a

v1.n2

ToshLetter^{tm.}

Contents

Key-Strokes

Autodesk University 2005

Associate Editor and Business Development Manager of Architosh, Karen Popp, was at Autodesk University a week ago in sunny Florida. One might think, "so what! They don't make Autocad for the Mac so why should I care?" But you probably should care.

Interestingly enough, during a keynote presentation by Autodesk executives, a slide went up during the talk that put the Apple logo front and center. In a phone call Karen asked, "what does this mean exactly?" It would be tempting to suggest that the presence of the Apple logo during an Autodesk keynote meant something big. But that is reading far too much into it. What it likely meant was that because Alias makes tools for the Mac, and because Autodesk bought Alias, now Autodesk is an enthusiastic Mac supporter. But how do Mac users learn to feel warm and fuzzy about Autodesk after all these years of avoidance?

 -- AFR

Breaking News

First CAD Program for Intel Macs

It seems that The Omni Group may be the first Mac developer to have a technical drawing program ready for Intel-based Apple Macintosh computers. Omnigraffle 4.1 is now shipping in a universal binary package, ready for Intel. Click Here.

Introduction: On the Matter of Focus

Anthony Frausto-Robledo, Editor-in-Chief

After successfully getting out the first issue of the ToshLetter, one might get the impression that this editor/self-publisher breathed a big sigh of relief. Nothing could be further than the truth. In fact, now the pressure really is on.

When I set about to publish a monthly newsletter, the first key requirement I placed on this project was "regularity". What's the point of a monthly if you only get it sporadically? This meant I needed to be really focused and that distilling the previous weeks news and events was a valuable objective.

The second key requirement of the ToshLetter was that I deliver something special each month, even if it is just one item. That one special item might set the theme for the issue, enabling readers to remember issues in that particular way. That too was a valuable objective.

The pressure *is* on. Clearly you might wonder why just two objectives as simple as these would be a difficult monthly task? In all honestly, I'd have to say from some angles it seems rather easy. But behind that appearance is the reality that the flow of news in the CAD/3d industries is unpredictable at. Secondly, stars don't often align, as they appear to be aligning for the third issue. And getting folks lined up for interviews and articles can be, occasionally, a logistics nightmare.

This is why the matter of focus is so important. Despite just two prime objectives, this month's issue was more difficult to get out than planned. But it is finally out! This month our focus on is on "modeling". And our special feature is an article entitled, "What comes after NURBS? Modeling the Future". We hope you enjoy this second issue. Please feel free to write with your opinions and thoughts. --- *Anthony Frausto-Robledo*, Editor-in-Chief

News Five
Top Five News Items in November

No. 1 - Apple's Rosetta Wins Wall Street Journal Technology Award

This story really is the number one story of the month from our perspective. Two facts indicate that there is more to this than one realizes. The first fact is that Apple VP Phil Schiller stated on the record that Rosetta is Apple's technology. QuickTransit software is involved, but apparently Apple has gone beyond what the engineers of Transitive have already done.

A second interesting fact is that Apple went ahead and trademarked the 'Rosetta' name. This suggest that Apple understands the importance of marketing the reverse compatibility with older PowerPC code-based applications. No doubt, there will be many PowerPC-based Mac users for years to come, forcing a considerable overlap or delay in a full transition to Intel.

In fact, when Motorola announced that they would continue to develop G4 chips for Apple for several years, some speculated that there was trouble in the Intel 'switch room'. Not so at all. Apple is likely securing those chips for themselves -- both for internal use and for the ability to still provide PowerPC-based Macs to critical customers or key segments for several years. Rosetta Story Link.

Looking in the Mirror: Who You Are
Anthony Frausto-Robledo, Editor-in-Chief

I want to personally thank each and every ToshLetter subscriber for going through the brief survey form in order to receive this newsletter. This information is tremendously helpful to us.

