

# COOL TOOLS FOR DESIGNERS

## I. Digital Sketching – Nancy Cheng and Kevin O'Donnell

Trade in your mouse for a pen-based tool to naturally generate re-usable digital graphics. We'll examine how the Logitech Io and Tablet PC's work with different kinds of design software and look at how ideas can be developed from 2D or 3D digital sketches for presentation or construction.

## II. Conceptual Design tools - Panos Parthenios

During the early phases when the designer is playing with ideas, can digital media facilitate a better conversation between the designer and his ideas? An architect usually uses a number of different tools to express his or her ideas, so technology needs to bridge the gap between analog and digital, two-dimensions and three-dimensions. We'll examine how designers are working with conceptual design tools and then look in depth at an accessible modeling tool, @Last Sketch-up.

## III. Visualizing Ideas – Tim Eckmair

In reviewing design ideas with clients, it's useful to generate quick alternatives. We'll look at how fast 3D models can be dressed up with Piranesi rendering software to create powerful, evocative renderings.

## BREAK

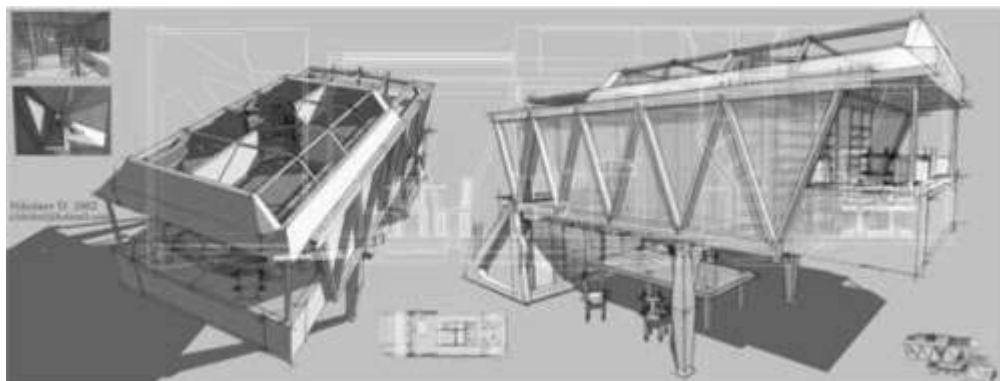
## IV. Mixing Traditional and Digital Tools – Nancy Cheng

Using simple tools in creative ways can create beautiful results. First we'll discuss Photoshop collage techniques for site, facade and interior studies and look at some crucial operations. Then we'll look at how graphic components can be composed into live and print presentations.

## V. Presenting ideas on the Web – Jonathan Cohen

Sharp, compelling Web pages are within your reach. Adobe Acrobat makes it easy to generate Web-accessible pages, Apple's Quicktime Virtual Reality creates interactive tours from still photos. With more robust tools like Macromedia Dreamweaver and Flash, the sky is the limit.

## Q & A



*Sketchup model by Dennis Nikolaev composed in Photoshop*

## Summary of software presented

### Sketching

While many architects think of computer drawing as complicated and cumbersome, the latest tools make creating ideas in 2D or 3D a pleasure.

With the portable **Logitech lo digital pen**, you can write on specially patterned **Anoto** paper and generate a digital version of your sketches and notes. The pen downloads drawings to a personal computer when placed in a docking cradle so they can be viewed as animations, exported as images or vector lines. An upcoming pen by **Nokia** can also transmit the images wirelessly to digital phones.

