Initial conversations about our individual thesis topics revealed a compatibility that could not be ignored. An integrating concept between each thesis was the idea of communication as a central theme. Eco-Village to city, Telecenter to village, community to Telecenter, and individual to community represent different levels of communication.

The Eco-Village was an overall idea of the redevelopment of an abandoned area adjacent to the downtown of Denver Colorado. The project entails the integration of green systems into its physical infrastructure as well as promotes a green social infrastructure. The Eco-Village provides a mixed-use, central core, which binds nodes together in a framework that reconnects downtown with its surrounding context, while focusing on a pedestrian scale of interaction, occurring within urban community gardens and public commons. These issues began to inform the design of the Telecenter.

The Telecenter's purpose is to provide workspace for designers, which accommodates teleconferencing, and digital design. This facility allows designers to migrate to the Denver area to improve their quality of life while simultaneously retaining their careers. The Telecenter takes full advantage of technology of the next five years. Teleconferencing, virtual critiques of design, and global communication are the emphasis of this technology. Technology, in this context, improves the quality of life for a large number of people. It allows for global exchange of information while providing new opportunities for people to live and work. Further, the Telecenter encourages interaction among individuals.
within various realms of the design profession. It relies on interdisciplinary conversation in order to enrich the design process. Conversation between the Telecenter and the Eco-Village reveals global communication on both virtual and physical levels.

Both theses are anchored around the issue of quality of life. The point at which they converge is through the concept of communication. After deciding where the ideas came together it was clear that regular meetings should take place. Our strategy was to work on concepts individually then come together for a charrette. During these charrettes we explained the work we had done, then critique one another. Through this process, a strong give and take relationship between the two projects was discovered. The Eco-Village provides a community for design professionals to live in. It shares resources through strategies for a greener urban ecosystem. It also provides an enriched culture within a living community. The Telecenter is a stimulus for creativity. It provides a technological center as a resource for the community. It gives by not taking because it is sensitive to scale, energy resources, and green attitudes.

Our similar attitudes provided a positive, secure environment to share ideas uninhibited. This time was used to exchange knowledge learned from precedent studies and further incorporated it into the designs. Issues of scale, material, social impact, social hierarchy, and personal experience held priority over all others. That is to say every design decision came back to these issues. It was important to work together for one reason. It enriched our work. The building is successfully integrated into an ecological community. The community embraces the telecenter as a productive node within a larger canvas. Both projects meld together. This could only be achieved through collaboration. The expertise of DeLay in master planning and landscape design combined with Marszalek's architectural training provided for a positive, enriching experience.
BACKGROUND
issues, positions, project description,
methodologies, context

PRECEDENT STUDIES
Commerzbank Headquarters, Frankfurt
Getty Center, Los Angeles
Jersey Devil Organization
Reichstag: New German Parliament, Berlin
School of Architecture at Marne la Vallee
Berlage Lectures

PROGRAM/PROGRAMME

CONCEPTUAL DESIGN

COLLABORATION
Reclaiming Downtown's Backyard:
Urban Eco-Village Denver
Darin DeLay
Landscape Architecture

303: Telecenter for Design Professionals

REFLECTION
Issues & Positions

The idea is to express a function that is not currently tangible or visual through architecture so that a building's identity is expressed simply and clearly. Intangible refers to the invisible or undefined characteristics of an electronic age. Characteristics that may be found and isolated can be transformed into a language of design. The design language can then do two things: inform the program/programme of the project, and inform the architectural language of the building itself. Architecture that is practiced beyond the pages of international magazines lacks identity and articulation of function. Most of what is built has become an exercise in graphic design applied to a simple construction type, rather than a piece of architecture that responds to its function and its culture. It is my contention that attention to program, then to a design response to that program can alleviate the continuing problem of anonymous architecture; architecture that lacks character in terms of its program and its culture.

Functional articulation is the expression of the purpose a specific piece of a building has, or the expression of the entire project. If a building or element is functionally articulate it reveals its identity of purpose in the whole design. Structural articulation is a good example. Structural systems can be articulated via many methods including reveals of masonry, or through exposing the members themselves. One would understand the physics of the building through this type of articulation. Expressing the function of a whole project done in a combination of ways. One can point to gravity, scale, and form separately or inclusively to reveal the design intent. The Salt Works by Claud LeDoux in Chaux uses, among other elements, a spout detail shaped as if the minerals processed in the facility have made deposits. In combination with other articulation, one can deduct the general purpose of that facility. With little education about salt manufacturing, one may still be able to decipher the activities beyond the walls. Scale, in combination with details or lack of detail, is also an indication of the manufacturing process here. Because those processes require huge amounts of space, it comes automatically that the building will be large. Therefore observation of such characteristics can lead to a deduction of function. Articulations such as these allow people to understand the building and its components.

