THE bebop Studio

First you learn your instrument.
Then you learn music.
Then you forget both of those and just blow.
-Dizzy Gillespie

by Bennett Neiman

In an attempt to engage today's analog and digital media savvy architecture students, aspects of both methodologies were applied to a beginning architectural design studio, taught during spring semester 2006. This renewed pedagogy, satisfies the demands of incoming students who represent an evolving paradigm shift. A poetic tonality or attitude of this approach is discussed. Those interested in the specific processes and methodologies employed should consult earlier writings listed in the references at the end of this article.

The bebop STUDIO translates the jazz performance entitled Leap Frog, by Charlie Parker and Dizzy Gillespie into a series of improvisational layers, one portion interacting and superseding the other. Representations of form, space, light, line, volume, and texture are implied in the music. The student hears the three dimensional space of interpenetrating movements where primary, secondary

NOTE: The bebop SPACES project, designed by Professor Neiman, received the 2005-2006 Association of Collegiate Schools of Architecture Faculty Design Award. A series of analog-digital workshops and seminars taught by Professor Neiman received the AIA Education Honors Award in 1994 and 1998.

and tertiary precincts are juxtaposed and projected against complex geometries. The bebop STUDIO wakes up architectural dreams and places to experiment, discover, manipulate, interpret, and extract. The site of this ongoing investigation is the mind. The viewer, as the ultimate client, establishes the program. The material is space and light. The function is the psychological demand of spatial experience. The budget is time, passion, and commitment to the study of architecture.

The bebop STUDIO does not advocate photo-realistic rendering, instead empha-sizing design representation, translating fundamental concepts into architecture. Photo-realism implies an attitude of mimicking the real world. Here, new media is used as a tool for representation and form translation in conjunction with physical models. Students resist seeing the obvious or the literal in favor of imagination, exploration, experimentation and translation.

In jazz, the musicians record an improvised performance several times, critically deciding which "take" is the one that will appear on the final released album. The alternate takes are analogous to sketches. The students

reflect a jazz attitude by treating each study as a "take".

The exercise is similar to a performance device or a game, exploring the boundaries of its limits. Each composition seduces and motivates the viewer into grasping its potential, thus requiring an ability to 'inhabit' and 'decipher' it. Doing so demands participation by both the performer and the viewer. Thus, each composition is always a two-sided event. Both the designer and the viewer can read multiple interpretations, extracting from the process at any time, allowing for the experiential interpretation of space from two-dimensional drawings into three dimensions at any scale, as a detail, as a building, or as a community of buildings.

The design process is a cause and effect relationship, beginning as a simple analytic structure that grows with compulsion. This mechanism rapidly unfolds as an open-ended experiential phenomenon. The structure develops into a metamorphic labyrinth, as a self-perpetuating continuum. Each composition is a complex work of resultant simplicity derived from an ordered language of constants and variables, constructing and articulating joints and connections. The

complexity is discernible, traceable back to the original order of size, shape, treatment, location, and orientation. There is not one piece that is considered "the end product." The entire process is also the product.

Adobe Photoshop and Illustrator are used for image manipulation and early digital collage exercises. Collage structures are translated into physical three-dimensional models. Using **form•Z**, students start in the draft mode and swiftly move to digitally modeling the physical models. Professor Neiman argues that with **form•Z** there is no one way to make these forms. The students learn **form•Z** as they design. A willingness to experiment and play with the software is key.

Students enrolling as college freshmen in the fall 2006 were born after 1987. This means that during most of their lives they have been exposed to not just CD-ROMs, but realistic video games, Game Boy, dolls with embedded microchips, cell phones, the internet, the graphical user interface, digital cameras, digital video, Tivo, iPods, DVD's, flat screen HDTV, blogs, MySpace, and the emergence of Fox News Channel showing live satellite action directly from embedded war correspondents. High school students are making and editing their own videos and digitally composing their own music while they download, sample, rip and mix mp3's. Today's

architecture student is willing and able to fluidly move data between many different digital applications including **form•Z**, transforming physical models into digital drawings and models.

The bebop STUDIO sets up a rigorous series of incremental and additive exercises, but at the same time introduces an attitude of open experimentation. This design studio presents a seamless exchange of information between various digital design applications, creating an inviting environment in the context of contemporary media. The studio provides students with the fundamental critical skills in formal manipulation, space and organization. The exercise stimulates action followed by reflection.

The bebop STUDIO is an evolving dynamic process. As each new group of students engages the exercise, new ideas are applied to the pedagogy for future groups. The quote by Dizzy Gillespie gives the underlying attitude for this process. In the beginning stages it is about learning a particular set of instruments. Then simultaneous to that it is about learning the architectural music or language. By the end of the bebop STUDIO, the student is in the beginning stages of just blowing, which in a certain sense is about forgetting about the rules and almost working intuitively with **form•Z** to create these works.

References

Neiman, Bennett. (2005) "Analog-Digital Light Box Exercise." *form•Z Joint Study Program Report 2004-05*. pp. 86-89.

Neiman, Bennett and Jeff Olgin. (2005) "Institute for Jazz Studies at Fort Adams." *form•Z Joint Study Program Report 2004-05*. pp. 46-49.

Neiman, Bennett. (2006) "Bebop Spaces." *Proceedings of the 2006 ACSA Annual Meeting*, Salt Lake City, UT. pp. 169-172

Neiman, Bennett. (2002) "Bebop Space/ Leap Frog." *Proceedings of the Western Region ACSA Conference*, California Polytechnic State University, San Luis Obispo, pp. 129-132.

Neiman, B. and EllenYi-Luen Do. (1999) "An Analog Digital Language of Vision." *form•Z Joint Study Program Report 1998-99*. pp. 62-65.

