EARLY EDITION

project
evolution

...ready when you are

(!) Introduction – About Project Evolution

Project Evolution is a 3D virtual female figure intended for use in Smith Micro's Poser series. Her name was inspired by the general desire to have a figure that *actually evolved* from figures that had already been proven useful in functionality, flexibility, realism and appearance for many artists around the world. Instead of re-inventing the wheel, Evolution hopes to improve upon the proven, and hopefully will be compelling as a whole right out of the box, and for a change can easily slot herself into the busy workflows of many an artist out there with 'minimal effort' (*Ya'll still gotta do a little adjusting, ahem*).

She is also Poser native, so Poser users don't have to make difficult career-changing decisions because of a lack of a good figure.

I know that some of us are busy people and you might not have the time to sit and read all of the manual, that's why I've added this

marker (!) to chapter titles that are very important. Ideally its recommended that you read the whole manual because... this girl is different... ahem. And I want to prevent my inbox from overflowing. So if you can, please read all of it.

projecte .mesh5

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Project Evolution
Early Edition
is available at

Special thanks to:
RENDEROSITY   CGbytes

Her design was heavily influenced by Erogenesis' experience as a comic artist since 2011 using Victoria 4 and Michael 4. The influence of the comic production environment has given her a slightly more practical and accessible side than the usual 3D figure (regarding posing as well as morphology). She was developed parallel to my personal comic figure, the 'EroGirl', which is based on the previous version of Project Evolution (mesh4.5), and thus shares the same topography and handles.

Because of this, many of her features will also be slightly unorthodox with regards to current trends and conventions in CGI, with good reason (as explained later). She is slightly higher resolution, has a homogeneous polygon flow that prevents texture stretching, has realistic bending geometries assisting her weight mapping, has integrated oral and genital anatomy, and a very fun and intuitive facial rig.

(!) The Early Edition

This Early Edition is an extraction of what I wanted to put out around Christmas 2017, but as usual I was a little too ambitious. I wanted to put out something before the new year. This ball needs to get set a rolling!

Because she's still getting designed in P10 (*don't switch weapons during a battle*), and because my main renderer is still Firefly, everything is still defaults to **Firefly**. Superfly mats are available, but might need work. Note: much will still get added and refined, but the important components are there:

- Project Evolution Base Figure with all the base morphs

- a P11 version with Master sync disable for all morphs (safer)

- 13 Characters spanning global generalized ethnicity

- **Corresponding Firefly** Materials and Superfly Materials

- Simple everyday girl hair with lots of morphs and controls

- Lots of important poses, partial poses, of difficult movements and angles. Like the figure, these Poses are something to help you deal with realistic posing. Do expect to do a little bit of adjusting since they will work differently on different characters with longer / shorter arms. They're also from my private collection I made last year.

- Some lighting options

- Extra scenes with lighting to use for experimenting

- Scenes with Firefly settings for you to use (superfly settings to be added later)

- A dome with a flat bottom that can take 360 images

- Some mats for the dome

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(!) The DEMO version (check it out!)

Because this figure is a little experimental in nature, and also because Poser users have been disappointed so many times over the last few years, I thought it would be appropriate for to first be able to check out the base with no further obligation. The DEMO contains:

- **A very minimal Base rig**

- **In introduction scene**

The Demo is for free, but even if you buy the Early Edition, STILL CHECK OUT THE INTRO SCENE!!!! Its meant to inform you. Please check it out! And if you see anyone else not checking the intro scene... tell them to!

The Demo is obviously not meant for making art with, since the textures are tiny, a lot of WM has been removed, and there's next to no morph options in it. Its purely meant to inform. But if you want to make your own version of PE with this demo, lol go ahead! Just don't sell it or anything ya?

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The Evolution Content Support Beta Kit

Because Evolution has a fair bit of JCMs to help bend it (more about that later) I've provided a way to speed up content creation for it. The tools I've provided are called Mannequins, which contain all the essential morphs and rigging that your garments would need. There is:

- A skin-tight Mannequin

- A Cloth Mannequins

- A Dress Mannequin

- A Hair Mannequins

- Prepared OBJ files of the mesh but grouped in UV islands for texturing convenience

- Templates

- An injection for Victoria 4 to bring her to the shape of Evolution

Because they're basically new figures (also *very* high resolution) development on them went very slow, so I can only make them available in Beta stage for now. <u>But they do work!!!</u> They're just a little messy and have morphs in bodyparts that don't need them etc... They will get cleaned up soon.