The idea set forth by the author of Theory and Design in the Second Machine Age is that it has become more difficult if not impossible. In this "Second Machine Age" electronics have replaced many mechanical devices and thus transformed some industries while bearing new ones. A direct relationship between architecture and functions becomes more obscure when electronics are in consideration. In
the “First Machine Age” machinery was easier to express because the mechanics were easier to understand. It was obvious and could be seen by anyone. Pistons and levers could easily be associated with some detailing or design scheme. Most people who were alert could make the visual connections. Even the nature or spirit of the design could be felt through responsible articulation. The language of the building came directly from the functions it took on. The spaces responded to the people and how they worked with the tools in the space. Old factories or textile mills are prime examples of “First Machine Age” articulation. Roof planes were manipulated into saw-tooth profiles in order to allow daylight into the spaces. Long spanning metalwork allowed for clear floor plans for machinery to be located and worked with. High ceiling planes allowed more space for larger machinery as well as provided passive cooling in the design. These and other aspects of factories worked and therefore were repeated in more projects. After some time, those elements turned into the language of the archetype. People recognized that buildings with those characteristics were manufacturing facilities. Train sheds of the early railroad spoke easily of the nature of the technology as well as the spirit of travel. Long expanses of ironwork and glass allowed room for the bulky trains and their equipment. At the same time that same exposure of the technology invoked the excitement of the new transportation and its potentials. Truck stops are also easily recognized for their purpose. They also, through their language, speak to the excitement of the American highway and travel in cars. If there is a history behind a method of expression, then that method eventually becomes accepted as the language of that archetype. Articulation of form is exciting, however articulation of form and function creates a rich facility that becomes authentic.

It is important for architecture to not only speaks physically of its function and its physical pragmatics, but to speak of the projects character as well. It is a common definition to think of functional articulation as the expression of the physical, tangible aspects of a building. However, I believe it is possible to include the expression of the feelings/character of a project as well. Cathedrals are an excellent example how character of a building can be expressed. With its high vaults and beautiful craftsmanship of materials, Cathedrals invoke a presence that demands respect and awe. Though some architecture does this, it is those particular aspects for which cathedrals are known. Thus its metaphysical function is articulated. Consequently the pragmatic functions of worship are automatically expressed. The character of the project is a significant attribute to consider. Too
often today architecture remains anonymous, because it does not speak about itself or the culture within which it resides. If these are handled responsibly, then the community can appreciate an architecture that is of their culture and their place.

Beginning with this very basic definition of functional articulation and a brief statement of its significance, the question arises, "Where do we go from here?" Functional articulation can be an expression of the tangible aspects of a project, it can communicate the character of the project, or it does both. Pawley states that articulation is more metaphor today than it was in the past. Articulation becomes more symbolic (less physically related to the elements) in this electronic age of the invisible events occurring in our computers and buildings. That symbolism speaks to us through metaphor, much the way past metaphors of mechanics spoke to us. However, electronics have less tangible basis for our connections to take place. The functions of circuitry and electricity are invisible and thus require symbolic references to describe them. They are not readily perceived. The selection of such symbols, at present, is very arbitrary. One person's interpretation of electronic/virtual can be vastly different from that of the next. These technologies are new enough not to have the historical basis from which people can judge the language as authentic to its subject. The goal then becomes to develop a method for designing virtual, electronic facilities that works and will be repeated because it works. Then it will become the language for such facilities.

If the research of previous developments has pointed to designing around the user of tools in a space, then this research should begin with the users of new technology. How do they use their tools? What problems currently exist in their use and in the environment they are in? Architecture is for people, and thus through reflecting the way people live and work in their spaces, an authentic architectural language should come of it. Inherently, by manipulating the design program/programme, and focusing attention on the uses of the space, a design language will emerge.

Artists who work with a two-dimensional media (i.e. paint, paper, charcoal, pencil) or a static three-dimensional media (i.e. clay, marble, metals), require much more room than a web designer for instance. Where the artist paints, forms, and creates in the real, physical space; the web designer does these things in digital space. Artists' Studios were often spacious and allowed for the artist to spread their work out, to be loose with their space. Artists would often expose themselves to adverse or unusual conditions to stimulate their creativity. The freedom to manipulate their environment made the artists work much richer in
content. It seems the other design professions would need similar freedoms in their environments. Architects are often placed into cubicles or cubicle clusters that aren't necessarily conducive to the tasks they need to perform. Architects require space for many different tasks. Through their design process, models are built, large and small sketches drawn, and those drawings are spread out for review. Workstations should accommodate these activities. Architects are a good example because of the diversity in tasks, however other designers require accommodations for their specialized work. Sculptors and painters require room for the obvious tasks of creating, as well as places for reflection, observation, sketching, writing, and contemplation.