Neiman, B. and EllenYi-Luen Do. (1999) "Digital Media and the Language of Vision." *ACADIA 99, Media and Design Process*, Snow Bird, UT, Association of Computer Aided Design in Architecture.

Neiman, B. and J. Bermudez (1997). "Between Digital and Analog Civilizations: The Spatial Manipulation Media Workshop." *ACADIA 97, Representation and Design*, Cincinnati, Association of Computer Aided Design in Architecture.

Neiman, B. (1996). "Improvisation and Articulation: The Jazz Studio." *ACSA European Conference*, Copenhagen, Denmark.

Bennett Neiman joined the Texas Tech University College of Architecture as an Associate Professor in 2004. He has also taught at North Dakota State University, Miami University, University of Texas at Arlington, University of Tennessee, Roger Williams University, and at the University of Colorado. Professor Neiman has received several honors for a series of self-generated design projects and competitions involving improvisation, order, and variation on a theme. His design seminars and studios exploit the strengths of both traditional media and digital technology. For this work, he received the American Institute of Architects Education Honors Award in 1994 and 1998, and the Association of Collegiate Schools of Architecture Faculty Design Award in 1990 and 2006. He was the recipient of the University of Colorado at Denver Outstanding Teacher of the Year, and the College of Architecture and Planning Excellence in Teaching Award in 1994. He received the Texas Tech University Alumni Association New Faculty Award representing the College of Architecture in 2006. Professor Neiman's students have won the **form•Z** Joint Studies Program Award of Distinction in 1994, 2005, and 2006, and an honorable mention in 2003. Email: bennett.neiman@ttu.edu Web site: http://bneiman.notlong.com/. Neiman's photograph by Jerod Foster (2006). *Photo by Jerod Foster (2006).*

Selected student work from the bebop studio.

If I internalize the environment around me, who is going to control how the information eventually resurfaces? It's an uncanny situation; the creative act becomes a dispersion of self. Back in the day it was called alchemy, but in the hyperfluid environment of information culture, we simply call it the mix. I like to call it cybernetic jazz.
***-DJ Spooky on rhythm science***