Brass tacks! Let's get down to them. Who are ToshLetter readers? Well, at this point, you are numbering well into the multiple hundreds of professionals, though a sizable minority are students. Of this tiny student group, 9 out of 10 are architectural college students. In fact, in the industry category, approximately 50 percent of you are in Architecture. The next highest single category was Engineering at just over 10 percent, with both 3D/Visualization and Industrial/Product Design each representing nearly 6 percent. Combined these often overlapping professionals account for nearly 12 percent. The "Other" category accounted for nearly 21 percent, and that is where the students fall into.

Not surprisingly, nearly 57 percent of you are in the United States. The remaining 43-45 percent (depending on when I look at the stats) are from over 36 different countries. The United Kingdom represents nearly 9 percent of the ToshLetter audience, with Canada not far behind that. Not surprisingly European Union countries dominate the majority of everyone else with Italy, France, Germany (in that order) topping the EU list. Of all the countries on our list, only Turkey, Singapore, Russia and New Zealand do not have ToshLetter subscribers yet. We are just one issue into this publication and we have a very international audience. That is a true testament to *Architosh's* global brand.

The vast majority of you are in firms larger than 3 people. Nearly 36 percent of you are in firms 3-19 people. Over 12 percent of you are in firms larger than 150 people. Are you decision makers? Do you have power over your information technology? Do you make the call on what to use or employee? Absolutely.

And this delights us immensely. Nearly 48 percent of you are either Principal/President/CEO/Owner. This tells us that many of the firms (with a predominance being the 3-19 person firms) are led by leaders/owners with a high interest in information technology. Factor in other categories and 55 percent of you control the pocket book on IT spending. How much spend-

No. 2 - Pixar Debuts RenderMan for Maya

The biggest news in the 3d market for Macintosh in November was the Pixar announcement of RenderMan for Maya.

In some circles this was a huge announcement. 3d artists who can't afford Pixar's higher end products, such as RenderMan Pro Server, can now have access to Pixar's legendary rendered look from within Alias' popular Maya application. The plug-in offers cinematic-quality imagery and Pixar's superb "Deep Shadows" technology.

Pixar is an interesting leverage point for Apple. Of course, there are so many 3d artists on Windows and Linux that Pixar would likely not push the OS X agenda too hard in the near term future.

Pixar, as a studio, will be a very interesting company to watch over the next few years. What hardware will they fully adopt? Will they go all Mactel (Intel-based Macs) within a few years? Will Pixar create its own multi-OS boot environment and run Linux and Windows on Mactel hardware? And perhaps more importantly, will they publish more of their software tools?
Pixar story link.

No. 3 - SketchUp Advances in Market

Last month, @Last Software was in the same top five spot, with "Grizzly" news. In November they garnered a huge win with the firm-wide adoption of SketchUp at SOM (Skidmore, Owings & Merrill, LLP), one of America's most prestigious and largest architecture firms.

ing do you control? Annually your firms are spending $17.8 - $28.1 million US dollars, of which more than half of you fully control. And that is just on our modest early growth reader-base. We expect our reader base to double within the next three issues resulting in an estimated $60 million US dollars being spent annually in the firms of our readers.

And why are you interested in the ToshLetter? What do you want to see and read about? The dominant choice was Industry News & Analysis, by a landslide over other categories such as Executive Interviews, Debate and Opinion, Rumor and Feedback. This surprised us too. Because we like doing interviews.

In any case, we look forward to serving your interest and reporting on the things that matter to you.

What comes after NURBS? Modeling the Future

Anthony Frausto-Robledo, Editor-in-Chief

So what comes after NURBS, those non-uniform rational B-splines which constitute the method in which advanced 3d CAD modeling takes shape today? The answer, according to T-Splines chief-executive officer, Matthew Sederberg, is something called "T-splines", not the company, but the mathematical strategy for dealing with the limitations inherent in NURBS.