How can these spaces be integrated into the workplace? How can they be designed without customization so many designers are using the spaces? Can spaces for the design professions be integrated so that people perform rather than work at their job? Architecture can inspire people of all professions to do great things. By programming around the techniques of the design professional and his/her use of their tools, an expressive architectural language will emerge.

**Project Description**

Set in Colorado, where there appears to be a boom in technological industry, a center for design oriented professionals to work and exchange ideas would be developed. Space in this facility is designed with functionality and convenience for the employee in mind. Employees that are less permanent, who might travel as they design projects, would be considered as well. Attention to the programmatic requirements of such users will develop the design language of the project. Theories of workplace performance would be examined and applied to optimize the daily experience. The building would implement ideas of articulation developed earlier. Responding to site and culture, as well as theoretical ideas, this project would enrich the design of cutting edge workplaces.

The design will allow for workstations that cater to the individual professions, however will focus on the computer as the primary tool. Designers of furniture, for instance, will require more space for building models; whereas a web page designer may require more flat space to mock up layouts. Architects might require both flat space and more volume to work in. The design environments will not be boiled down to square footage. The use of the spaces will determine the form and amount of the area. All professionals will benefit from spaces other than their assigned stations, where work can be done in a different setting; in a different mood.
Issues of the workspace are that of glare on computer screens, enough light for working at varied tasks, and feel of the space as far as inspiration. Some of these issues are pragmatic and should be looked at in all design, however special attention to interaction between disciplines in this project would be prudent.

This complex of workstations is multi-disciplinary and will include professionals from a large cross section of the design professions. Areas for architects, engineers, interior designers, furniture designers, industrial designers, as well as designers of web pages and network designers as well. Bringing all of these design professions together will provide for educational opportunities that will subsequently enrich the respective design projects. Incidental contact between disciplines will spark intellectual conversation, and thus an exchange of ideas. This will be a primary design objective, for it will weigh heavily on improved work by all artisans.

Social aspects of the workplace will be further pushed. Aspects such as childcare, flex hours, and transient professionals. There will be places that rented for weeks at a time that would accommodate a professional that is working in the area for a particular time. There will also be a near by daycare for the employees' children that is visually or audibly connected to the workplace. Workstations will be manipulated to accommodate varying work habits.

For instance, the desks may be height adjustable to allow for temporary stand-up working, as well as transportable to allow for a different environment on fair days, etc. It would be ideal for people to have their permanent spaces, but be able to move out of those for periods of time to enjoy aspects of the building. (i.e. weather, atria, and children.). Their workspaces will not only be locally adjustable, but will also be adjusted through changing the environment all together.

**Methodologies**

From the beginning ideas and definitions must be formed to provide a basis for the project design. Therefore a concentration of effort will be made toward that end. Being aware of the task at hand, the effort will be directed toward the development of the project as the bulk of the basis is established. Therefore the ideas will take fewer roles toward the end of the semester.

Analysis of precedents in the electronic design field is important and should include previous research into development of a virtual language. Developing a pre-design book that includes this research as well as site analysis, statements of design philosophy, and a clear program of the facility should be done before design begins. Site analysis would include explanation of culture as well as physical characteristics.
Developing this information into usable material will provide a sound basis from which some required assumptions could be made. It will establish credibility.

Precedents will be schools of design, offices that are innovative in the treatment of their employees, workspaces in which the computer is used as a design tool, and spaces where design occurs without the computer. Examples of precedent include: Eero Saarinen's John Deer Headquarters in Moline, Richard Rogers' Channel 4 Headquarters in London, Bernhard Tschumi's school of architecture at Marne la Valle'e, the Jersey Devil organization, Norman Foster's Hong Kong Shanghai Bank/Commerzbank Headquarters/ New German Parliament, Reichstag, and Richard Meier's Getty Center in Los Angeles.