Craig Dixon. analysis, process, presentation, repeated structured, distillation, collage, representation, compress, transition, form, and expansion.
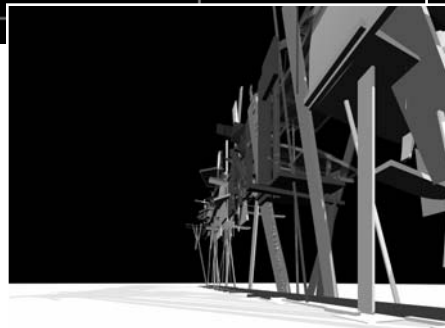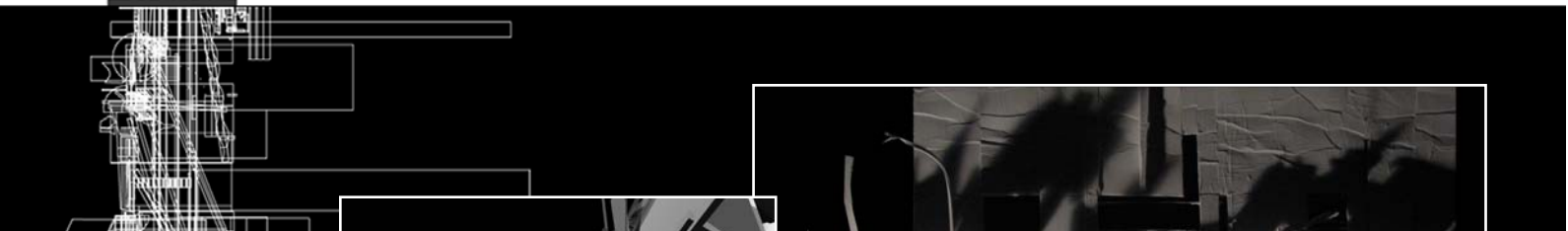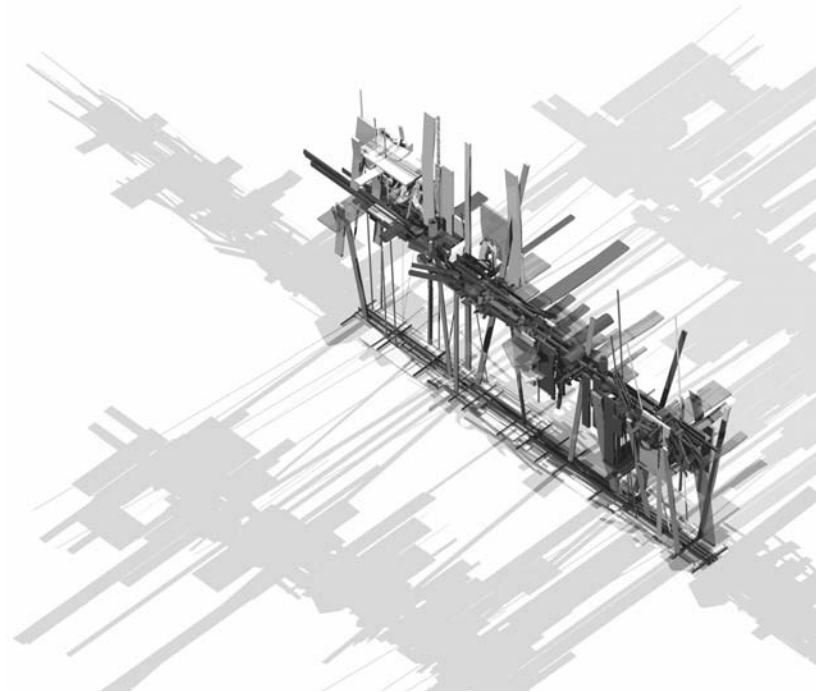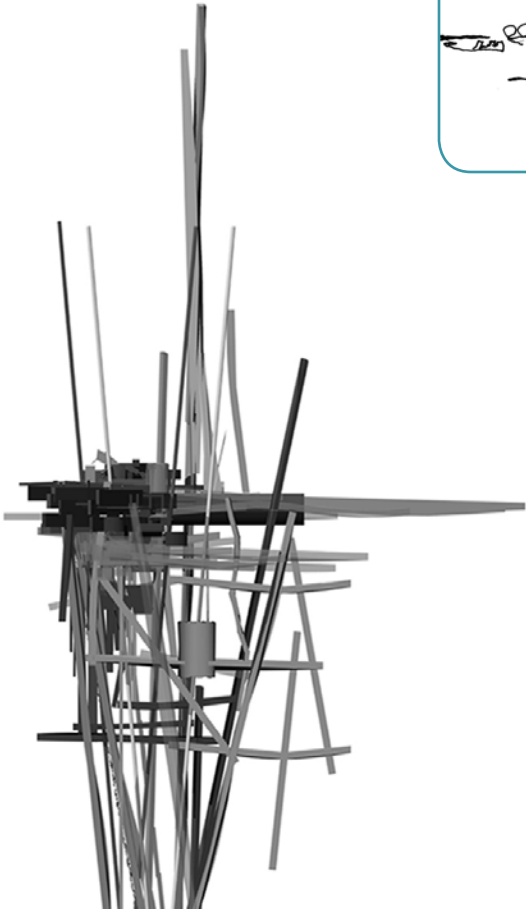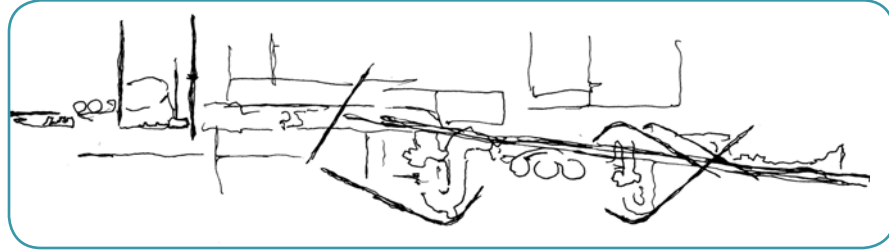
Jack Mussett. bebop spaces thrive on idiosyncratic forms derived from time, music, instruments, structure, and countless conscious and preconscious design decisions. It is intuition and iteration.