Matthew -- whose father Dr. Thomas Sederberg, arguably the most esteemed scholar working in the field of NURBS -- says that his father's invention will get CAD modeling past the limitations of NURBS and move modeling technology into the future. NURBS of course, have been around for decades, and as the Rhino (the application) web site states, "have a precise and well-known definition." So what exactly is the problem with NURBS that T-splines aims to solve?

According to Dr. Thomas Sederberg's 1983 Ph.D. thesis, it is mathematically impossible for the Boolean of two NURBS to be represented exactly using trimmed-NURBS. "A gap will exist between the two intersecting NURBS," says Matthew, "you can see this if you zoom in close enough on such a model in Maya." In the field of creative computer animation (such as gaming and film effects) this isn't really a problem. But when it comes to advanced and complex surfaces in CAD and CAID (computer-aided

The deal means SOM will furnish more than 900 employees worldwide with SketchUp at work and home. "Our company-wide implementation of SketchUp is certain to further enhance our design capability," said Carl Galiotto, FAIA.

We are still curious about where Grizzly is going to go, but for now the SketchUp folks are continuing to advance in the market at a rapid rate. SketchUp story link.

No. 4 - Graphisoft Wins Wall Street Journal Technology Honor

This is the same award program that Apple won with Rosetta. Graphisoft was also honored in the Software Category for the Wall Street Journal's 2005 Technology Innovation award.

The company's Virtual Construction product was the entrant. "The building industry is enormous, and has been behind the curve in employing IT to drive efficiency and cost reduction," states Dominic Gallello, CEO, Graphisoft. "We believed that in order to affect dramatic change, new processes and supporting technology would be required. Enlightened companies around the world are making the move."

This was significant because it brings to the fore the importance of driving efficiency innovation in the AEC (architecture/engineering/construction) markets. It has been said that there is 35 percent loss (wasted time) of efficiency in AEC, due to such things are data repetition, file format incompatibility, data errors and old-fashion paper-based processes. This Wall Street Journal award focuses attention on the issue and awards achievement to a deserving company that

industrial design) it becomes a big problem. So pervasive is this problem, Matthew says, that in the CAD industry it has been referred to as a "billion dollar problem", meaning "it cost the CAD industry an estimated billion dollars per year in lost productivity."

As Matthew Sederberg says, "the surface intersection problem has been one of my dad's pet research projects for over two decades" and "T-splines forms the basis of a promising new solution." The technology is indeed promising and the original research was supported by a National Science Foundation grant. Today the NSF is funding the development of the surface intersection algorithm used to create T-splines technology.

T-splines technology itself is rather simple on concept. The weakness of NURBS models is that NURBS control points (vertices) must lie topologically in a rectangular grid. Chances are you have seen a human head, for example, modeled up with a grid array of control points which seem to make up a mesh-like framework of individualized smaller surfaces. The problem is that many of these NURBS control points serve no purpose other than to satisfy "topological" constraints. They are not freighted with any significant geometrical data. What T-splines does is create T-junctions which enable the rectangular NURBS mesh to forgo the placement of superfluous control points. This means that T-splines can significantly reduce the number of vertices in a NURBS model by allowing a row of control points to terminate at a T-junction.
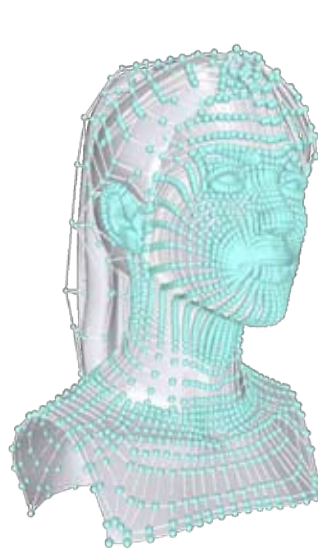
NURBS model (10305 control points)
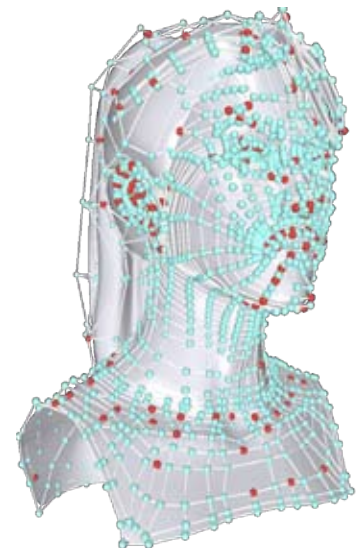
T–Splines (3995 control points)