Context
Set in Denver, Colorado where technological and population growth are surging, a telecommuting center for design professionals will capture interest. Denver and its surrounding area, including Boulder, presently are attracting many people looking for outdoor adventures, cleaner living, and the youth Denver can provide in its nightlife. Technology industries have found a home in this area as well, feeding off the migration to the region. As people relocate to the area and find themselves in design technology fields, it would be ideal to remain in an environment they enjoy when company loyalties change. A telecommunications center would broaden the scope of the job search, because it wipes out most of the commuting issues. A place like Denver, where people are migrating for the scenery and activities, provide an ideal sample of people who might telecommute to their jobs across long distances to maintain their quality of life.

The site itself is located on the outskirts of downtown Denver. It is near popular retail centers as well as transportation hubs. Development of business centers is in progress near the site and should contribute to the telecommunications center. Landscape architects are actively developing parks around the area as the site lies along the S. Platte River and attracts business and recreational activities.

These characteristics of the area will provide a stimulating atmosphere in which this center will be placed.
Commerzbank Headquarters
Frankfurt, Germany  1991-1997  Norman Foster

This building is the world’s first ecological high-rise tower. The design emerged through close cooperation between the Foster studio, the Bank and the City Planners. The plan of the tower is triangular made up from three ‘petals’ and a central stem. The petals are the office floors, the stem a great central atrium which provides a natural ventilation chimney up the building for the inward-looking offices. Four story high gardens spiral around the triangular plan form giving each desk a view of greenery and eliminating large expanses of unbroken office space. Every office is designed to have natural ventilation with opening windows.

The fifty-three storey tower, just over 300 metres high, rises from the centre of the city block alongside the existing Commerzbank building. By rebuilding and restoring the perimeter edge buildings, the scale of the neighbourhood is preserved.

One of the most innovative aspects of this project is the interaction between floors across a major atrium. Offices and other work spaces are either adjacent to the atrium or have direct visual access to and through it. This characteristic promotes interaction between groups as well as provides a stimulating working environment.
Jersey Devil Organization
Steve Badanes, John Ringel, Jim Adamson  1972

For twenty-five years the members of Jersey Devil have been constructing their own designs while living on site in tents or Airstream trailers, and making adjustments to their structures in response to problems encountered during the building process.

Jersey Devil is a name that has been attached to work by Steve Badanes, John Ringel, Jim Adamson, or any combination of the above, plus other people who have participated in their diverse projects. This loose-knit group of designer-builders has created projects that critique conventional practice, both the process of making architecture and the accepted definitions of architecture itself.

Jersey Devil’s architecture shows a concern for craft and detail, an attention to the expressiveness of the construction materials, and a strong environmental consciousness.

The loose organization of Jersey Devil illustrates a major design concept for the Denver telecenter. The members of the firm reside in various parts of the country, then come together as projects arise. This idea of living outside of the work region is copied in the scenarios developed for the telecenter. People will work at this or other centers like it in order to maintain their desired level of quality of life. Simultaneously, their careers remain in tact elsewhere around the globe.
With its golden light and brilliant blue sky, southern California provided the unique opportunity and the freedom to relate interior space to exterior space, to create a relationship between architecture and landscape and to focus on the concern with building and garden. The Museum as the primary public destination will respond to this opportunity; it will be a place which is both introverted, in that its spaces are conducive to the contemplation of works of art, and that it is also extroverted in that its organization allows the visitor to experience this unique place. Upon ascending the steps to the entrance plaza of the Museum, visitors will be presented with an array of choices, either to enter the building to look at art, or to explore the gardens. The Museum Lobby is a tall, cylindrical space opening to the Museum Courtyard as well as leading to a series of 5 gallery pavilions. These small pavilions break down the scale of the Museum into easily comprehensive clusters, each with its own inner courtyard. The visitor can be taken on a chronological journey of the Getty collections, with paintings occupying the top floor to take advantage of the natural top light. Decorative Arts, Illuminated Manuscripts, sculptures drawings and photographs will be housed in ground level galleries, shielded from the sunlight.

It is these ideas of campus, contemplation, and conversation that influence much of what the design of the telematic center should be.

Recent lectures by Toyo Ito and Kazuyo Sejima at Berlage Institute in Amsterdam has suggested an interesting direction of the relationship of architecture with the society developing within the Japanese architectural realm. These two architects who have leading positions certainly in Japan but also internationally have developed a tradition of light architecture in Japan. The lightness, which they have explored, was not merely the lightness of the material and structure of the physical building but also the meaning of the existence.

At the Berlage Institute, the theme that Toyo Ito chose was 'virtual flow'. He explained that the traditional civilization used to develop along the physical flow, such as rivers and harbors, to have the advantageous transportation and communication possibilities. The contemporary civilization is even more dependent on the flow of communication, however the flow in this case is not the physical one but the virtual one.

