customers and visitors to sit, relax and take in their surroundings. A place to meet and greet customers is provided. Briefing administration will have a desk to furnish customers with briefing details.

05-[main presentation theatre]  
The main presentation theatre will be designed for the utmost flexibility and use with the primary focus being world wide video conferencing. Other activities taking place in the main theatre may include:  
•Conferences-Accommodation for up to 50 plus individuals for business interaction worldwide  
•Town Hall Meetings- Greater Indianapolis area government and business organizations  
•Workshops- Presentations that explain the possibilities of evolving technology.

06-[Building Administration]  
The primary users of this space will be limited to office personnel. An in house manager will hold office here to provide organization and direction of the facility. Several activities for the space may include management record keeping, and supervision of facility operation, along with small conference capabilities. In addition typical day-to-day office duties will also occur here.
01-[leased offices]

In a commercial environment keyed to technology, the key word is flexibility. Offices in the virtual airport may accommodate either temporary or long-term tenancy providing an equally appropriate environment for traveling business personnel who need access to office space for a shorter term. Every space is maximized for on-site contact with potential clients, while having around-the-clock connectivity to the global marketplace.

02-[short-term hotel]

The hotel is perhaps the most individualized space within the Virtual Airport. The rooms themselves are cellular and opaque. The inside opens to a view of Downtown Indianapolis while providing digital display that can be completely transparent or opaque depending on the amount of privacy.

summary…

The spaces included in the program efficiently promote a comfortable business environment for a variety of user groups.

A vertical public to private approach successfully separated the spaces according to the user. Special attention was given to promote people interaction as the glue of the design.
exterior images_

[main south entry by foot]

[monorail connection]
monorail connection to facility

monorail drop-off
interior images_

[view through atrium]

[gallery walls]

[view to irc]
final design

[galley space]

[hotel room]

[reception waiting]
delivery method

[via video conferencing]
The delivery process for the thesis design was a unique approach that further articulated the design concept of the virtual airport.

A video-conference was set to demonstrate the power of communication and technology, regardless of the location. Via video software and macromedia director were used as the main portions of software in the conference.

The large presentation room was set up to simulate a possible scenario of the presentation theatre located in my project. Professor Stacy Norman was delivering his critique from a remote location. An audience was able to view the presentation in person, while seeing professor Normans critique via two television monitors. Two polycom units allowed the critic and the audience to be in constant contact with the presentation and design.
final thoughts
In general, I am pleased with the outcome of my thesis investigations. The design process began slow, but increased its pace as certain areas of technology sparked a new interest. I believe that the virtual airport is the most cohesive architectural design project I have done. The topic of technology in the business environment allowed me to pursue my architectural and business interests.

I wanted this project to push the envelope of what technology and architecture have to offer. I feel that I have successfully done this to the extent that I anticipated. Further design would allow me to articulate individual spaces and fully understand the systems that make a communication center more versatile.

From a design communications standpoint, I learned many new tools to carry on to the next level. I exploited Photoshop and form-z to their furthest extents, while still having a balance with hand and computer work. Presentation through video conferencing and director have additionally been investigations that I am satisfied with. Overall I feel that the design thesis has satisfied the expectations that I set on myself through the duration of the curriculum.
online citations

1. Alfredo Andia and Claudia Busch, *Architects design in cyberspace and real space for the nyse*, August 1999, 
   <http://members.tripod.com/wwwandia/art/100.html> (11 October 2001).


literature citations