has been a pioneer in AEC software from the early 80's. Graphisoft story link.

No. 5 - solidThinking Live

solidThinking developer, EVOQUE, of Italy, announced a global online web training program for solidThinking users. solidThinking Live is a "live event" web training program that is scheduled in advanced based on registered event participants. The company has a full schedule of training events from which to choose, with beginner to advanced event sessions building on each other in skill levels.

These are not pre-recorded QuickTime movies for online viewing, like other companies use to distribute training sessions. It will be interesting to watch how this program evolves and whether or not other companies will follow in its footsteps. solidThinking story link.

Feedback

Send us your feedback on the ToshLetter or anything else you see on Architosh. We'd love to hear from you. Email to: anthony@architosh.com

In essence, if you think about a NURBS mesh like a grid of city streets, no street is ever able to die into the broadside of a cross-street. Instead, streets have no dead-ends ever. Not so with a T-splines mesh. In a T-splines mesh you can subdivide the grid into smaller "streets" that exist only within a certain region of the overall mesh. By doing this you can vastly simplify the entire mesh by focusing only the amount of control points where you need them, reducing control points in larger areas that have insignificant geometry requirements.

Matthew says that T-splines are much more than merely a nice set of tools for NURBS modeling because they also extend to SubD's (subdivision surfaces) "because a subD is a special case of a T-spline just like a NURBS is a special case of a T-spline," says Matthew. Unlike subD's however, T-splines can add geometry without changing the surface. T-splines are also fully compatible with NURBS and sub-division surfaces. "Companies and industries that heavily use NURBS or subD's have a huge investment in software and models," says Matthew. "Economics discourage such companies from adopting new ways of modeling that are incompatible with the prevailing methods."

For this reason and for the problems it solves, T-splines can make a legitimate claim to being the future of 3d modeling beyond NURBS.

So where is T-splines technology today?

At the moment T-splines is a plugin technology that works with the latest version of Alias' Maya. *Architosh* had the chance to see this plug-in in action at SIGGRAPH LA 2005. Matthew says the company he and his father founded, T-Splines, LLC, have actively been in discussion with just about all of the major CAD companies about its technology. Rhino is a product that may be the next area for T-splines adoption but Matthew said it is still too early to say where and when for any product adoption beyond Maya. "T-splines is a low-level technology so it has to fit a company's core modeling technology," says Matthew. For that reason, in the case of Maya, it is developed as a plug-in. He noted that several other programs in 3d and CAD utilize a plug-in architecture where T-splines could be positioned to extend the modeling capabilities of that software. The goal is for T-splines

Our Sponsors

Architosh and the ToshLetter would not be possible without the generous financial assistance of our corporate sponsors. We sincerely appreciate the role they play and strongly encourage you to review their companies' product portfolios the next time you are considering technology purchases.

@Last Software

Makers of the popular SketchUp 3d design application. Visit them at: www.sketchup.com

Apple Computer, Inc.

Makers of the legendary easy-to-use Macintosh computer and innovative iPod. Visit them at: www.apple.com

IMSI, Inc.

Makers of the popular TurboCAD computer-aided software product series. New products for the Mac OS X platform include TurboCAD 2D and TurboCAD 3D. Visit them at: www.imsisoft.com

Nemetschek North America, Inc.

Makers of the award-winning and most popular Mac CAD application, VectorWorks and the entire VectorWorks Series product line, including RenderWorks. Visit them at: www.nemetschek.net

to be adopted as a CAD industry standard.