Literally, 'physically being somewhere' is more and more losing its meaning. It is everyday life reality that you are aware of your friends moods and feelings of the day, who is living on the other side of the world, while you do not know the face of your neighbor living next to your apartment.

Normally environmental architecture means architecture which does not consume too much energy, which uses environmentally friendly material, or looks integrated with nature.
Conceiving of a new school of architecture located 30 minutes outside Paris raises two questions. The first one has to do with the direction that architectural education will take in the next decades. The second has to do with the "attraction" that a school situated on the edge, the periphery, the margin of the social, economic and cultural density of an urban center can have.

Today, a triple revolution—informational, interdisciplinary and ideological—is in the making. At Champs-sur-Marne, located 30 minutes from the heart of Paris, one is at the same electronic distance from London, Berlin, Tokyo, New York or Delhi. There is global architectural culture and information; the conditions alone are local.

For this new school Tschumi sought to design a space conceived for the age of the modem and of mobility, a new type of school of architecture that does not look for inspiration to the old Ecole des Beaux Arts, the Bauhaus, the American universities or elsewhere.

The project starts from the following thesis: there are building-generators of events. They are often condensers of the city; as much through their programs as through their spatial potential they accelerate a cultural or social transformation that is already in progress.

The Reichstag is the destination of the German Capital From Bonn. It represents perhaps the most influential sect of democracy in Europe, and therefore much by the way of culture and history is integrated into the design. This precedent study takes from the energy strategies rather than the design influences of the project.

Manually and automatically controlled windows, combined with secondary outer glazing, allow natural ventilation to most rooms. These double layered windows comprise an internal, thermally separated, glazing system and an outer layer which consists of a protective laminated glass pane with ventilation joints. Between these two layers is a void housing a solar shading device. Between half to five times the air volume of a room can be exchanged per hour via this double facade depending on the weather conditions outside. The double facade also gives a high level of security so that the inner window can remain open whenever required, especially for night time cooling. Due to the constantly varying number of people occupying the building a flexible energy conservation strategy has been adopted. Using the building's inherent thermal mass, energy can be stored to provide a comfortable base temperature from which active heating or cooling can be 'topped up'. This method reduces heat load peaks by approximately 30 per cent over conventional methods.
Organizational Data

303 will operate in a few ways with a consistent type of personnel. As it is a center for bringing design professions together, it will consist of many independent entities that co-exist in one facility. Designers from fields such as furniture, sculpture, architecture, interior architecture, web-based design, as well as industrial designers will come together to work and exchange ideas.

- Most designers who use this facility will be part of a larger, off-site firm/body/company. They are telecommuting to their workgroups outside 303.

- Small groups of designers will occupy parts of the complex as independent firms. 303 is the base camp for these companies. Additional employees of these small firms may telecommute into this center, providing bi-directional flow of information.

- In addition to these operations single artisans will occupy studio spaces and workshops. From here they will exhibit/sell their work.
Design Criteria

Conceptual
The driving force of the facility design is two fold.

- The first concept is that of developing an accepted architectural language by which this archetype can be designed or vise versa.
- Secondly, more specifically, the facility will encourage (even force) casual/incidental exchange of ideas and information. This is a collection of designers who operate in different fields. However, if ideas cross the disciplines, then projects will be richer in content.

Architectural
Concepts developed about informal exchange of ideas as well as that of developing a distinct architectural language for this archetype should be accommodated and encouraged through physical/built form. The facility will provide ideal working conditions for each profession. These provisions will include:

- Workstations designed around the use of each professional's set of tools
- Environmental controls that accommodate optimal working/thinking/creating environments for each design field/professional
- Relationships of work spaces to one another to encourage interaction between fields.

Contextual
Set in Denver, Colorado where technological and population growth are surging, a telecommuting center for design professionals will capture interest. Denver and its surrounding area, including Boulder, presently are attracting many people looking for outdoor adventures, cleaner living, and the youth Denver can provide in its nightlife. Technology industries have found a home in this area as well, feeding off the migration to the region. As people relocate to the area and find themselves in design technology fields, it would be ideal to remain in an environment they enjoy when company loyalties change. A telecommunications center would broaden the scope of the job search, because it wipes out most of the commuting issues. A place like Denver, where people are migrating for the scenery and activities, provide an ideal sample of people who might telecommute to their jobs across long distances to maintain their quality of life.

The site itself is located on the outskirts of downtown Denver. It is near popular retail centers as well as transportation hubs. Development of business centers is in progress near the site and should contribute to the telecommunications center. Landscape architects are actively developing parks around the area as the site lies along the S. Platte River and attracts business and recreational activities.