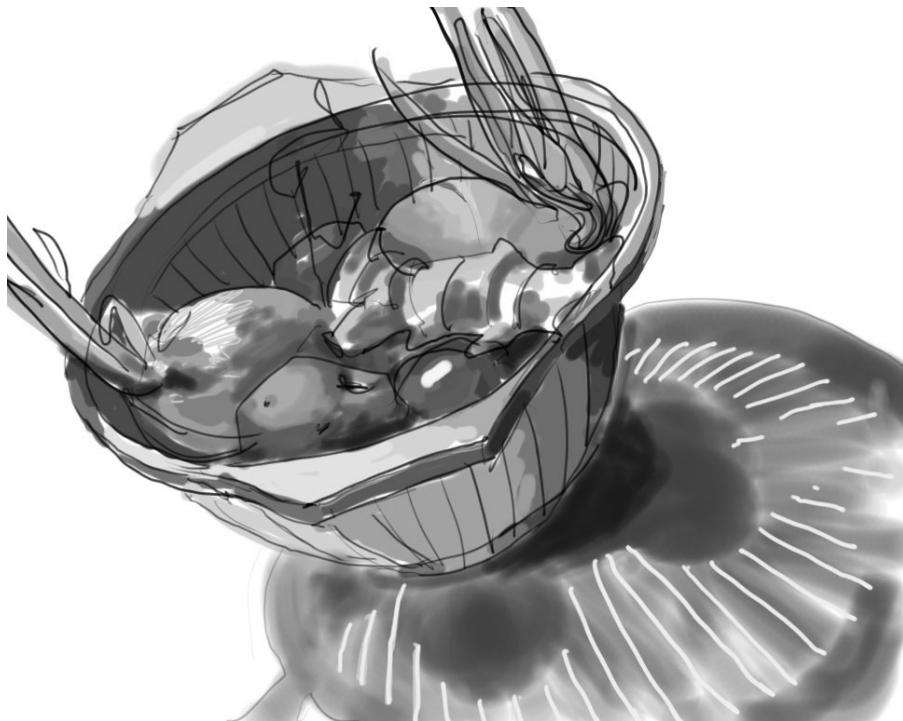
**Wacom digitizing tablets** give designers a pencil-like drawing stylus.

**Tablet PC's** allow sketching directly on a laptop screen. Convertible versions have an attached keyboard, slate versions have a separate wireless keyboard or docking station.

**AliasWavefront Sketchbook Pro** for the Tablet PC provides a very direct way to sketch or paint and present ideas to others. Composite images can include photos, background grids and painted images layered together.

**@Last Software Sketch-up** makes 3D modeling easy and direct. The software provides an intuitive interface for sketching in 3D, and allows data to be shared with other applications.

**Autodesk Architectural Studio** has natural tools for 2D sketching and 3D modeling. The program has layers of trace and transparent markers so that photographs can act as underlays for 2D and 3D development. With Architectural Studio, remote team members can work together on the same project using the collaboration mode.



*SketchbookPro still life by Nancy Cheng*

## Visualizing

Beautiful images can be critical to understanding design implications and effectively communicating a design idea. The following programs give flexibility in how a project can be portrayed.

**Informatix Piranesi** is a rendering tool that allows you to take simple 3D models and quickly develop photorealistic images by painting in textures and scenery with automatic perspective and masking.

**Adobe Photoshop** is the professional image-editing favorite that lets you create and edit images for print, e-mail, and the Web. It has multi-faceted tools for image adjustment, texturing, and compositing. A lightweight version bundled with many scanners, **Adobe Elements**, provides many Photoshop features in a simpler, less expensive version.

**Adobe Illustrator** is a great vehicle for making CAD vector drawings into more finished renderings. Illustrator can assemble raster and vector images with carefully controlled text



*Piranesi renderings by Tim Eckmair, Odell Associates*

## Presenting

Once information is in digital format, it's relatively easy to use it for many different purposes. The following tools help package raw images, text, sound and other information into professional-looking live, print and Web presentations.

Graphic viewers such as **IrfanView** helps organize, print, enhance and share digital photos. This compact freeware application makes it easy to do simple cropping, rotating, color enhancements and batch file conversions. It efficiently scans and prints images and creates slideshows.