Additionally, T-splines research is being picked up in universities around the world. Moreover, it is now being applied to physics analysis and stress analysis, to name just a few examples. "People are doing things like wind-tunnel simulations and deformation calculations," says Matthew.

At SIGGRAPH T-splines technology was being showcased in a brand new show booth outfitted with bleeding edge Apple Power Mac G5 workstations. Matthew said the company loves the Macintosh OS very much and finds it a very ideal match for this type of creative work. He said, "one reason why we like Apple so much as a company is its exceptional reliability and its graphically pleasing operating system." T-splines technology was developed on the Macintosh. Matthew said his father Dr. Thomas Sederberg raised Matthew on a steady diet of Macs since he was in grade school.

Guide to Mac-based Modeling Tools

Anthony Frausto-Robledo, Editor-in-Chief

The story of Macintosh-native modeling tools is an improving story these days. Some of the best new Mac native software to hit the creative market in the 'OS X era' have been modeling tools. Two very impressive native OS X applications come to mind immediately: modo and SketchUp. The former is from Luxology, a company comprised of many veteran 3d software engineers and executives. They made their big splash during a Steve Jobs keynote presentation a few years back. The latter is currently the 'software darling' of the AEC world. SketchUp has, in the minds of many of its loyal users, revolutionized modeling in architecture thanks to its incredible simplicity. In this article we'll briefly review the many new and old modelers serving the Mac market. We're going to focus on just pure modelers for the most part, not complex CAD or 3d animation systems like ArchiCAD and Maya.

The Old Gang:

(1) form-Z, by auto-des-sys, Inc. formZ is one of the legends of the Macintosh world. Originated on the Mac in the 1980's, the popular product has been an innovator for decades. formZ has had a large following in the architecture market for some time now, but today is used for an extremely wide variety of work from architecture to apparel design. Technically formZ

ForumTalk
On the boards this month

No. 1 - PowerCADD 7 Sneak Peaks

This thread contains links to previews of PowerCADD 7. Thread 1377.

No. 2 - Discussion of Vectorworks 12

This thread has folks talking about the latest version of VectorWorks (12). Thread 1248

No. 3 - Can SketchUp Models be Rendered Photo realistically?

This popular thread has some beautiful sample renders. Thread 1113

No. 4 - Artlantis vs RenderWorks

Debate thread discusses the virtues of these two rendering options. Thread 1062

No. 5 - New and Improved in Latest Release of BoA

Thread talks what's new in latest BoA release from developers in France. Thread 1388

is both a polygonal solids modeler and NURBS-based surface and subdivision modeler, supporting an extremely wide array of modeling technologies all in an integrated environment. It is also a radiosity-capable render and animator but many use it as just a pure modeler. Cost: $2099 USD approx. for radiosity version.

(2) Amapi Pro, by Eovia. Amapi has been around for quite some time, much older than *Architosh*. It is both a NURBS and polygonal modeler, with support for some highend modeling export/import options. The program has long been known for its quirky interface -- in some ways the SAAB of the 3d applications world -- but these days sports a conventional interface which has helped earn it some new respect. It is suitable for industrial and product design, mechanical and architectural design and general 3d. For the price, Amapi is one of the stronger tools around. Cost: $779 USD.

(3) Argon, by Ashlar-Vellum. Argon is a class-A NURBS ACIS solids compliant modeler, very suitable for high-end industrial, mechanical and product design. Better yet, the program's files can be brought into the company's other higher-end product design packages such as Cobalt. Ashlar-Vellum's tools have been used for many note-worthy projects, such as the humanoid robot design in the feature film, "iRobot". Cost: $995 USD.