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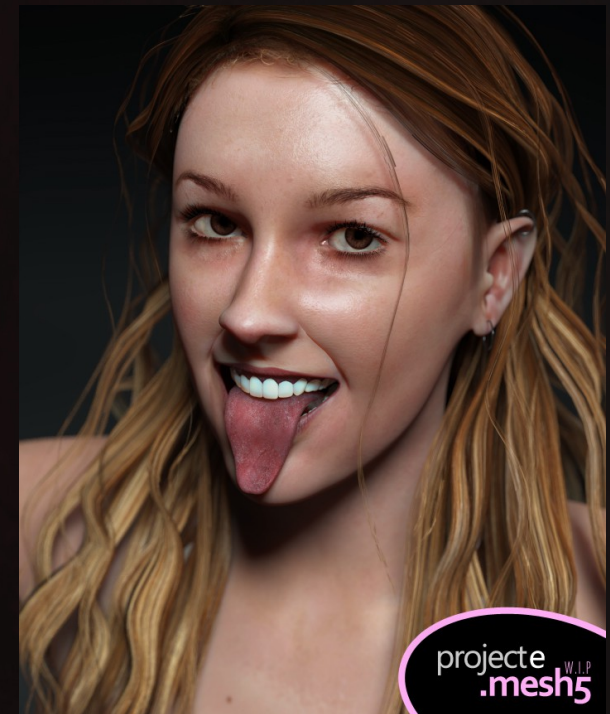EDITION
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(!) The intention of this product

I have designed this package in a particular way so that you immediately know what's going on. This is important because Evolution is attempting to do several things at once:

- Give you a fun and realistic looking lady in your Poser scenes

- Overcome your Poser figure trauma / skepticism ;)

- Convince you that JCMs are the only way to get realistic bending in Poser at the moment (if you're old-school)

- Convince you that Evolution is awesome

- Get you enthusiastic about Poser again (*and hopefully help me put the pressure on Smith Micro to fine-tune Poser for figures like this, and give the Poser Team the resources it desperately needs*)

project e .mesh5 W.I.P

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(!) (!) (!) How to use this product

Before anything else!!!! Open the Introduction Scene (in the DEMO zip) in the Scene category (*replace the scene, don't add!*)

This scene will give you important visual information about Evolution.

Please pay attention to the Read Me icons too, they will also help you understand what's going on.

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Replace, do not add!

evolution.mesh5

Warning to seasoned V4 users / vendors about Evolution

Evolution is modeled after a realistic woman, and she has a lot of WM and JCMs to help her achieve that. If you're used to working with V4 and Genesis or Pauline, then here are some vital tips to make your Evolution experience better:

- **(!) Shoulders**: if you try to throw up your arms like V4 does, you will kill yourself. The way a human puts their arms up is by rotating the collar around the x axis and then pointing the arm forward. For example, stand in front of a mirror and strike the T-Pose. Note how your armpits are pointing down. Now reach for the sky, look where your armpits are pointing now. Forward, aren't they? That's because the entire scapula swings forward over the ribcage, in other words: the collar twists forwards and up. There is a dial in the body to help you with this movement, there are also partial poses available for this.

- **Making FBMs involving the hips**: I've seen many great vendors making amazing body sculpts for V4, but some of them made one big mistake: they modeled the hip rotation into the sculpt. Avoid this because it will screw up the rigging. If your sculpt needs the hips to be rotated back, programme it into the dial using the rig. Email me and I can help you with that.

- **Mind the rigging when morphing:** When making morphs for Evolution (*and any other figure actually*) make sure they work with the rig too. Try to morph the vertices perpendicular to the axis of rotation. For example, a wide hips morph, try to just pull the vertices out along the x-axis, because if you also pull them down, the bending that occurred at the original position will now be translated down to your new morph and might look bad. Also, when sculpting armpits, make sure the part that closes in on the chest stays in relatively the same position.

(!) NOTE: It is recommended to use the *rotate* and *twist* mouse controls and **not** the *translate* (move) control for posing the shoulders as the software would not understand how human anatomy works.