These characteristics of the area will provide a stimulating atmosphere in which this center will be placed.
Initial attempts at capturing the form of 303 came from direct interpretation of the technologies. It was through this method of inquiry that the distinguishing characteristic of the 'virtual' would reveal themselves. Consequently, forms that express linearity, speed, transmission of information, and an interconnectedness come forth.

A: Linear paths of transmission (structure) are combined with a condensing mass of information (form spaces). This concept relates to Speer Blvd. and traffic on it. The scale of the forms relates directly to the scale of the activities that occur within them. (i.e. sculpture studios are large while the web design studios are smaller)

B: Tower provides central hub for the collection of paths to connect to. Paths lead to secondary spaces. Simultaneously they create interstitial spaces for casual contact.

The goal of this inquiry was to discover those unique characteristics of the digital media this complex would be designed around. The results would then potentially be used to create a language for this archetype. The realization of this process was that it would constantly reveal an arbitrary set of symbols for technology. Thus it would be impossible to provide a language in architecture that could be universally accepted. Rather it would provide the various dialects of a language identified with a technological archetype.
The mode of thinking transformed into something perhaps truer to the development of existing architectural languages. It centered on the people's use of technology. Similar to the industrial language of factories, train sheds, and mills, the digital language should reflect the spatial requirements created by the use of the technology. Therefore, by designing a work space that accommodates and innovates the work being performed, an architectural language will emerge.

Focusing on people's interaction with technology readily provided material from which strategies could be derived. Strategies responding to circulation, mechanical systems, and contextual history encompass the design of 303, making it an icon for Denver, the region, and the surrounding community.
Reclaiming Downtown's Backyard: Urban Eco-Village Denver

'Ecological cities are about balance within human society as much as they are about balance between humans and nature.'

"A human-scale, full-featured settlement, in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future" (Gilman 1991). It is easier to understand this definition if it is broken down to separate elements and each of those elements are further defined.

Robert Gilman, a leader in the development of eco-villages, breaks down this definition into separate components. Gilman begins by defining the first portion, "A human-scale...", as referring to a size in which people are able to know and be known by the others in the community, and where each member of the community feels he or she is able to influence the community's direction (Gilman 1991).

"...full-featured settlement..." was defined as one in which all the major functions of normal living — residence, food, provision, manufacture, leisure, social life, and commerce — are plainly present and in balanced proportions (Gilman 1991). Gilman uses the example of how most current human settlement in the industrialized world is entirely divided by function: some are residential, some are commercial, some are industrial, etc., and how the eco-village is a "comprehensible microcosm of the whole society" (Gilman 1981). This does not mean eco-villages have to be fully self-sufficient or isolated from the surrounding community. Ideally, villagers will be able to work and live within the eco-village, but some will go outside the village to work, and people who live outside the village will hold some of the jobs in the village.

"...in which human activities are harmlessly integrated into the natural world..." is to be understood as bringing the 'eco' into the eco-village. One of the most important aspects of this principle is the ideal of equality between humans and other forms of life, so that humans do not attempt to dominate over nature, but rather find their place within it (Gilman 1991). There is the important concept of "cyclic" use of materials, which is directly related to use of renewable energy sources, such as solar, wind, etc., rather than fossil fuels. This would include the process of reusing organic waste and returning them to the land rather than a landfill, or filtering sewage and gray water through such systems as a solar aquatic system, rather then sending it through pipes to the sewage plant.

"...in a way that is supportive of healthy human development..." recognizes that eco-villages are human communities, and without genuine human health at the core, these communities are unlikely to be successful (Gilman 1991). By a 'healthy human development', Gilman means a development that involves a balanced and integrated environment of all human life — physical, emotional, and spiritual. It should not only be expressed in the lives of individuals, but in the life of the community as a whole (Gilman 1991).

"...and that can be successfully continued into the indefinite future..." which is also described as the sustainability principle, and forces a code of honesty on eco-villagers (Gilman 1991). This principle is to help ensure that the eco-village will not become a short-term, human scale community that is harmoniously integrated into nature, but lives off capital accumulated within other parts of the society, or is dependent on unsustainable activities elsewhere (Gilman 1991). This last principle is to reinforce that the eco-village is striving towards becoming a sustainable community. In this sense, an eco-village is a distinct place, either as a rural or urban village.
Master Plan for Ecovillage

Telecenter & Sculpture Garden
ECONOMIC SUSTAINABILITY

The Telecenter is representative of each of the three components of sustainability, but it best represents economic sustainability. The Telecenter’s purpose is to provide a workspace for designers, which accommodates teleconferencing, digital design, and global communication as emphasis to the technology. It allows for global exchange of information/work while providing new opportunities for people to live and work. The Telecenter incorporates ‘green architecture’ by conserving energy and maximizing passive-cooling technologies, as well as providing a technological resource for the ecovillage community.