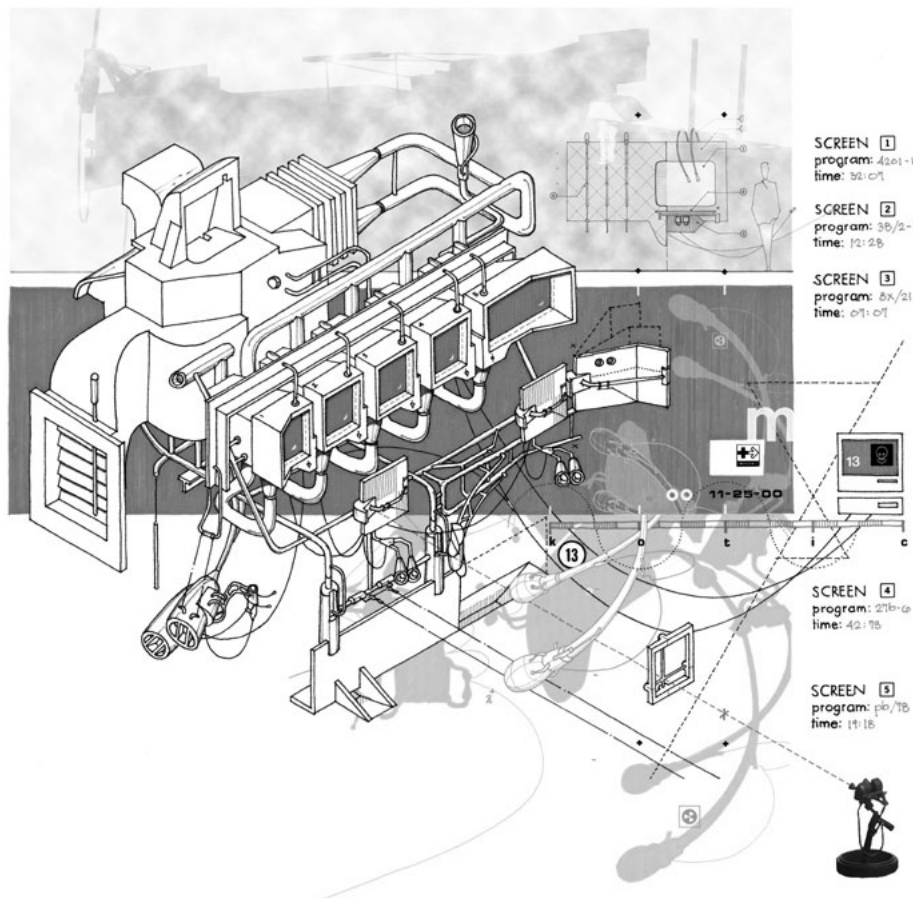
**Adobe InDesign** and **QuarkXpress** page layout programs provides precise typographic and dimensional tools for print projects. They excel in long document management.

Panorama viewers such as **Apple's Quicktime Virtual Reality (QTVR)** create a vivid online "you are there" impression with interactive panning through 360 degree panoramas. It makes panoramas and rotating objects from conventional still images and allowing you to place links to QTVR movies for a virtual tour.

With **Adobe Acrobat**, it is simple to create Web-viewable documents that preserve layout and typography. While the Reader only allows viewing, the Distiller transforms printer files into PDF and the full Adobe Acrobat software allows embedding of notes, links and bookmarks.

**Macromedia Dreamweaver MX** and **Adobe GoLive** are full-featured web authoring packages with support for features such as cascading style sheets, Javascript interactivity. Compared to simpler programs, they provide tools for site management, with planning mode and automatic link checking.

**Macromedia Flash MX** helps create interactive, animated Web pages. You can either draw graphic components directly or import images and vector / CAD drawings to create sophisticated presentations.