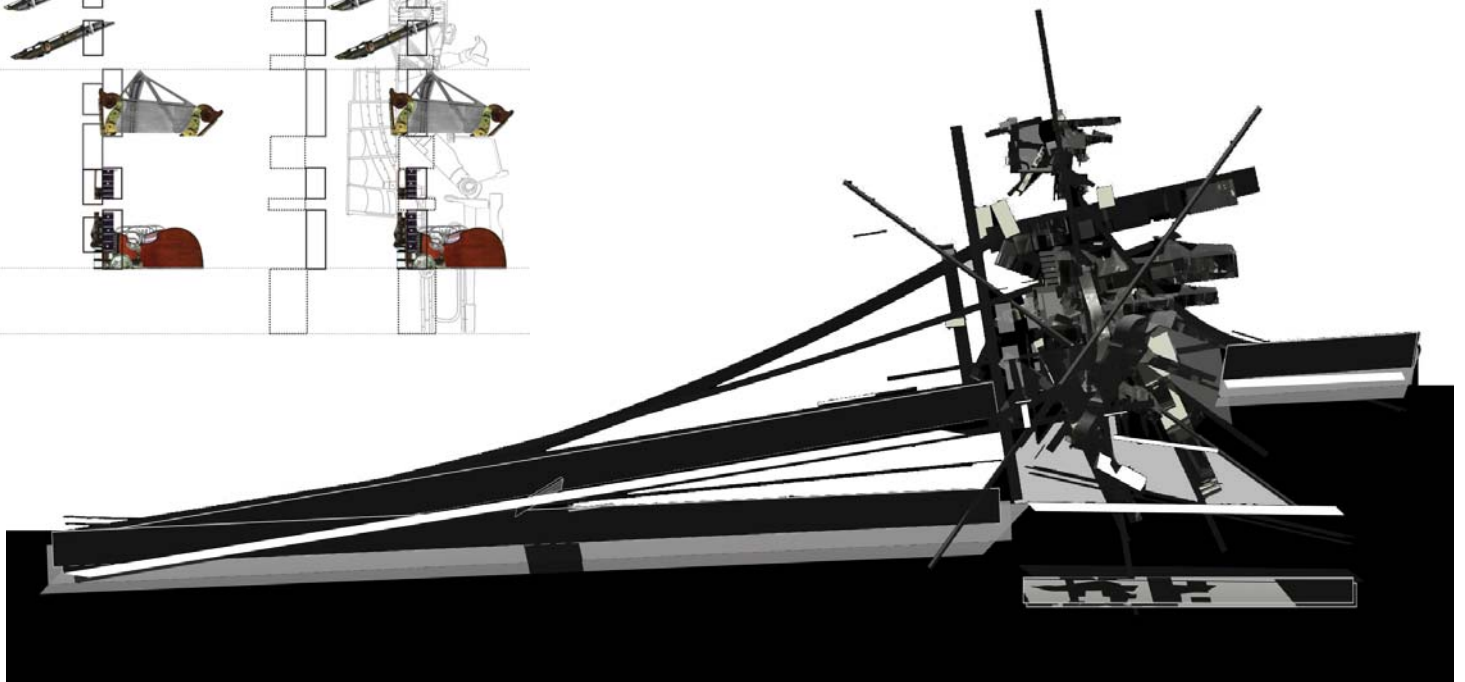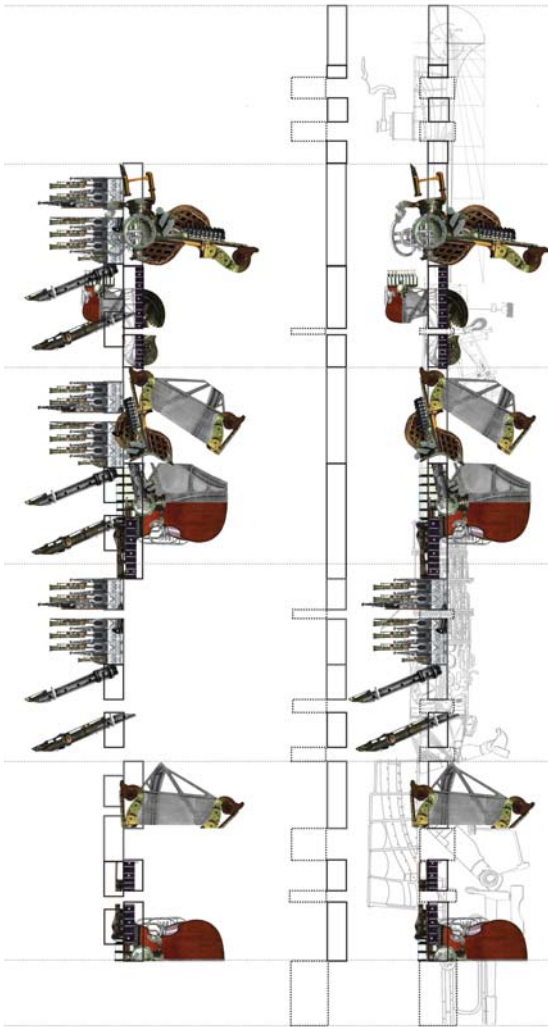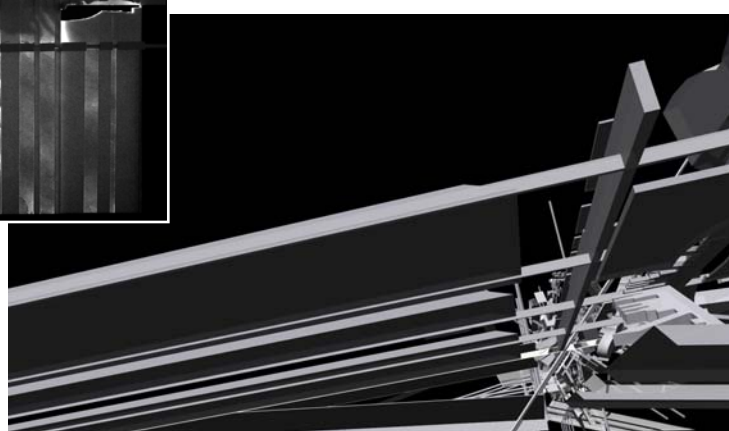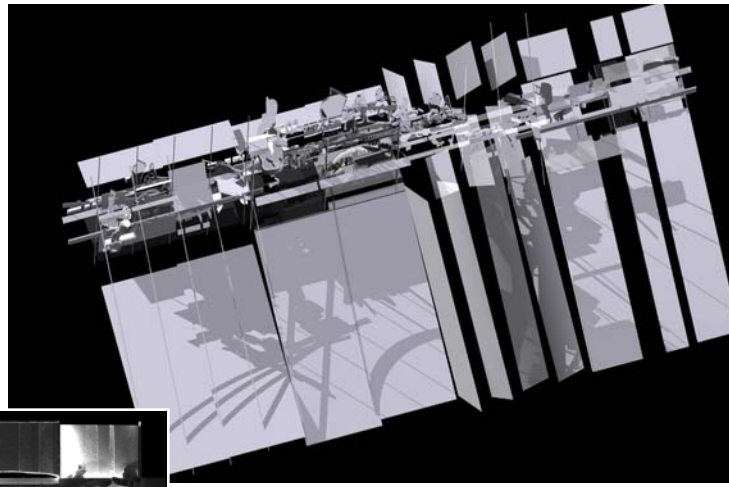
Jarod Fancher. Through expansion and reuse of pieces, a model is created. With the idea of structure and improvisation you exploit views of the model to gain more ideas and knowledge of the musical structure. The spaces and volumes in these views can be translated and transformed into an actual structure or just simply sculpture.