I always use the **rotate**, **twist** and **translate** tools for Posing. Its *much* faster. I only use dials if things get very tight.

For handles you can use the **translate** tool

P11 has the shortcut notations removed, no idea why...?

- **Morph vendors:** mind the fact that her mouth and oral anatomy are connected. So make sure when you're making facial morphs that her inner mouth is masked out (if you use zBrush).

- **Dial the control handles away** when morphing before accidentally including them in a morph.

- **Texturers**: I recommend texturing her in a sitting position so that the textures don't stretch too much (unless you already do that)

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Things still to do

Although the important parts are basically done, there are still a few things remaining to be done:

- Make tutorial videos

- More joint-responsive muscle definition

- Rigging of the hands needs refining + JCMs

- Clean up the poses, perhaps add a few more **.

- improve the genital textures and make erotica morph packs

- Some Superfly materials need redoing (like the African materials)

- Hi definition morphs for the P11 version (aging / wrinkles)

- MAYBE a young age preset provided its clear that it won't work with genital morphs

- Basic clothing pack (getting worked on now, will be available at CGbytes and Rendo*)

- *Only if requested*, splitting the figure up into injections

- probably something else that I'm forgetting...

* There are a few vendors working on content now. If you're a vendor making content and you need help, email me at: erogenesis.art@gmail.com

** Some poses might not be 'grounded'. I always ground them manually since many characters react differently to poses. I'm sure you'll manage in Poser ;)

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Known issues

Evolution is a CGI figure, and all CGI figures will have their limitations. Besides that she's also a Poser figure, and Poser itself also has things that still need improving. In other words, there WILL be limitations / issues. These are the ones I know of, and will try to sort out somehow, if possible:

Deliberate / unfinished issues:

- **(!)** The collar should only be twisted if the shldr is forward. Humans cannot do that move naturally otherwise.

- For the naughty Poser fans, no detailed genital morphs yet. Just haven't had the time.

- Arms might be a little too long (won't change that, but can easily be adjusted)

- **(!)** Like mentioned before, some Superfly materials suck. I haven't had time to teach myself Superfly properly yet. These will get updated, probably with someone's help.

- There are still some grammatical errors in the dial names.

- One or two redundant morphs (morphs that do the same)

- Hair morphs need to be refined a bit.

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Non-deliberate issues:

- **(!)** Posing in IK is not great in Poser with a JCM-reliant figure. For some reason since Poser Pro 2012, they stopped letting rotations of limbs being updated when posing in IK. If there are no changes in rotational values, the JCMs have nothing to go on, and therefore they won't do the work they were designed to do. There are three ways forward with this:

    1. Cycle the IK (switch off and back on). It updates the JCMs, but in many cases the rotations of the hands will deviate because Poser IK allows them to over-extend their limits.

    2. Wait for my script that will update the rotations for you. Its works fairly well, but needs testing.

    3. Go to Smith Micro with torches and pitchforks and pester them until its fixed.

- **(!)** handles not invisible in Superfly renders. A '*hide Control Handles*' dial can help there, as well as invisibility materials.

- Sitting handle bone creates ridges when thighs bent up high. No idea why. We'll figure it out.

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Evolution's Design – Comics, production and Accessibility

Production environments can differ per artist, but if you're a comic artist like me and you want realistic scenes and actions, you'll quickly be working in scenes with hundreds of props and their textures, several heavily kitted out figures each with clothing items and hair, their textures, and then also a very complex animation timeline with thousands of keyframes.

This obviously requires rigorous planning before you even involve the figures, but even upon preparation of the scene, you want your figure to be doing the work for you, and not the other way round. A figure should not stop you in your tracks, but rather help you and let you get on with it. She should be:

- it should be native to Poser (no programmatic back channels)

- easily accessible and *editable* (incl her handles and dials)

- she should bend realistically and not force you to have to postwork 50% of the time

- be able to handle the most extreme poses (dancing, martial arts, yoga, or erotica)

- express anything you'd want her to express

- basically anything that will help speed up your workflow so that you can actually get on with the story and the art of your comic.

Obviously I cannot do everything perfectly here, so I am hoping **Smith Micro and the Poser team** are watching carefully.

