Let's Go Gaming! – Autodesk's Maya LT helps game developers get there fast and in budget

by David Heller

Excitement is in the air as the gaming industry continues to increase momentum with most of today's game development targeted at mobile smart phones and tablets. Entrepreneurial spirit has been ignited and new indies and small production houses are popping up like dandelions, all looking for the best and most cost effective game asset development solution they can find.

To meet the needs of this emerging market Autodesk announced the release of Maya LT last month. In developing Maya LT Autodesk started with Maya 2014 and stripped out features that were aimed at film production, like advanced rendering and special effects, leaving Maya LT with a solid core of high-end development tools plus some new ones specifically aimed at meeting the needs of smart phone and tablet game designers.

Introducing Autodesk Maya LT

While getting acquainted with Maya LT I realized that its accessibility might also make it an entry point for CG artists who aspire to create professional results and who can learn and make good use of this tool now and then grow into the full Maya edition as their skills and needs increase.

What perked my immediate interest were its rich [feature set and its price point](). You can get the full version including updates for $795 or, to get your feet wet, you can lease Maya LT for $50 per month. And, since Autodesk is offering a [free trial]() you can download and try the software now to see for yourself if it meets your needs and expectations before opening your wallet.

I recently interviewed Greg Castle, Senior Product Manager and Wesley Adams, Marketing Specialist at Autodesk who have been actively involved in Maya LT concept and development and continue working with the team to improve the software based on internal and user experience feedback.

I will be posting a hands-on full review of Maya LT in an upcoming article, but to get the ball rolling I'd like to share the interviews with you here first to give you a good overview of how Maya LT was conceived, what Maya LT is, how it can fit into your workflow and where it's headed.

The Consolidated Interviews
I've consolidated and edited my interviews with both Greg Castle and Wes Adams below to give you the full picture.

Edited Transcript

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A Brief Overview

Autodesk is known for its high end products and traditionally caters to high-end professionals who create movies, TV, Vfx, and games. Recently a growing number of smaller and indie companies are writing for mobile devices and we took notice of this. We have been tracking this closely and are excited about advancements in this area, especially in the unique game play that's being released now and also the production innovation that is taking place.

These teams are small compared to larger studios and are more restricted by budget and resources. They've had to work hard to produce impressive and captivating games and have had to innovate, and improvise to do new cool things. We wanted to make sure that we were poised to help these people.

We've been working hard developing new free products for consumers like the 123D mobile app and Sketchbook, and offer both a low and high end range of development tools, but up until now small game development houses have fallen somewhere in the middle. We did an analysis of our tools and determined that for game development, 3D modeling and animation is where we can provide the most help to smaller game developers and determined that Maya was the best option to start from. It has a substantial user base, works on both Max and Maya and has some great tools for game development and some great game development features. So, we decided to focus on Maya and see how we could make it more accessible.

Maya is a big and very powerful tool used in lots of different industries and we said okay we're going to modify Maya for game developers, and the first thing we did was to ask the question 'what features don't game developers need?'   We began by removing features used exclusively in film and that are just superfluous to game development. We then compared small game developers to larger game developers with attention to the different restrictions of resources etc. Smaller developers just don't have the time to create the same types of assets that a Triple A developer can while Triple A studios don't have the same price constraints and are happy with Maya as it stands.

We engaged in a Beta program at the beginning of this year and did a lot of research to learn how small game developers were using Maya compared to larger game developers and studios and realized that the biggest factor for smaller studios was pricing. We needed to figure out how to make the pricing much more in line with smaller development budgets without cannibalizing or alienating our larger Maya base. We looked at tools like Particle Effects and high end renderers that smaller game studios don't use and we customized a version of Maya specifically for smaller developers that we could offer at a lower price point. This became Maya LT.

We only kept the essentials. Everything we've left in Maya LT is there for a reason and we've even added some features that are specific to game development and that don't even appear in full Maya. One such example is Shader Effects, a node based shader that makes it easy to create shaders non-programmatically and get some really great results in a more efficient manner. And there are some other game specific tools we are working on now that will go into future versions of Maya LT as well. But initially, we really wanted to get Maya LT out there because there is a major need for this product.

This was just a jumping off point, if you will, and we've got a lot of great services and features planned for indie and mobile game developers that will find their way into Maya LT. We're also working very closely with the community through our community website 'Area,' to nail down what people really want and need and what their pain points are in game development and we're working hard to insure that all these needs are incorporated into Maya LT.