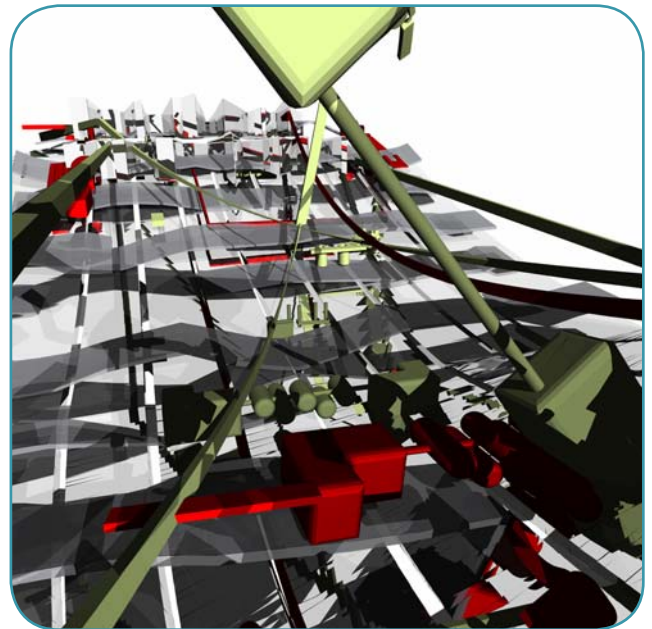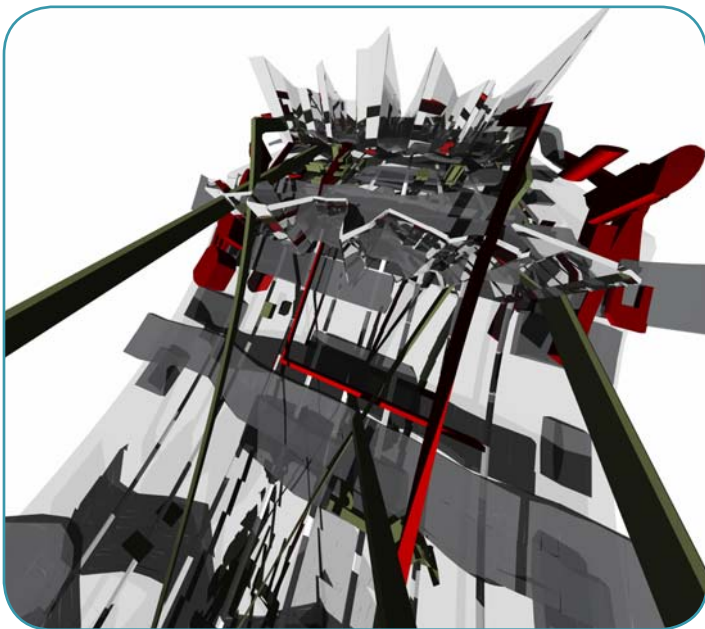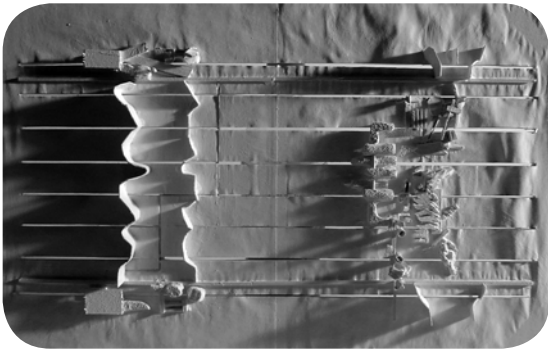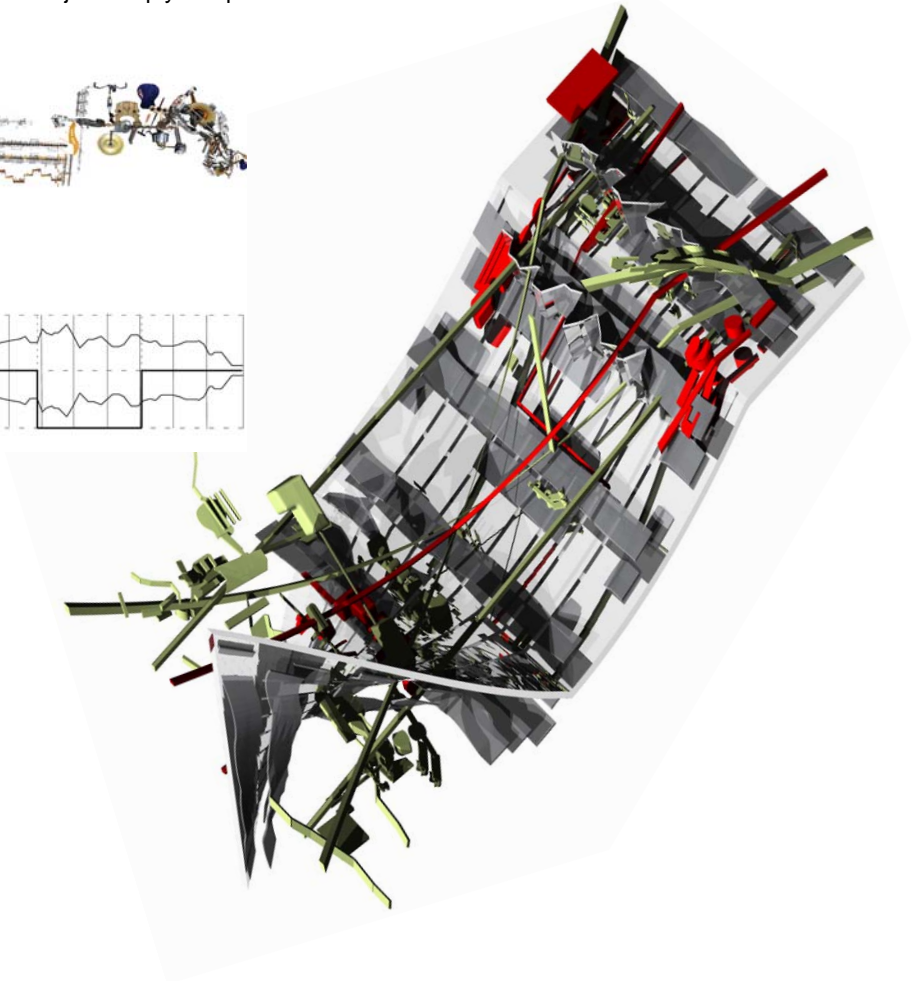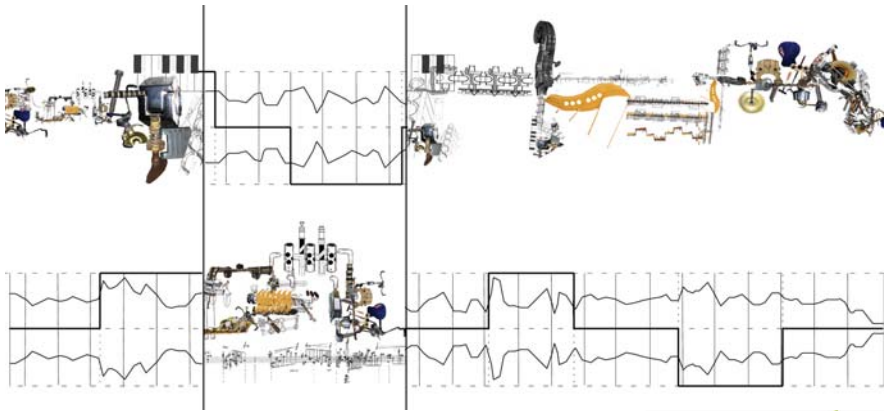
Jonathan Creel. **form•Z** was our main instrument. Certain elements of the underlying structure and theme of the song are diagrammed and described in detail. A catalyst for a broader idea could not be found by traditional drawing. The program changes. A new process of thought is involved. Images of musical instruments are fractured