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Project Evolution
Early Edition
is available at

Special thanks to:
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Understanding Evolution – Mesh resolution

I made a total of 4 meshes before getting to the final one, mesh5. I was a complete amateur modeler before I started, my only experience with modeling was making game meshes. Therefore the first mesh was all triangles until someone drew my attention to the fact that all Poser figures mostly had quads. Oops.

Since then I've learned a lot about quad modeling, edge loops, UV mapping, etc. I'm sure mesh5 is now more-or-less up to standard... well sort of.

Contrary to current trends she is a moderate resolution mesh, much like V4. In my experience it just works much more pleasantly.

- Low resolution is usually for game figures or high performance figures

- Evolution is an art figure, designed to look pretty and detailed

- Evolution doesn't necessarily need Subdivisions to look good

- Subdivisions also affect certain details you would want to keep

- Poser's Subdivision Morphs tech still needs work before relying on it

- Evolution has detailed anatomy (therefore doesn't need addons)

If you're a 'purist', this figure might not be for you. Unless Poser introduces a new type of skinning method, **you need JCMs to simulate compressed flesh**, or joints that go in all directions. Its a fun challenge to make it purely WM, but you're wasting your time. Believe me, I tried.

Also, because of the amount of work involved in getting things right, the OBJ file might not look like a neat document. Its really not that important.

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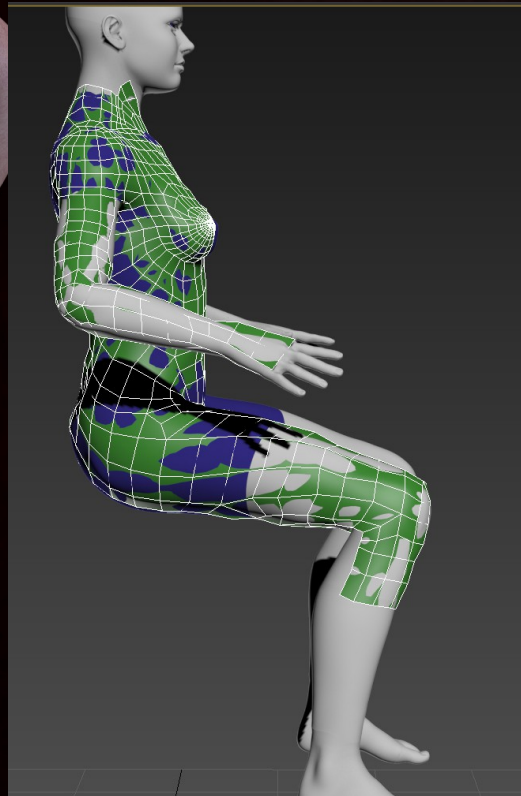**Understanding Evolution – Mesh bending**

If you look at how the polygons in the mesh are arranged, especially when you bend her, you'll see that she was designed to accommodate for bending (see *Introduction Scene.pzz*). She was modeled in a sitting position so that the polygons would naturally align themselves to that position when bent in Poser. This allows for a wider range of bending without utterly distorting the mesh (*I used mesh4 as a template*).
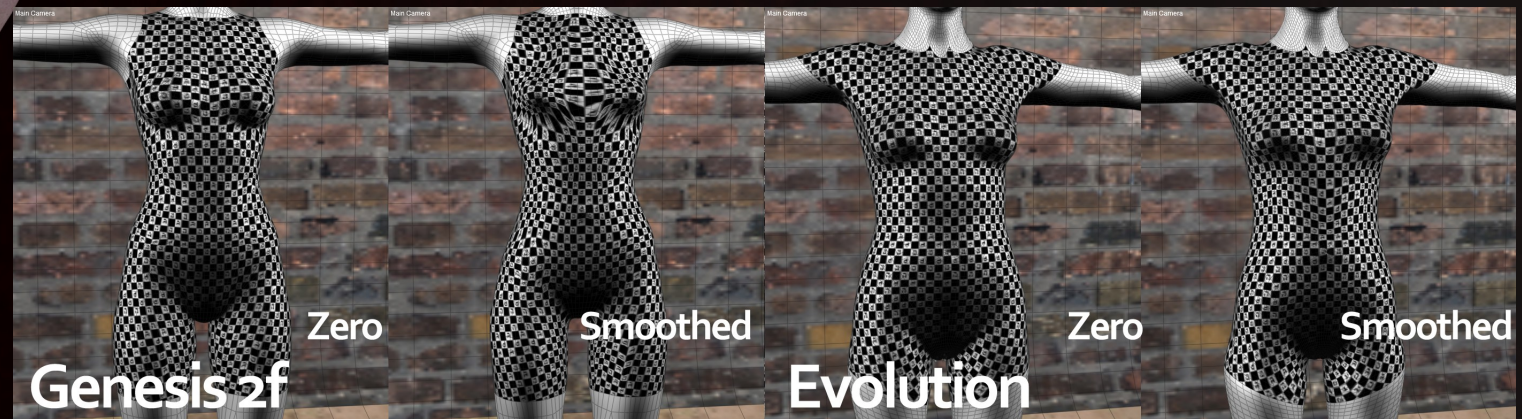
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Understanding Evolution – Mesh arrangement

