

Interview with Axel Riviere

Technical Coordinator Scripting at Quantic Dream

About yourself:

1.) What drove you to pursue a career relating to technical game development?

To tell the truth, I had more a musician profile at the start, rather than a technical one, being a musician since my childhood. I was a huge fan of consoles games during the 8-16 bits era, but it was just a hobby. I didn't know there was Computer Science.

During High School & University (Physics), I got some graphic calculators (TI81, TI85 then TI92) and I started to do some little programs/demos/games in TI-Basic, like a Tetris in Text Mode on TI85. I enjoyed that almost as much as playing my games. At some point I decided to do only Computer Science, but I thought it was impossible for me to work in videogames. I got my Masters, and I started to look for a job, but I was not really motivated by regular jobs.

I decided to start to look for jobs in videogames, but it was really hard for someone without experience. I ended up looking for QA tester positions. I found a job at Coktel, then at Quantic Dream (to test Fahrenheit/ Indigo Prophecy). Finally, I went to Vivendi Games Mobile. There, people discovered I knew coding and Java. Instead of testing their games, I started to do a lot of coding there: porting, developing tools in C#, coding parts of our 2D engine, etc.

I was really happy to work on 2D games (even on these weak devices).

I was a huge fan of game books (like the Fighting Fantasy ones) before owning a NES in the 80's. I think it's why I like working on Narrative Games today :)

2.) How did you end up working at Quantic Dream, and receiving the Technical Coordinator Scripting title?

After some years developing mobile games, I noticed Quantic Dream was looking for scripters and programmers for their next project (which became Heavy Rain). I had enjoyed a lot my experience with them during the development of Fahrenheit/ Indigo Prophecy. I was impressed by their PS3 demos and I contacted them back. They were interested by my profile since I already knew the kind of games they were doing, and since I now had programming experience. I had never worked on 3D games, so the lead programmer told me I would be more qualified to join the scripting team (referred as the game building team).

So, I was hired to build some scenes of Heavy Rain. I did "The Park", "Rat Trial", all the "Motel" scenes (I know they are boring, but I like them ^^), all the "ARI-desk" sections (Jayden at his desk), the taxidermist "AI" scripting for the DLC, some stuff for the Move version (like the new main menu), etc.

Later, we started development of Beyond: Two Souls. At the start, I was in charge of the building of the Train section of the vertical slice (shown behind closed door at E3 2012). Beyond

was a very complex project, and our lead asked us (another senior and I) to prepare script functions and guidelines for new scripters in order to "factorize" stuff to help the building of Beyond, and to make the debugging process easier (Heavy Rain was hell-ish). I got the "technical coordinator" title quickly... It seemed people started to think I was more a coordinator than a builder: helping people, finding solutions, preparing functions, etc. In the end, I worked on almost every scene in Beyond to fit them in the PS3 memory (which was insane).

3.) What has the general experience been like working at Quantic Dream?

Really interesting and rewarding. It's artistically driven, so on the technical side it means you have to be ready to do and re-do stuff if it doesn't work, which can be frustrating.

Even if I don't work on the artistic parts myself, it's incredibly motivating to be a part of these kind of projects. I receive performance captures from great actors and integrate awesome soundtracks (as a violinist myself, I was totally blown away by the quality of the recordings we got during Heavy Rain ... we got some musician from LSO (Star Wars, Harry Potter) in the orchestra).

Along the projects, I met tons of nice coworkers, interesting and sensitive people with great skills.

But it's not easy. Really. Each time, we push beyond what we did before. We have to find new ways to do stuff. If you are not creative it could be hard. Each time I received guidelines of a new scene of Detroit to script, I was like "Seriously? how can we manage that?" xD. And we did it xD. I think the team effort is really visible in our games, and people are really skilled, creative and united.

4.) What were your general responsibilities, as someone in charge of Technical Coordinator Scripting?

Basically, I design how to script our games with my lead and other seniors. It involves structuring the whole game in our tool and preparing the functions that the scripters will use to build the scenes. We let the scripters build the scenes and I'm here to prepare the main structure of the game, tons of generic functions and script main systems with my lead (nearly everything in our games is scripted ... when you hit the Pause button it's a script page). During production I'm here to help them to find solutions, debug, and optimize.

I'm here to help sound designers and cameramen too, since they work with our building tools sometimes.

Depending on the project I could be in charge of some specific parts (one example in Detroit: implementing the branching structure of final chapters). At the end of the project I often analyze & optimize some performance issues (framerate and/or memory) with the help of senior coders or technical directors.

