Virtual Architecture; Reconstructing Architecture through Photography: “Kanyon” reconstructed
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Abstract

Construction is a temporary action that exists for a while and transforms itself into another product at the end. On the other hand, reconstruction is the representational interpretation of the “once constructed” substance and it never turns out to be the replica of the original, since components and techniques that are used are not the same anymore. This modification points to a certain level of metamorphosis that carries the potential to lead to an “opinion” that may create new worlds. This text focuses on the possibilities of using digital imaging techniques to “construct” new micro/macro-cosms from existing structures.

1 - Introduction

Photography is the only medium that enables architectural works to be shared with people who do not have access to these works. It is, in this respect, the ultimate representation of architecture. There are various techniques, lenses, rules of thumb that are used in architectural photography. But these special techniques usually provide us with a unique perception that is impossible to the naked eye. The so-called “perspective correction” process much used in architectural photography, usually produces some converging lines that are otherwise unattainable in real life since the shifting motion is applied to lenses. So it is obvious that there is a “shift” in our perception, photography does not reflect the truth.

2 - Exposition

The concept of construction in architectural design process is a temporary action that exists for a while and transforms itself into another product; i.e. the final building to be inhabited. Construction site can be taken as a podium where a play-to-remain-incomplete is being staged. The incompleteness causes us to dream, due to the fact that a complete building looses its narrative potential as it informs us about all the necessary pieces that constitute a whole: There is no puzzle to solve... Construction in this sense is like a historical ruin; Paul Zucker asserts that “ruins have held for a long time a unique position in the visual, emotional, and literary imagery of man. They have fascinated artists, poets, scholars, and sightseers alike. Devastated by time or willful destruction, incomplete as they are, they represent a combination of man-made forms and of organic nature.”

Architectural photography has the potential of re-creating this puzzle back again in order to bring an alternative representation to architecture. The architectural photographer is sometimes offered the freedom of reinterpreting, reconstructing architecture in order to be able to present a novel virtual perception to the audience. The idea here is to get some spatial clues that can later be used in other architectural projects. I was invited to two concept exhibits in which I was given the freedom of inventing a virtual architecture to connect it to the frequently referred concept of “paper architecture.”

3 - Technical details / Chronological details

Vertical panoramic photography: Took 8 photos for creating a very high resolution vertical panorama. Stitched photos using Autostitch, retouched the final panorama in Photoshop CS2, mirrored the image in order to complete the aimed “reconstruction” process. Canon EOS 1Ds was used to take the photos. Trace bitmap: Saved lower resolution copy of photo and imported it into various software such as Freehand MX, Illustrator CS2, Adobe Streamline. The idea was to obtain vector information for the CNC machine. The trace bitmap studies were not very successful and created a huge number of vectors that could not be imported into CNC software. Callin a CNC specialist: After all this waste of time with vectorization, decided to consult a CNC specialist and learnt that it was possible to get 3D relief information from bitmap images. Etching the photo on plexi: Using CNC machine’s bundled software, we constructed 3D relief patterns from the photo and it took about 20 continuous hours to etch the photo on a 1300 x 650 x 12 millimeter plexi sheet. Printing photo on etched plexi: The photo was printed on the etched side of the plexi using ZUND 215 C55 UV (Ultra Violet) inkjet printing system.

4 - Conclusion

Virtual architecture is a term used for architecture specifically created in the computer environment and never used in the realm of architectural photography. People like Lebbeus Woods, M.C. Escher, Marcos Novak, etc. previously dreamed about architectures that could exist virtually on paper, screen, digital environments. This paper will try to prove that this practice of (re)designing architecture virtually can be transferred to one of the most important realms of visuality: Photography. Various digital processes like stitching multiple photos together and mirroring images in image editing software like Photoshop, allow this virtual architecture to take place in the computer environment. Following this, I propose to raise the term “snap architecture” to connect it to the frequently referred concept of “paper architecture.”

References