You will also see that she will hardly have any extreme jumps in polygon size and also hardly any muscle definition, unlike many Poser figures. This was done for 2 reasons: 1) to give the artist freedom to design their own anatomical features and not define it for them 2) because when working with figures like V4, whenever I modified their meshes for making morphs, especially when smoothing, the mesh tended to stretch and adjust in awkward was such that the textures would warp and stretch in an ugly way. Here is an example of smoothing Genesis 2F's mesh compared to smoothing Evolution's mesh, G2F warps while Evolution mostly maintains her resolution:

Genesis 2f — Zero / Smoothed
Evolution — Zero / Smoothed

For the record: this is not meant to discredit Genesis 2 or any other figure that has these definitions. For many they do serve a purpose and that's fine, but for me they were a nuisance, and therefore I left them out of Evolution. Its purely a design choice.
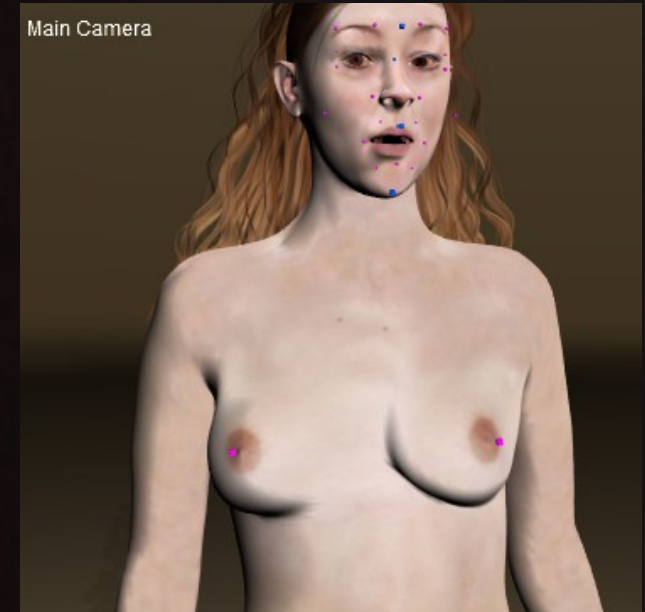
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(!) Understanding Evolution - Handles

Evolution has handles to help you control various parts of her body. Some of them are extremely handy, like the facial rig and breasts, and yet some might be useless to you, but they're there if you need them.

For example, the calfs and thighs have handles that can be used for animating a wobble if she's running or something.

Breast handles are designed to actually rotate over the chest in their entirety instead of looking like jelly pudding stuck to a plate. The way this was done is by putting the center of rotation way behind the chest so that it resembles the curvature of the chest. This is called out of the box thinking haha.

Main Camera

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(!) REPEAT: It is recommended to use the *rotate* and *twist* mouse controls and **not** the *translate* (move) control for posing the shoulders as the software would not understand how human anatomy works.

Rotate (R).

I always use the **rotate**, **twist** and **translate** tools for Posing. Its *much* faster. I only use dials if things get very tight.

For face handles you can use the **translate** tool

P11 has the shortcut notations removed, no idea why...?

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RE

Understanding Evolution – Face Rig

This is by far the most fun part about Evolution. The face rig was inspired by some of the facial rigs that they have available for 3D Studio Max and Maya and to be honest I think its time that Poser starts going more in that direction.

