BIM (Building Information Modeling)  The Latest Curve in Technology
One of the prime focuses for the AIA in the coming few years is to increase our involvement in our communities and strengthen our voices in the governmental arena. In recent studies, the general public stated that they looked to us, the architects, to help make those decisions.

William G. Severino
ALNNJ President 2005

New graduate program will explore innovations in design, fabrication, and advanced collaboration methods

By John Nastasi, Architect

When deciding upon the focus for our 2Q Tech Issue the editorial committee discussed numerous ways that computers and software have impacted our profession. It was essentially the evolution of solid modeling which has been in the architectural design industry for over 25 years. Those (now) iconic Lisa platforms in the automotive and space industry, this technology has evolved significantly and now is being used for the next generation of architectural technologies and advanced methodologies and advanced studies. This primary goal is to explore intense and creative collaborations between designers, engineers, scientists and manufacturers.

In its inaugural year, The Product-Architecture Lab, as it has become known, has captured the national attention of innovators in the design industry. Gehry Technologies of Los Angeles; an emergent branch of Gehry Partners dedicated to building design and construction technology, Buro Happold Engineers in New York City; a leading engineering firm; a subsidiary of the AEC industry's leading design and engineering firm, HOK; are all among the program’s close advisers and research collaborators.

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John Nastasi, Architect
You have a small design studio in Hoboken, not unlike a lot of offices in New Jersey, correct? Have you implemented this technology in your office? If so, how has this worked successfully on your recent projects?

AI: Yes, in several ways. We started introducing this technology slowly and over time. In my office three years ago. We started with small collaborative projects like furniture pieces and posters. Then we immediately noticed that once a piece is designed and developed such as a desktop, we very efficiently were able to digitize and build the majority of most of other configurations for other clients. So, in a sense, we are developing a cohesive body of work with similarities of material, color, texture, and detail that exists. In the early days of AutoCAD when architects began building digital libraries of details. However, in this context, the final product is much more customizable and malleable without losing efficiency and design intent.

JN: How do you use this technology, the whole BIM concept, changing our profession?

AI: Your questions get right to the heart of this technology. Working in this manner, the architect or designer can establish himself as a master-builder. Building information modeling embodies geometric conditions (Design, materiality, etc.) physical properties (Engineering) and assemblies (Construction/Manufacturing). It forces us to work comprehensively again and to have conscious awareness of all the components of the final result, which is what we used to measure our success through building... it is an extremely practical application with tremendous implications on the way our industry can efficiently express itself on a day to day basis.

About the Program

The Graduate Program in Product Architecture at Stevens is a two-year post professional graduate program offering the degree of Master of Science in Product Architecture.

The current student body, a mix of architects, engineers, product designers, mathematicians, computer scientists, have come from 20 U.S. states and 21 countries across the world including Columbia University, Carnegie Mellon University, RIT, Rensselaer School of Design, Vassar, Savannah College of Art, Southern Illinois University, Texas, University of Michigan, University of California, University of Cincinnati and Cal-Berkeley. Once the students are graduated in interdisciplinary teams and work collaboratively on funded research projects. Current design and research overview:

- A transparent enclosure and interactive display for a Norweigen Christian Church in Hoboken, NJ, sponsored by and in collaboration with Dean Marchetto, AIA of Hoboken, NJ.
- Sub-Urbam Prototype - The design of a pre-assembled private residence in Woodcliff Lake, NJ, as sponsored by its Client, Greg and Arpie Najarian of Woodcliff Lake, NJ and in collaboration with Nastasi Architects of Hoboken, NJ.
- The program is headquartered in Steven's historic Carnegie Laboratory — to fly high at the turn of the last century, a state of the art manufacturing facility. With the recent addition of an advanced digital media lab, a suite of PCs and Macs, including design software such as CATIA, Digital Project, Solidworks and scripting environments such as Flash, Aspex and PHP, 3D scanners, and other gear — the Product Architecture Lab leaps into this new century at the forefront of design.

For further information about The Product Architecture Lab, please visit our web site at http://www.stevens.edu/prodarch. Email the director at: jnastasi@stevens.edu.

About the Director

John Nastasi is a practicing architect and design educator with over 15 years of experience. He currently serves as Founding Director of the Product Architecture Lab at Stevens. He received a Bachelor of Architecture (1987) and Master of Science in Product Architecture (1993) at Carnegie Mellon University. He is a registered architect in New Jersey and New York. He is the Past President of the Architectural League of New York. He has been the recipient of six annual design awards from the New Jersey Chapter of the American Institute of Architects. He resides in Manhattan.
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Seminars will be given under the skylight which suggests that the panels and the fighters that make it a meaningful event for them.

Our Fourth Quarter issue of Leagueline is to be about “What we do,” featuring photographs and brief descriptions of our favorite recent work. Think about it.
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