Some of my other responsibilities include talking with other departments (coders, artists) if we have issues, and collaborating with them to find solutions.

I work with the Tools Team to help to identify what we need in the tools to improve our "pipeline" and our script language (it's a visual language, a little like Blueprint from Unreal Engine).

5.) Can you give a specific example of some of the tasks you were assigned to do?

For Heavy Rain as a scripter:

"Okay, you have to script this 'Park Scene' ... with all these NPCs everywhere"

I think I spent more time on the script for the NPCs than on the script for the walkthrough of the scene.

"Okay, you'll script all 'Motel Scenes'!!"

And I ended up working on the same set for a full year. xD

For Beyond, I got assigned the task to script the 'Hunted Train Scene'. I had to script a lot of the functions as I explained earlier, etc. At some point I got the task to analyze the 'out of memory' issues and to find how we could modify the script to handle that.

For Detroit, I'll answer that in the next questions, I think.

6.) What are your main goals when it comes to your designs?

Simplicity (Okay, not like my answers so far :p).

I repeat to look for clear and simple scripts, which is in reality not easy at all to achieve with visual scripting (you can see the script pages David tweeted some days ago ... but these are not so bad :p).

Really, if you achieve that, it helps a lot for iterations, maintenance and debug

About Detroit: Become Human:

1.) Can you tell us specific details in the game that were your doing?

An easy one: each time you see an action in the game, you trigger one of my scripts which checks if the action is registered. If it is the case, the contextual move/button appears. An action has to be "registered" to be active and to appear in yellow when you are in the Mind Palace.

More specific, I worked on Hostage since the beginning (I was alone on it at the very start), then I designed some functions like "Analyze/ Reconstruct" to be re-used "easily" in other scenes by other scripters. But I kept the responsibility of Hostage's Analyses/ Reconstructs until the end. Obviously this kind of system is not the work of one person : it involves lot of departments (animations, GUI, cameras), but I was in charge to handle that for Hostage to find the best way to put everything together (Hostage was our vertical slice)

I did the generic functions for Tutorials, Relation Gauge, Walls, Texts in 3D (again it doesn't mean I integrated them in the scenes, just I prepared how to integrate them. The GUI team was in charge of their look and in charge of their internal script)

I worked a lot on Flowcharts too with another senior: not on GUI parts, but on "how to track" that, how keep the information, and on making the statistics works with coders

Finally, I took the responsibility of the implementation of the Final Chapters structure (with that INSANE bending). During these Chapters we have no loading between characters (actually, it could happen depending your hard drive), and I spent a lot of time tweaking the memory and preloads of these scenes : for instance, when you are in the Bus Terminal, we have TONS of humans NPCs loaded for diversity and we are preloading the next part of the scene which can be really different depending on your walkthrough (if some characters are dead or not). I really liked working on last chapters. And I hold my breath each time I watch a stream of the game ("will it work? :p")

2.) Any small trivia about the game you can share with us that we might not know about?

I think some fans here know more things than me, but I'll try:

- The Hostage scene setup was during the day at the start!
- We got like 10000 "visual script" pages for Detroit (not all of them are complex hopefully :))

3.) What was the most challenging obstacle for you when developing Detroit: Become Human?

Maybe I should not tell you that, but we changed our tools during the development. Everyone think that Hostage from E3 2016 is the same scene than Hostage from E3 2017. That's not exactly the case. It's the same assets (animations, sets, audio, etc.) but on script-side, one of the

senior scripter refactored all the script structure on the new tools for the 2017 version. And it was not the only changes (if you want to know more, check YouTube). The 2016 version was the very last polished scene we produced with the "Heavy Rain & Beyond" tool. It was a huge challenge to handle this transition smoothly during production for all the scenes. But we had to, because some scenes of Detroit would have been impossible to do with our old tools.

The most challenging stuff I did for Detroit was the last chapters with the "no loading between characters" constraint. You jump between totally different sets with NPCs totally different... and it has to be as smooth as possible without visual artifacts (or at least minimal ones). And sometimes these sections are really short which means you have to keep tons of stuff in memory. Players usually don't notice how complex it is, which is nice : that means it works! It was really important for the rhythm and the suspense. Loading would have broken that.

Another challenge was the NPCs. Few players noticed it but our NPC systems was really a great step forward for us. Stay in Painter District scene and watch them, I think you'll see tons of different animations. The challenge was to find the proper balance for performance

There was tons of other challenging stuffs in Detroit for each department (I could have told you the "Chases" scene)

4.) How do you feel about the game now, now that it has been released?