The rig also has an extra trick. You can operate the rig by pulling it around with the rotation or translation tools, but if you press 'S' some of the handles can do extra things too (the blue ones mostly). Between the eyes there is a handle that controls both eyes! The mouth (open mouth) is operated by the actual lower jaw inside the face. There is a jaw handle too but that operates the jaw while the lips remain sealed.

Like with the breasts, the rotation centers are set to match the rotation of the skull.

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So here's the thing about poly count

I need to address this issue because I know some might get worried here, but relax, its ok.

Project Evolution is what I would describe as an 'Art Figure', which for me means: the poly count doesn't matter. Why would they matter? There is this thing in the Poser and DS world that less polys is better, which doesn't really make much sense if you think about what these figures actually get used for.

So here's an example of what one of my girls would be wearing in a typical scene of mine:

- shoes (25,566p)

- undies (9,226p)

- bra (21,903p)

- jewelry set (81,545p)

- jeans (62,577p)

- shirt (18,368p)

- hair (68,688p)

And that's just ONE girl. These are all nice outfits with details like buttons and laces etc (and not to forget lots of morphs). Now, Project Evolution is 75,936 polys, she is a human with eyes, teeth, lashes, fingers, toes, nails, a vagina even. Compare to some items above. Wouldn't you agree that a beautiful human being deserves more polys than jeans?
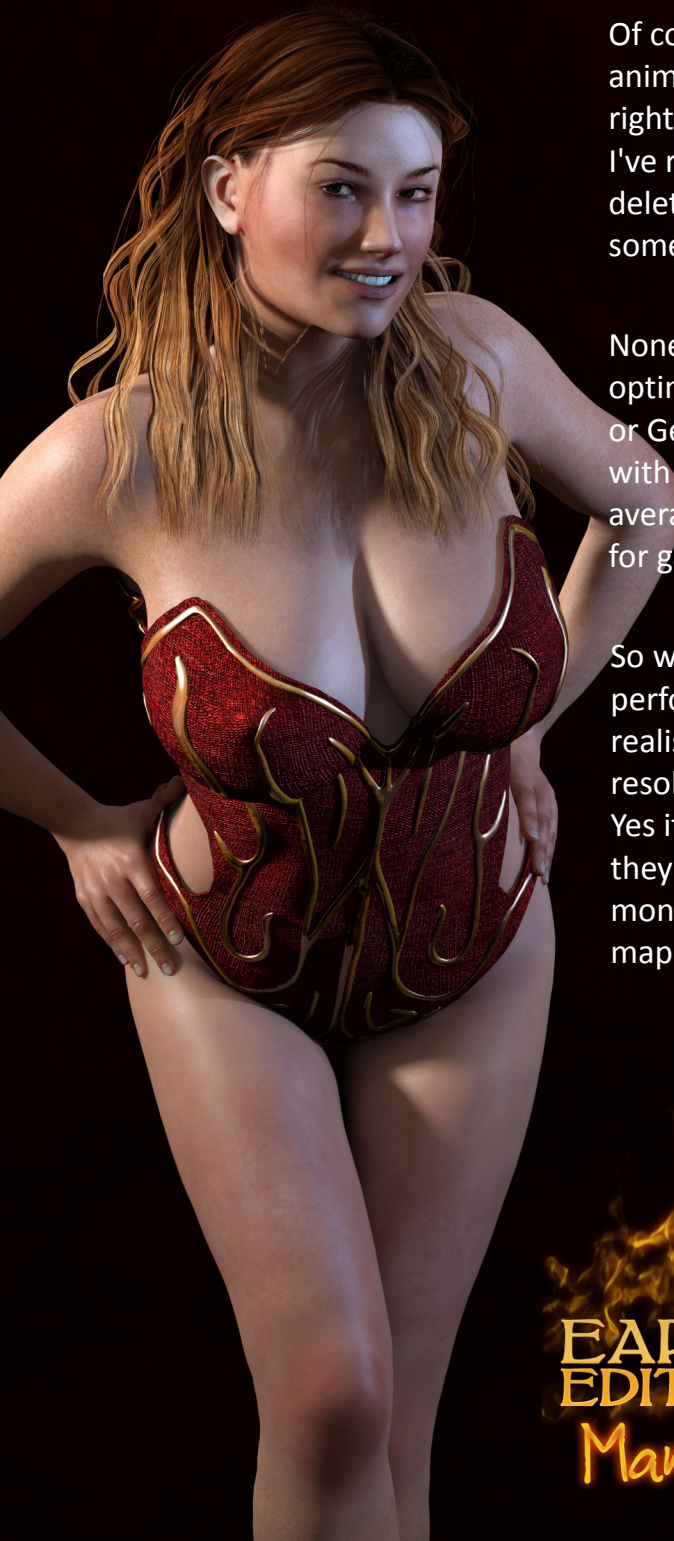
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So, poly count really is not a problem here. V4 clocks in at 68,830 polys. She was released in 2006, when we were all still farting around with 2.66GHz Processors and 2GB of RAM... V4 is still successfully used today.