*Hybrid drawing by Kevin O'Donnell and Bryan Cantley*

## Web links

Adobe Elements, Photoshop, Illustrator, InDesign  
<http://www.adobe.com>

AliasWavefront SketchbookPro  
<http://www.aliaswavefront.com>

Apple Quicktime Virtual Reality  
<http://www.apple.com/quicktime/qtvr>

@Last Software Sketch-up  
<http://www.sketchup.com>

Autodesk Architectural Studio  
<http://www.autodesk.com>

Informatix Piranesi  
<http://www.informatix.co.uk>

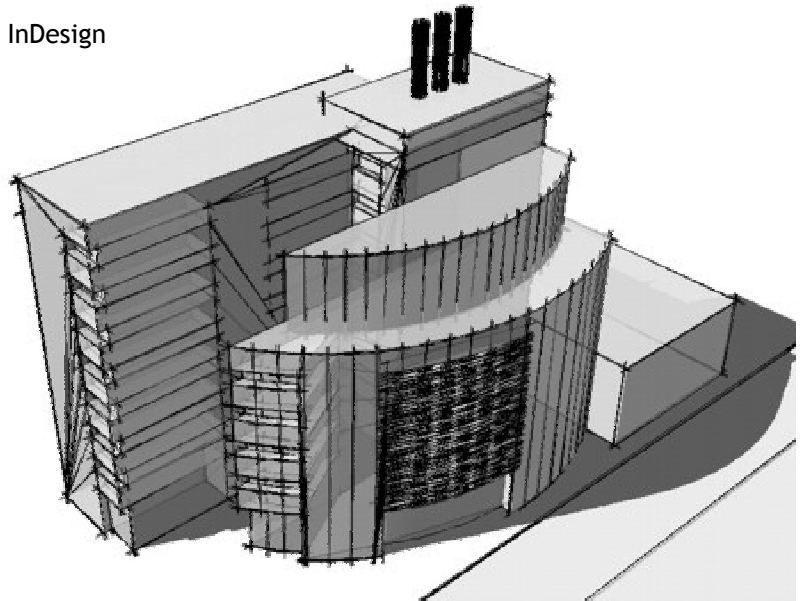
Irfan View  
<http://www.irfanview.com>

Josh Capistrant's Guide to Collaging Models in Photoshop  
<http://darkwing.uoregon.edu/~graphics/tutorials/modelcollage/>

Logitech lo digital pen  
<http://www.logitech.com> (products > category > digital pens and paper)

Macromedia Dreamweaver, Flash  
<http://www.macromedia.com>

Tablet PC  
<http://www.tabletpc.com/>



Sketchup model by Panos Parthenios



Photoshop collage by Warner Wong Architects, Singapore

## Profiles

### **Nancy Yen-wen Cheng, AIA**

<http://www.uoregon.edu/~nywc>

Associate Professor **Nancy Yen-wen Cheng** teaches architectural design and digital media at University of Oregon. She researches how digital media and networks can enrich the architectural design process. She is currently studying how digital sketching can reveal design thinking. She is the 2004 advisory group chair of the AIA Technology in Architectural Practice PIA, an Editorial Board member of the International Journal of Architectural Computing and a co-chair of the 2004 AIA-ACADIA Fabrication Conference. She previously taught at University of Hong Kong and practiced in Boston. Professor Cheng received a B.A. from Yale University and a M.Arch. from Harvard University.

### **Jonathan Cohen, FAIA**

<http://www.jcarchitects.com>

**Jonathan Cohen** is an architect and IT consultant in Berkeley, CA. He was the 2003 advisory group chair of the AIA Technology in Architectural Practice PIA. Jonathan has received a national AIA Urban Design Citation, an AIA/San Francisco Honor Award, and an Urban Land Institute award. He has been a presenter at many conferences and an instructor in the Executive Education program of the Harvard Graduate School of Design. He is the author of *Communication and Design with the Internet: A Guide for Architects, Planners, and Building Professionals* as well as articles about technology and design for Architectural Record, Urban Land, Planning, and other national publications.

### **Timothy Eckmair, AIA / NCARB**

<http://www.odell.com>

**Timothy Eckmair** is Senior Project Designer and Associate with Odell Associates in Charlotte, North Carolina. He is a registered architect with over 20 years of experience and has been involved in large design projects throughout the United States and Abroad. His design and development skills have been focused on Healthcare, Education and Commercial projects.

### **Kevin O'Donnell**

<http://www.form-ula.net>

**Kevin O'Donnell** operates a design studio called *Form:uLA Dimension Laboratories* with Bryan Cantley. Their collaborative partnership focuses on design research, with an emphasis on experimental methodologies and theoretical investigations. Current work exploring pen based digital drawing technologies is supported by a 2002 Graham Foundation Grant. They are recipients of a 2002 OC AIA Honor Award, have work in the permanent collection of Architecture and Design in the San Francisco Museum of Modern Art, and are visiting faculty at the Southern California Institute of Architecture [SCI-Arc].

### **Panos Parthenios**

<http://www.gsd.harvard.edu/~pparthen/research>

**Panos Parthenios** is a practicing architect from Athens, Greece. He received his Diploma of Architecture from the Aristotle University of Thessaloniki and his Master in Design Studies from Harvard Design School. He is a Doctor of Design candidate at Harvard Design School and his research focuses on new tools that architects use during conceptual design. He was awarded the 2001 Harvard Digital Media Prize and the 2002 National Internet and Digital Media Prize in Greece.