(4) solidThinking, by EVOQE. solidThinking is actually beyond just a modeler, but it should be included here. It is actually a CAID program and could be compared with Ashlar's product line from Argon to Cobalt. There are actually three versions and Forma, the low end is more of the pure modeling play. It features NURBS modeling but a user would have to adopt solidThinking Design, the product above Forma, to move into Class-A NURBS. With Forma there are polygonal modeling and subdivision surfaces. Forma does not support photo-realistic rendering nor animation. Cost: $495. USD.

(5) ZOOM GDL, by Abvent S.A. ZOOM is one of the longest running pure modeling tools in existence on the Mac. It has shifted its purpose in the recent past to serve GDL model production for ArchiCAD, a leading architectural CAD/BIM program. ZOOM GDL helps architects model sophisticated parametric objects using polygonal solids, powerful Booleans, ruled surfaces, sweeps as well as Coons and Gordon surfaces. If you know the GDL language you can modify the program to suit export options to your needs. Cost: $149. USD.

(6) Touch-3D, by Lundstrom Design. This program is uniquely focused on polygonal model unfolding, in order to produce physical models. It is related and works with TouchCAD by the same company. Cost: $395. USD.

Of the older gang there are really three powerful modeling-centric choices suitable for leading edge industrial design: formZ, solidThinking and Ashlar-Vellum's products. All three are in the thousands of dollars. All three could be used for architecture too, but only formZ is truly developed with that in mind. Arguably, with CAID, the two primary choices are between solidThinking products and Ashlar-Vellum products. Other older choices with a lot of sophistication include LightWave and Cinema 4D; however, they are more broadly-oriented 3d packages.

The New Gang:

(1) modo 201, by Luxology. modo is one of the strongest members of the new gang of Mac modelers. In truth, it is not just a modeler, but for now let's give it special consideration because one could utilize it that way. Luxology claims that modo is the most powerful modeling environment available. Some of its competitors (old gang in particular) would likely debate that claim. However, it does sport a very complete and sophisticated set of modeling tools. modo at heart is a very capable subdivision surface modeler with complete polygonal primitives and sophisticated mesh and surface editing tools. Their online gallery demonstrates its wide appeal in the fields of industrial design, architecture, and character/creature animation design. A compelling feature of modo is its stunning and creative user-interface. Cost: $895 USD.

(2) SketchUp, by @Last Software. SketchUp is the tool that is sweeping the architectural community because of its simple learning curve and powerful features. It is a surface modeler with handy primitives and wall tools. Often called "sketch modeling" because of the immediate simplicity of the tool, SketchUp also provides some new organic surface modeling tools which are aimed at creating terrain models or organic architectural forms. A signature feature of SketchUp is its Push/Pull polygonal manipulation tool. Simply draw a square on the surface of another cube and push it or pull it to subtract or add a form. It also has an interesting interactive sectioning tool. And like Luxology, these folks love the Mac! Cost: $495 USD.

(3) Hexagon, by Eovia. Hexagon is Eovia's newest program and a remark-

Events
CAD and 3D Events Coming Up

Jan 9 - 13, 2006: Macworld - San Francisco

This is Apple's premier show for the year and the show with the largest Macintosh CAD and 3d software companies in attendance on the exhibit floor. We have covered this show in detail in the past and it always promises great things.

Apr 20 - 23: COFES 2006

The Congress on the Future of Engineering Software is an invite-only event which Apple has attended the past two years, having a tech suite there last year. Apple's interest in attending this show concentrates on communications with some of its developers who are also there.

Jun 8 - 10: AIA 2006 National Convention and Design Expo

The leading convention in the US for architecture professionals. Last year Apple returned to the event for the first time in over half a decade with a special event, although the company did not exhibit. The event easily surpassed its registration limit and was deemed a huge success.