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Of course it all depends on what you want. These figures are ultimately used for artistic media like pin-ups, animations, presentation, comics, posters, instruction manuals. But games? You must mean erotica games, right? ... because most of these figures do get shipped naked. Now, I'm not an expert at this, but from what I've read, if you're serious about a non-erotic game, you'll need to integrate the clothing into the rig and delete all the polygons under the clothing to get some performance gain, re-rig it entirely, and you'll also need some game-optimal clothing too.

None of the outfits in my runtime are very game-optimal as you saw above. If you combine it with V4 or Genesis, like shoes, jeans etc, you'll still end up with a 70K figure minimum anyway, 45K is the top average limit of games I believe. So Poser / DS figures for games?... not that easy. Erotica games perhaps.

So what about artistic productions? They need some performance of course, but they need detail and realism more. Some people complain that high-resolution figures are harder to do weight maps for. Yes its a little harder, but do they mean to say that they are going to sacrifice years of detail for that one month they don't want to suffer through weight-mapping the figure? I don't hope so.

Folks, I've worked with a **much** higher poly count figure for almost 3 years (Erogirl, 110,000p), in absolutely massive scenes. I don't notice any difference in performance as with V4... but she looks way better. Isn't that what its all about?

So, don't worry, unless you're working for Pixar or Dreamworks, Evolution will most probably be fine for you!

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CGe Computer Generated erotica

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Evolution, Poser and other figures

Why Poser? Because I use it, its that simple. If this was purely a business move, I might have chosen for Cinema 4D even, but I use Poser, and it works well for the job that I do: comic making.

So why Evolution and not other figures? Why make a new one if there are so many ones out there already? Well, there might be a lot out there, but there's always something up with them. Either they weren't designed for Poser, or they're holding back in some way.

Some folks are content with these figures, and that's fine. It depends on what you want from your art, isn't it? Many people are content with DAZ's Genesis, for example, and rightfully so. Its a great platform that clearly works very well for the masses of people that have invested in it. DAZ are clearly doing something very right. But its not Poser is it?

So while I'm on the subject, its inevitable that people are going to make comparisons and draw parallels between Evolution and other figures. Although Evolution could obviously not have come to existence without scrutinizing those other figures (that's how things evolve), Evolution should **not** be promoted at their expense. They all have their purpose for others, no matter what we think of them. Many of my friends work with Genesis to effect, and I love their work.

Please remember that art is a deeply personal thing for a lot of people, and harsh criticism of their chosen figure can hit hard. I don't want Evolution to be a vessel for hate and endless arguments in an already strained and weary. environment. I'm also guilty of it, but over the years I've learned to respect this. If Evolution is better than another figure for you, well great! But then that's exactly what you must say, its better *for you*, because for others this might not be the case. That's fine too.

But remember it does go both ways. You can only progress if you see fault somewhere. Help Evolution actually evolve.

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Time to play!

So there you have it. I've probably missed a lot, but that's where you come in.

This project is so massive and ambitious that I need outside input to get this right. The base is complete, and now its time to give this figure some meaning. Like you, I'm going to play with this figure too now and see what needs improving. *I haven't even had the chance to play with it during development*. Like with my own figure in my comics, it takes time to fine-tune things like textures, materials, morphs etc. The only way to do that is to start using her.

But guys please remember I am one guy and I cannot do everything myself. At some point I'll need other people to take control of whatever aspect of Evolution they find important. I have provided the base, and yes that base is very elaborate, but I'm sure there's still plenty more that Evolution can do and I'm hoping others will step in to help there.