Telecommuting has potential to substitute for some of the commuting that goes on in and between our communities, and may lead to reduction in vehicle trips generated.

There is also a local economy being served in terms of economic sustainability. ‘Buying local’ is essential in keeping dollars within the ecovillage. Because the ecological footprint is reduced when buying local, savings occur not only in cost, but also in conservation of resources and the environment, where it can be difficult to place a dollar figure.

Cooperatives are also an economic benefit to an urban ecovillage. Examples such as a car and housing co-ops occur where neither homes nor cars are owned, but rather shared at minimal expenses. These expenses are incurred by all members of the ecovillage and every member is entitled to benefits and savings, which are in turn put back into the community.

ECOLOGICAL SUSTAINABILITY

The Ecovillage addresses numerous aspects of ecological sustainability. In the urban environment, this is difficult to achieve and understanding the urban ecosystem is critical. Urban ecology provides many environmental benefits: it reduces the urban heat island effect, conserves energy, cleans urban air, and absorbs carbon dioxide from the atmosphere.

Urban ecology offers more than environmental benefits. It offers an opportunity to foster a greater understanding and connection to nature. Urban ecology can break down the boundary between humans and the natural world. Urban ecology reveals the relationship between cities and natural systems. Through urban ecology, the relationships between people within the city, and the links between urban and rural communities are better understood.

Amenities such as urban gardens/agriculture, street plantings, and bio-swales can bring vegetation back to the urban environment and restore a connection to the lost natural environment. Ecological sustainability also includes embracing the South Platte River and Cherry Creek and integrating community programs which will assist in keeping the water clean and keeping the community involved/connected to its natural surroundings.
SOCIAL SUSTAINABILITY

Ecovillage Denver brings together surrounding communities and acts as a social link for interaction among various groups of people. Mixed-use residential and commercial promote social interaction within various levels of the social hierarchy:

Home – ‘Third Places’ – Market –
Commons – Spiritual Places

Home is best understood as most private within the social hierarchy. In terms of community scale, it is best visualized as residential districts. ‘Third places’ are less private and are often such places as cafes, bookstores, coffee shops, or vendors. Incidental social interaction often occurs within these places. On a larger scale, community blocks best represent ‘third places.’ The market is just that – the market where goods are purchased. It may be a place for social gathering, but most important, high levels of social interaction occur within markets. There is a common need shared by those visiting a market and conversation is often shared freely here as well. Neighborhoods best represent markets on a larger scale. The public commons is highly public in character and brings many members of a community together. The commons can knit the fabric of a community together, just as a village brings together surrounding neighborhoods. Spiritual places are places of highest social interaction. The social interaction often revolves around ritual and routine, and common beliefs are usually the glue which binds people together. On a larger scale, this may be perceived as the city – people come together in the urban environment because they have similar needs and desires found within the urban environment.

The Ecovillage bridges social boundaries and expands the the limits of community. Rather than rules, laws and standards, society adheres to beliefs, myths and rituals of the community.
303: Telecenter for Design Professionals

The social hierarchy is reciprocated in 303's design, and is the initial approach to the relation to human scale activities. Intimate spaces of the design center are the studio spaces themselves. This is where private contemplation occurs. The semi private atrium spaces are where interaction between designers occurs. Public interaction is limited to the lower floors and surrounding plazas.

Communication or conversation is also an important characteristic of the design profession and thus relates to the development of the project. Communication as a concept manifests itself at a few different scales and locations. Three of the major communication areas are the atrium, circulation paths, and throughout the public pedestrian zones.

The atrium provides the open, public adjacent to formal work zones. Its transparency allows views to other zones. Visual interaction between disciplines stimulates the imagination while providing a break in a potentially monotonous regiment.
The atrium is lined with deep balconies that are connected by bridges. These elements bring the workers together through their usual traffic patterns. The dept of the balconies creates a pull off zone where incidental run-ins can be taken advantage of. By discussing current projects with one another, the designers are able to enrich their work with multiple points of view across multiple disciplines. Through informal collaboration the work becomes richer and more complete. Open-air staircases anchor the atrium and add contact opportunities.
Second Floor