and turned into crystals. From a digital realm, an idea is converted to an analog expression of the original thematic sequence. It immediately conveys a mythical existence. There is no gravity; it's intangible space. There are infinite solutions and variations of themes that are invoked. This constant drives the possible variables. It begins with the analysis. This becomes a motor (immovable mover) which is, a moment captured. It's all in the perception. Once you hear music, it's gone, in the air. You can never capture it again
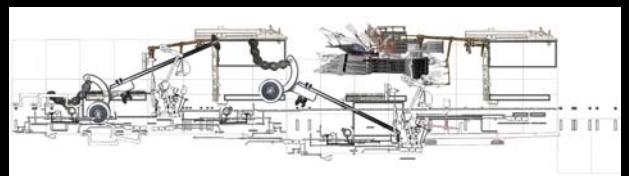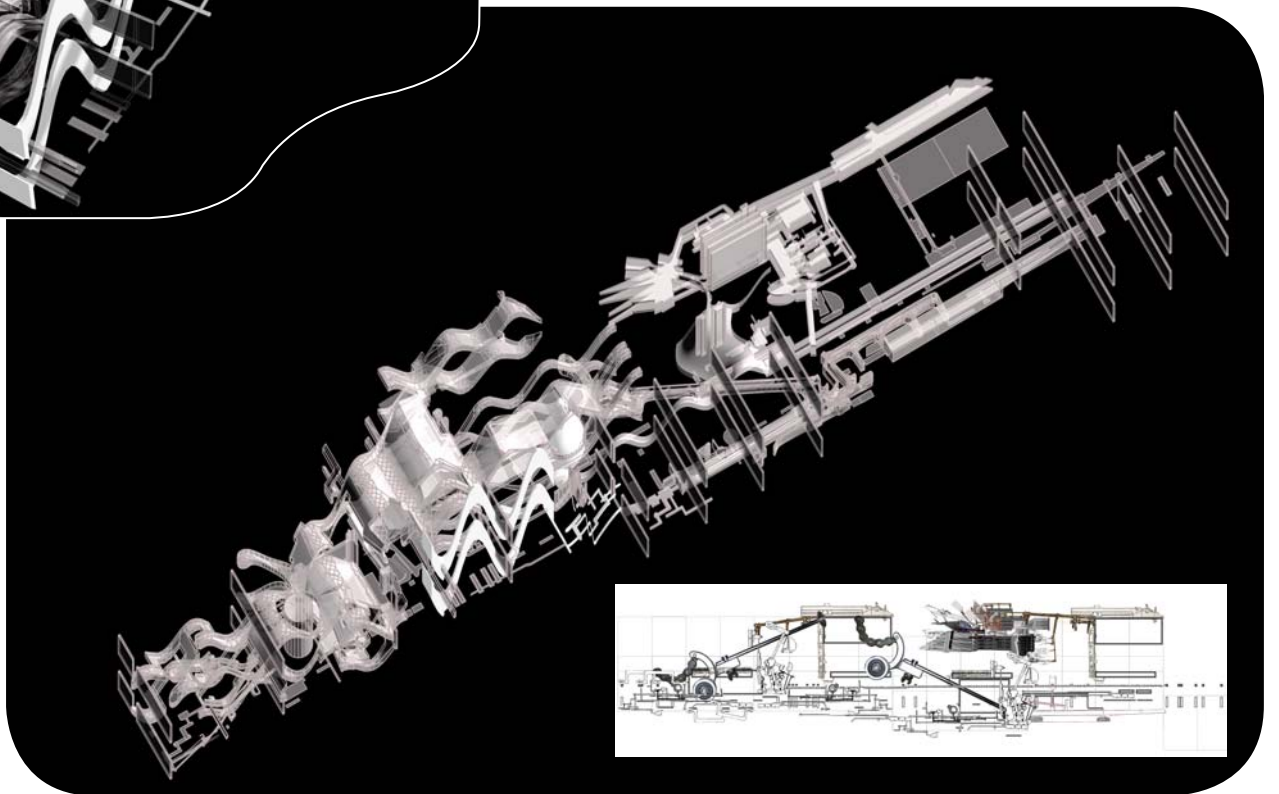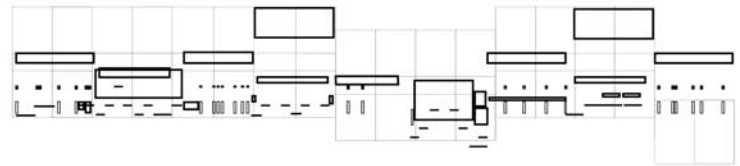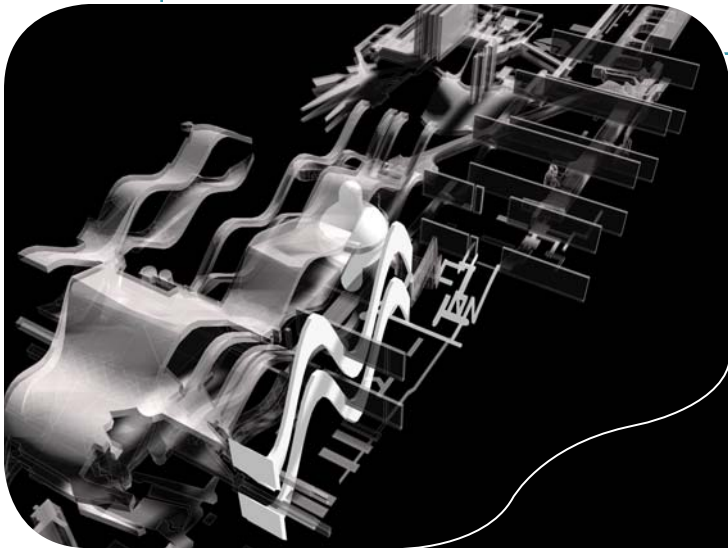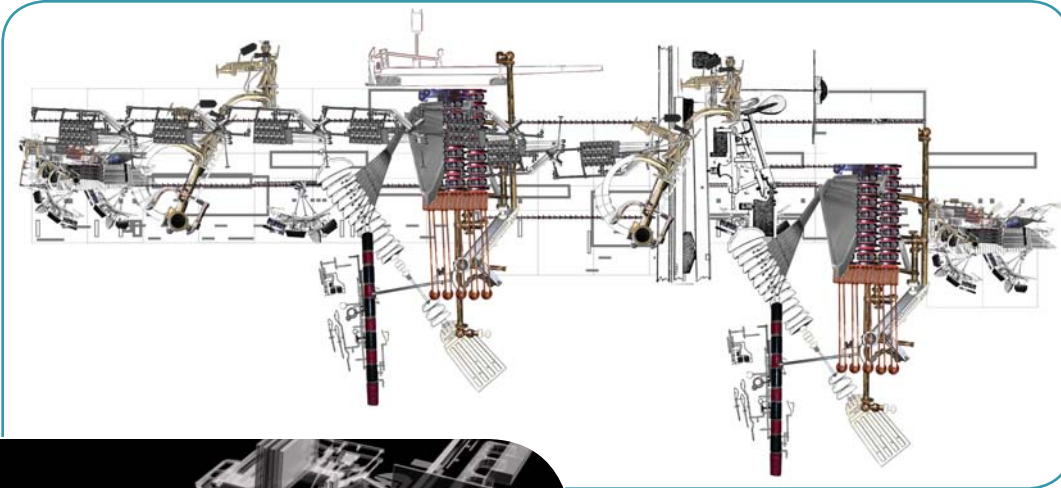
Kaitlin Underwood. Expanded models are combined and manipulated to create a final model. The lighting condition used on the digital model is reminiscent of the photographs of the physical relief. It uses high contrast similar to the back lighting and lighting from below.