There is a lot of work being done – this is not a static industry by any means – it moves super quick, and we have to be super responsive. Maya LT does not follow the same development cycle as standard Maya. Maya LT product updates will be coming out on a quicker cycle than they will be for standard Maya to make sure that we're keeping up with the industry and that we're responsive to customer requests.

A Lighter UI for Modeling

You work over there at ShareCG.com and are probably familiar with 3D packages.   And, sometimes when you open these models in Maya it might be pretty daunting, so we've made the UI a little bit lighter which right away makes the product more approachable, and that's one step in the right direction. But, Maya LT actually has full parity with Maya 2014 in terms of modeling.

What you're going to see vis-a'-vis Maya and Maya LT is that when something is added to Maya, if it applies to gaming, it will be added to Maya LT or vice versa.   We just added the next tool set that Maya users were clamoring for that makes modeling a lot nicer and we also include these tools in Maya LT. Our goal is to laser focus on what is going to help game developers and incorporate these features into Maya LT.

Character Animation with HumanIK
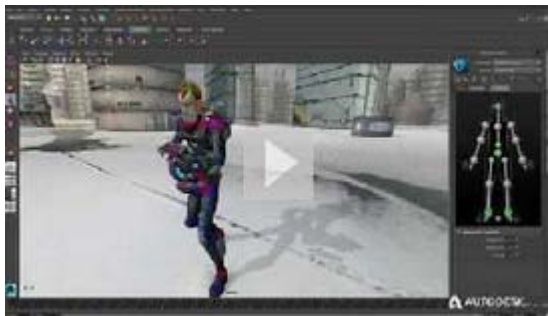
In terms of animation we've included Autodesk's HumanIK. HumanIK is a library that allows for the calculation of full body inverse kinematics.   HumanIK is traditionally used in games like Assassins Creed to be able to calculate character movement at run time without having to predetermine all kinds of animations.   If, for example the character wants to jump on one particular rock you don't have to animate thousands of rocks – Human IK can figure that out for you and more.

We incorporated the full HumanIK rig into Maya LT so that when you're creating bipedal characters you have a skeleton generator to help you create bipedal skeletons and bipedal rigs really, really quickly. And, it has HumanIK technology behind it so it's a lot easier to animate and incorporate into games.

The 'Beast and the Turtle' – Lighting and Texturing

In terms of lighting and texture-making another technology that we've incorporated is called Autodesk Beast which allows you to bake lighting information into texture and UV maps. This feature, which grew out of the Turtle plug-in, allows you to pre-calculate all your lighting and effects before hand to keep your assets light and efficient so they don't have to be calculated at run time.

Shader Effects

Something that's really interesting is Shader Effects which is the first capability that exists in Maya LT that does not exist in standard Maya. You basically apply shader effects to your asset like you would apply a material using a node based shader editor. So instead of writing in the HLSL, GLSL and CGFX computer languages you get a bunch of boxes that give you different selections that you can drag and drop between to create your shader definitions. Menus pop up and you can use float point values, or sliders to adjust the different effects and you can see the effects in real time as you make the adjustments. It's kind of like HyperShade but at the end you can export into HLSL or GLSL or CGFX, so you don't have to go in and create the shader yourself.

If you and I were collaborating on designing a game I could send you the shader definition file so that we are both working in the same environment that I've envisioned. It takes a few extra steps, but you can also make the shader work right within Unity for example, so the assets that appear in Maya LT's View Port will better approximate what they will look like once they're in the game.

Compatibility with Game Engines

Popular game engines like Unity, Unreal, and Cryengine support the FBX format and Maya LT's primary export file format is FBX. Maya LT has its own internal format, MLP. You save all your work-in-progress to the MLP format but then when you want to export and integrate your assets into a game engine it's all done in FBX.

Wrap Up

We have a separate development team that only focuses on Maya LT. This is really nice since for the full Maya version the development team has to consider multiple industries using the tool, whereas with Maya LT the team has the luxury of just focusing on Game Development. We will be releasing product extensions a lot more often than for standard products and we are paying close attention to feedback and quickly responding with solutions.

I can't share specifics about the Maya LT road map but if I were to show it to you I'm sure you'd be very, very impressed and excited!

Each integrated tool is targeted at different phases of your game development project making Maya LT a one stop place for creating game assets.

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I just downloaded the trial software and am beginning to delve into each of this tool's elements. In the coming weeks I'll write and publish an in-depth and objective Maya LT software review to share what I've learned. In the meantime, download your free trial and give it a test drive!