Ground Floor
303 also communicates at a public level with the ecovillage. The design center's integration into the ecovillage as a node that anchors the commercial district places it into a very public light. Pedestrian traffic from nearby bike/walking paths as well as the 16th street mall and ecovillage is channeled through the building. The sculpture garden turns traffic to 303 from Commons Park and the residential area northwest of the site. The atrium is bracketed by a sculpture plaza and another, more intimate plaza that reconnects the site with Cherry Creek. Traffic through the site and lower two floors of the facility flows easily by the exhibits created by the local designers. Through these exhibits the design profession is promoted/communicated to the public.
The atrium changes as the activities and exhibits change. However, it is always focusing on the people that inhabit it. The surrounding plazas flow through the building, guiding the pedestrian traffic. This is the most public and therefore most spiritual in the social hierarchy of the building. People gather here together and share ideas as well as life experiences and daily encounters. The people are showcased here through open vertical circulation and balconies.
Communication occurs at a larger scale as well. 303's sensitivity to the scale of the village as well as its response to the larger scale of the adjacent highway (Speer Blvd.) makes it a mediator between the two. On the highway side (southwest) the facility incorporates larger scale elements. The building rises to nine floors on this side to meet the elevated thoroughfare. Upon this are large planes of glazing act as billboard to the highway. The use of photovoltaic technology on these planes as well as the general sleekness of the materials further creates an icon for the area. The northeast portion of the building addresses the street. It is important to keep the urban edge consistent with the surrounding city. For this reason, the building raises only four stories from the street while it encroaches enough to let a generous sidewalk remain intimate to the streetscape. In the spirit of the eco village's language of community, this portion of the telecenter it set on a pedestal that creates a porch. Through this sensitivity the facility maintains a positive relationship to the eco village.
Large elements address the highway for higher speed readability.
A billboard for the community and the designers is created.
Maintaining the urban edge with pedestrian scale interaction. Building breaks its scale down from highway to village.
A porch gesture engages the public and maintains the community language of the ecovillage.
By condensing the vertical circulation of both people and mechanical systems the spaces are opened up to flexible arrangement. In addition, a logical strategy for the layout of HVAC, plumbing and wiring becomes apparent. Passive strategies toward ventilation further integrate 303 into the eco-culture of the region. On the southern side of the building a double skin creates a thermal chimney. As heat builds in the chamber the air will rise. As the air rises, air from inside the building will be pulled in and replace it. The stack effect created can be directed back into the building during cold months, and directed out during the warmer seasons. Panting within these spaces oxygenates as well as cools the air brought through. It is a natural filter of air. Operable windows on the interior skin of the thermal chimney allow control over the individual environments.
Large skins house photo-voltaic cells which will capture energy from the sun. The second skin also creates a thermal chimney that helps passively cool.
Mechanical services are run parallel with structural system. A logical layout emerges with the grouping of vertical services into a few locations.
It is important to discuss what was done, however it is as equally important to discuss what was learned and what should be taken further. Early on the thesis took an esoteric character. It was hard to grasp what really could be done with such an elusive topic. I discovered that nothing could be done and an different approach needed to be taken. The subject matter is just too arbitrary to mold into a concrete language of architecture. The method of designing around the people who use the architecture was more successful and more logical. Architecture is for people and takes its form from the way people interact with their work. This architecture responds to needs seen by this architect of the workplace as well as to changing lifestyles brought on by available technology. 303 can be a start to a larger network of these facilities. Other facilities can potentially accommodate any professional practice.

A major element of the project seemed to be left out during the execution of the thesis. However, this is not the case. The technologies that the project was designed around were expected to have a substantial impact on the form and organization of the building. It didn’t, directly. I realized that the advantages and opportunities of digital technology have brought disadvantages to the work place. Personal interaction among one another needed to be reintroduced. “Skin-time” is important to design as well as daily human living. 303 focuses on that
deficiency and attempts to resolve it. Providing opportunities for people to interact outside their designated cubicles is one effort. The atrium and the views across it to other disciplines is another. The interaction with the surrounding context of the ecovillage is perhaps the most important. The communication between site and building is dynamic by means of a common language and enthusiasm for a better quality of life.

It is through this collaboration with a landscape architecture student that enriched the process and thus the project. The information and insight brought to the table by the Ecovillage thesis enlightened my own perceptions of what the site wanted to hold. Positive attitudes toward and a general respect for one another's disciplines helped tremendously.

Further study of this archetype would include an more in-depth study of the work spaces themselves. The actual workstations have great possibilities and much room for improvement. There lies a large opportunity for further collaboration with other professionals in the digital industry. It would be very exciting to develop the technical aspects of this project. From the passive strategies to the digital networks, this project leaves much to be challenged.