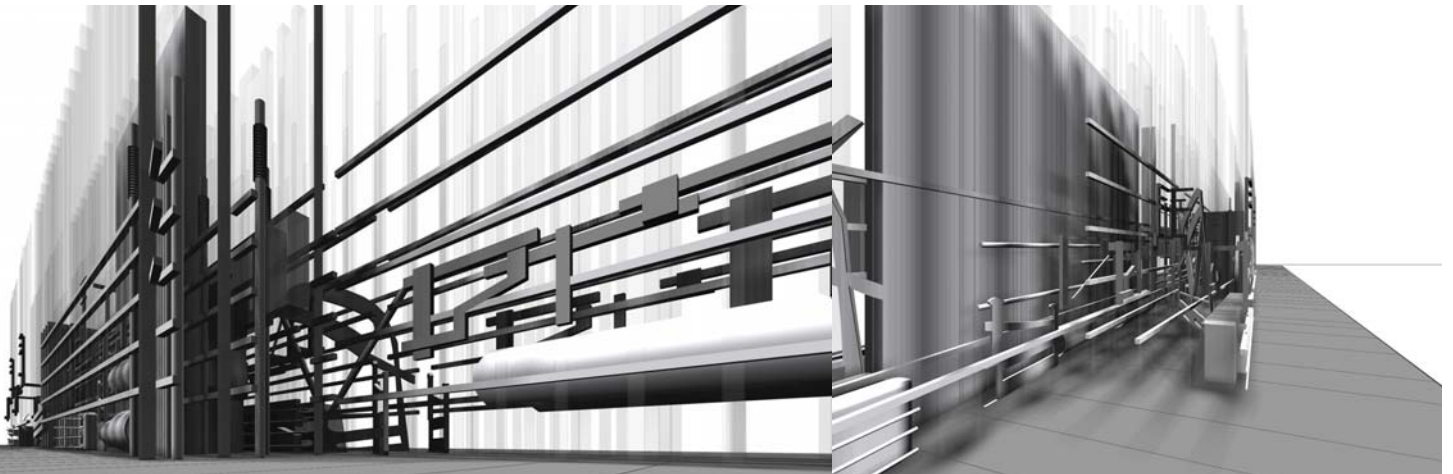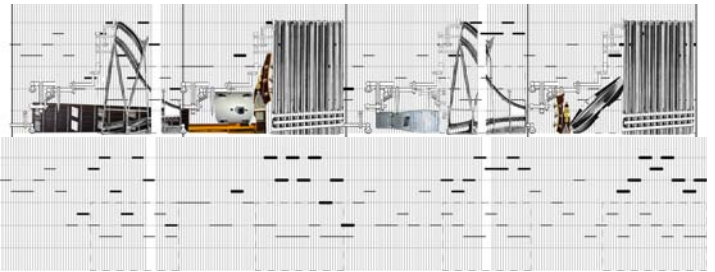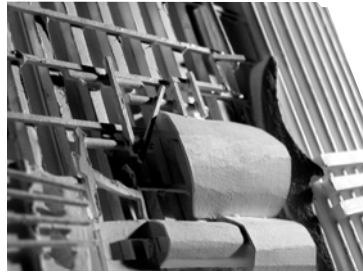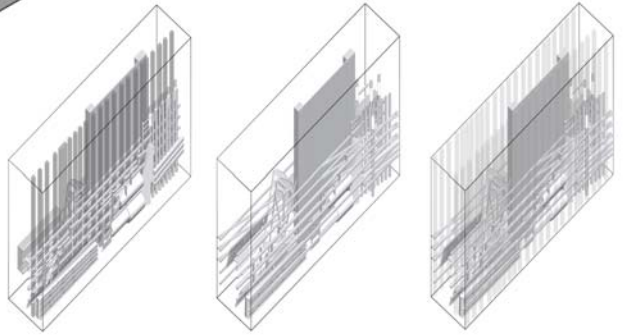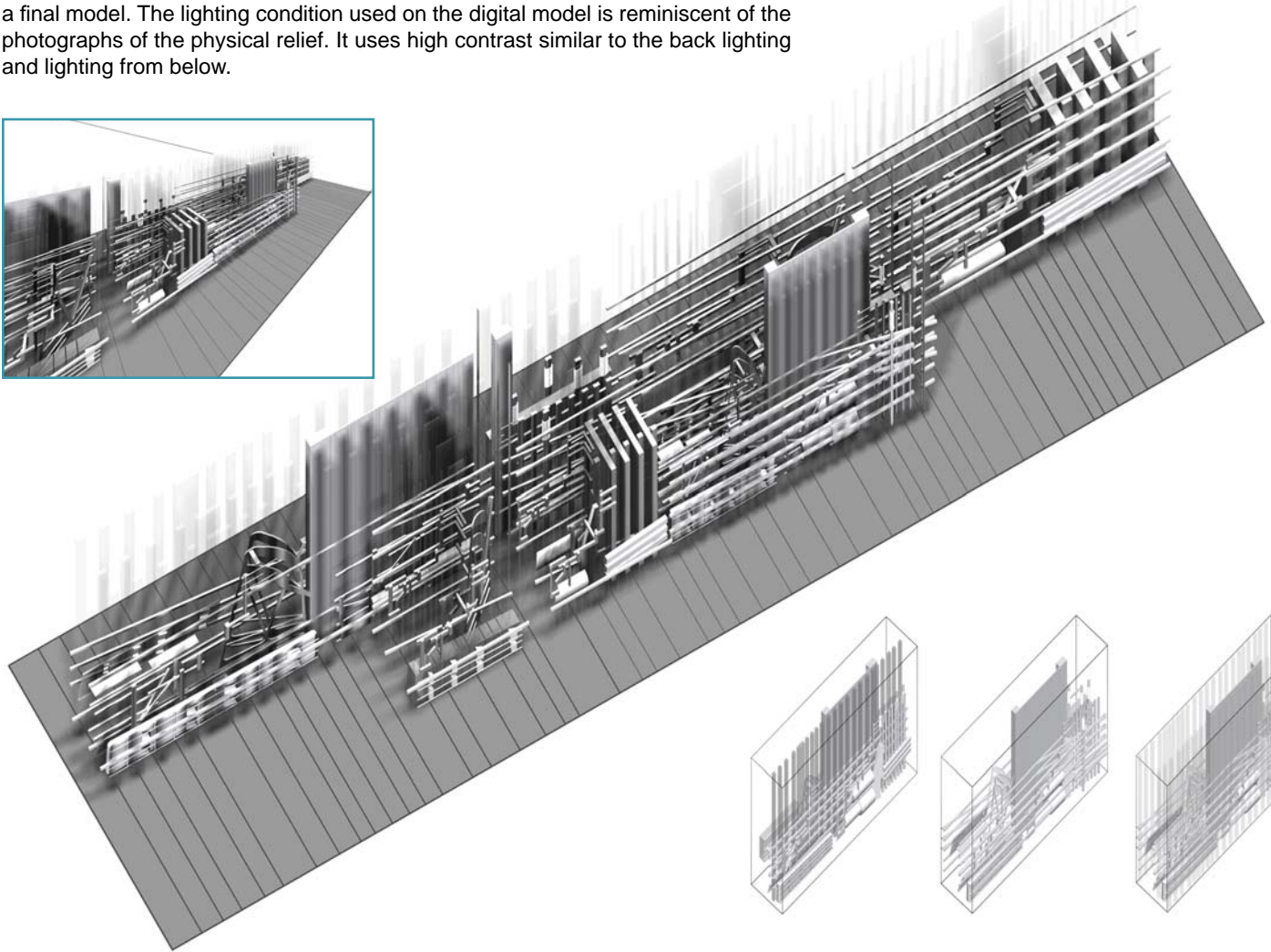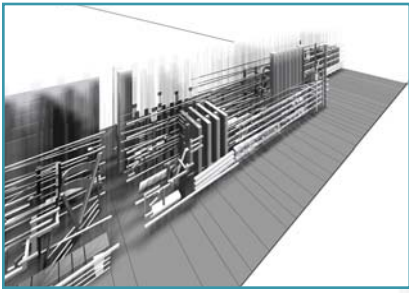
Ryan Gathmann. A spectral analysis is created using a clip from the song Leap Frog. Further simplification of the analysis defines the concepts of pitch vs. intensity which is used throughout the project. The sectional cuts become an expressive interpretation of both the fluidity of bebop music and architectural space.