Happy we did it. And Happy with the players feedbacks :)

I was deeply involved from start to end, then when I watch some players on YouTube or on twitch I'm still a little emotional when I see their reactions (even bad ones :p). Its nice seeing ppl have fun or being emotional too. Really I thx the players to give us that, its a nice reward :)

5.) Do you believe there is a future for the Detroit: Become Human IP?

David answered that already on Reddit I think :p

As a fan, I like the setup, and I'd like see more, but sometimes sequels/prequels are not as good. I don't know what is the best for the IP.

Bonus Questions:

1.) Who is your favorite main character? Why?

Its hard to answer. It depends scenes.

Connor is really funny, Kara made me cry. And I like some Markus scenes too.

Really, I can't answer xD

2.) Who are your favorite side characters? Why?

Probably Carl (even if he has stuffed animals at home, that's bad Carl!!). I like the relationship with Markus, but Hank is incredible too and has more scenes.

3.) Favorite chapter you worked on (or in general)

Cant just say one xD

Scenes I worked on

- Kamski, because I was in charge of this scene, and I think Kamski is an incredible character. I like the setup, the acting, the music, the dilemma in this scene.

In general:

- Markus in Jericho, when he meets the people the 1st time (Lucy, North, Simon, etc..). Its an simple scene, nothing special, but there is something. I really like the ambiance, with the dying androids, with Lucy singing.

- The River (during Final) & Midnight Train. Same thing. I like the interaction with Rose family, the bonds between characters and I like the "ambiance" of these scenes. There is something which appeals to me. The music maybe which is incredible on these parts. The River is a really sad scene, but the endings of this scenes are my favorites with Kara. Valorie is really incredible there and it was hard to work on that when I was tweaking Final. But its so beautiful.

- Crossroads is an incredible scene too in my opinion. I like the rhythm and the dynamic between all the cast.

- Freedom March ... I love players reactions. I think its unexpected for a lot of people to have this kind of scene

I'd say more scenes, but I'll stop here

4.) Any changes you wish you could have made to the game?

Yes, a few things.

Won't tell you in which scene, but we have a problem with memory management and it has some consequences for the visuals. Something was modified before the Master and I had not noticed it. When I did, it was too late. It won't be patched now (it could destabilize some other stuff). It's

hard for me when I see the problem on streams, but so far players haven't noticed it I hope. It happens ^^

The same for the crash a lot of players got during the last "Amanda Garden" section with Connor. I know exactly in which scenario it occurs but it seems to happen only if you have played for a very long session without rebooting the game (leak issue?). We failed to reproduce it. I'd like to have fixed it. By the way, it's funny to have this crash at this very specific moment of the story :p (we could almost say it was intentional xD)

Another thing I'd ask to Game Designers is about the flowcharts: I noticed some players didn't want see them on their first run. I'd like add an option to hide them.

Again I'll stop here : a game is never "totally" finished, I know a lot of improvements we could have done here and there, but I'm very happy with what we delivered.

5.) Any final thoughts you'd like to say?

Thx for the questions, and thx to the Detroit community and your feedback. People are really nice and positive :) (and I love the fanarts ^^)

I'd like to thx all the QD teams and members.

Again, our games are a huge cross-team effort,

but I'd like add some words for people of my team. I want to thank Chloe for the awesome NPCs setup in Crossroads, Florent for his hard work on NPCs life in Painter district & Capitol Park, Zach & Aurélien for their NPC setup and optimizations in Final - Pacific/Violent (and I know I was annoying :)), Antoine for Team Mates and all the debugs, Cyril for his first E3 scene ever with Capitol Park, Nicolas for all theses iterations of Spare Parts and for being our wheelchair expert, Yoann for being our "hand to hand" first explorer and for Fugitives, Tom for the awesome chase of The Nest and for being our pigeon master, Pierre for all Rose scenes, Baptiste for all the "Preconstructs" in this game and his optimization of the Border, Antoine for all the "On the Run" changes I asked constantly for memory :p, Raphael & Mathieu for their AWESOME long take in Final Revolution action sequence, Raphael again for the 2500 variables of the Flowcharts, Leo who helped me a lot to understand the last parts of Final, and obviously our lead, Julien for the Main Menu (Chloe!!!) and Stormy Night. I won't forget Gautier, Cyril and Elise: your work is still in the final game :). If I forgot someone, shame on me and you know where to find me!

Guys, you rock!