Jul 30 - Aug 3: SIGGRAPH 2006 - Boston Convention & Exhibition Center

SIGGRAPH is the world's premier event for 3D professionals across the widest array of industries, from architecture to industrial design to film and 3d on the Web. Apple has had a major booth presence for years at this show and we expect Apple at SIGGRAPH in 2006.

ably affordable one at that. It is an all new 3d polygonal modeler for artist and illustrators. A unique aspect of this program at this price point is that it features a fully editable "construction history" with dynamic geometry. It features a comprehensive set of tools for surface subdivision, edge modeling, thickness and filleting. And like just about all tools it features Boolean operations. Cost: $249. USD.

(4) Silo, by Nevercenter Ltd. Co. Silo is very new and promising modeling program suitable for a wide variety of fields based around complex surfaces, especially human faces and other types of characters. Of course people have used it for cars and other industrial objects. Silo features advanced subdivision surface modeling tools and a comprehensive polygonal toolset. Nevercenter claims it has one of the fastest subdivision modeling editing tools around. Of course, the real kicker with this tool is its cost, which is a steal for those involved in character design. Cost: $109. USD.

(5) Cheetah 3D, by Martin Wengenmayer. Cheetah 3D is a remarkable new comprehensive 3d application that is just growing up. We'll look at just the modeling tools in this profile. Cheetah features a full set of polygonal and spline editing tools (NURBS support) as well as Booleans and subdivision surfaces. Some items of note include Catmull-Clark subdivide with creases, and polygon N-gon support. The total list of modeling tools is impressive for the price of this young application. And that says nothing about its rendering and scripting capabilities which many users are praising. Cost: $99. USD.

(6) Microspot Modeler, by Microspot UK. Modeler is a new Mac OS X native product from Microspot that in some ways replaces their 3D World application. However, Modeler is different in that it focuses on the creation of 3d objects for its sister application, Microspot Interiors, a 3D oriented design package for interior designers and architects. Modeler allows you to create polygonal objects from basic primitives and from more sophisticated sections, including complex curves. There is also basic Boolean support of solids. A wide variety of furniture or industrial creations can be made with this tool. Cost: $129. USD.

Some of you may be thinking, "what about such and such tool?" Indeed

Feedback - Letters to the Editor

On Graphisoft and the Letter - E - in AEC:

"Anthony, the ToshLetter looks good. However, I think there is a little mis-interpretation of what Don was trying to say...regarding Graphisoft strategy. They have been, and currently do address, much of the "E" so I think the premise for your article is a little incorrect." -- Greg Conyngham, AIA, President, Integrated CADD Services

On News Five:

"Anthony, I read the part about the (new) Cheetah3D. Love the new ToshLetter. Thanks." -- Jeff Jacobs.

On First Issue of ToshLetter:

"Anthony, Thanks for the first issue of the ToshLetter! Reads well! Thanks and looking forward to more!" -- Pete Evans, AIA,

we have not covered every single Mac application capable of doing modeling. Of the new gang there is also Maya, which when combined with T-splines offers very powerful new capabilities. There are many others, including tools in architectural or mechanical CAD (TurboCAD 3D), terrain modeling tools, advanced 3d rendering and animation systems, sophisticated computer-aided industrial design or product design applications (CAID), and some that should be in this article but we have left them out for whatever reason. If you feel we have made a serious omission please write in.

The point of this article or guide was to demonstrate the increasing health of the Macintosh pure-modeling universe. Not only have the best of the old gang gotten better, but many have added to their product lineup, with ever increasing degrees of specificity and purpose. The new gang consist of some incredible software talent, and some incredible low prices. We what see in the modeling world is an increased proliferation of top-notch choices combined with more degrees of product focus. Not everyone can be a general purpose modeler, and not everyone can exceed at advanced CAID.

With such a strong showing in modeling in general, it is surprising that the high-end mechanical CAD or PLM (product life-cycle management) application industries have not yet taken hold on the Mac OS X platform. But that may be just around the corner. Clearly, some of the top-notch and most capable of these applications listed here may move into other territory as they expand their feature sets and grow their markets.

Feedback
Send us your feedback on the ToshLetter or anything else you see on Architosh. We'd love to hear from you. Email to: anthony@architosh.com