If you have them, definitely be vocal about your dreams for this figure, but not just to me, also talk to vendors about it. Remember to keep it fun. A LOT goes into a figure like this, and positive vibes help speed things up... but be patient too please.

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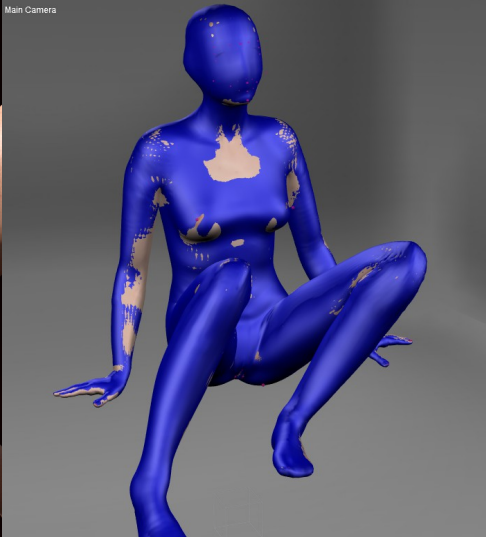
Message to vendors

Yes, she has JCMs. Quite a few, but she still has way less than my comic figure, which has JCMs for just about every degree of movement, and yet I've never had any real issues with transferring them to clothing.

I use a mannequin, which is basically a kind of cat-suit that has clothing related morphs in them that correspond to the morphs in the actual figure. This way you won't need to bother as much with the cloth suspended between the breasts.

However, I had to make high-res mannequins because Poser does not transfer morphs properly from low-resolution figures to high-resolution figures.

And since most clothing is higher resolution than most Poser figures (because of this low-resolution trend) the transfer morphs feature is useless unless you make a high resolution figure... hence the high-resolution mannequins.

Main Camera

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(!) **Message to all**

I hope Project Evolution will inspire you to make lots of fun art, and if you ever had doubts about Poser figures, that you can now hopefully lay them to rest.

But also, if something doesn't work right, or if something is amiss with Evolution, <u>do not give up here</u>, do not despair. You might have missed something, there might be a trick you didn't know about (I learn every day), or if there really is a problem, Evolution is meant to evolve, so much can still happen. Look at my comics and my renders, that's the result of never giving up, being patient, finding solutions. Like me you can learn and grow, and there are artists way better than I am, but it needs to remain fun.

CGI is a puzzle and there's always a way to fix things. Since her first triangle mesh I've learned a lot. I will constantly pay attention to how Evolution will perform in the field, and will try to help out and update her where I can. And I promise that if I don't have time for the project, I will not cling onto Evolution and I will allow others to develop her onward. But I will always be around to make sure it happens in a sensible and useful way. I have my own figure, I created Evolution for you.

Also please don't forget that Evolution is nothing without Poser, and Poser also needs Evolving. You need to voice your opinions clearly to Smith Micro. I am confident that they will listen to us if we keep at it!

But most of all, please enjoy Evolution!

Cheers, ero

Malawi & UK, 2017

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Acknowledgments

Thank you to all my beta testers, proof readers, experimental artists and prospecting vendors:

Nephanor, Singular3D, Danae, Kitty Brown, Peggy, Anomalous, Estherau, Cybertenko, Maddelirium, Prae, chimera, Lotharen, Blackhearted, Robzhena, Tempesta, Karina, Miss B, Kalypso, Karanta, Artdude, Ladonna, ghostship, duanemoody, simontemplar, morkonan, skiriki, Verbaas, Boni, chimera, Karanta, Ctbertenko, Ken_1171, Ulli, Andy, freeone1, KristinF and Apocalypse. I probably missed a few folks, please accept my apologies!

Special thanks to Biscuits, Wim van de Bospoort, Ghostman, Snarlygribbly and Scott Shaver for being patient and pushing me through this massive project. Thank you for all the help, advice and contributions! Thank you Andrew Clarke and Jenn Blake for all the support! My sincerest apologies to all my comic fans who had to go a year without an official Lali comic. My heart longs for Lali stories again!!!

Thanks to my girlfriend and my mother for being patient and supporting me in Malawi as well as the UK during the crazy times.

And thanks to Lali & Co, for reminding me what its all for!

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