Postmortem: Pipeworks Software's Deadliest Warrior

PRINT

By prithvi virasinghe,Jeremy Mahler

[The developer and publisher of the Spike TV-licensed fighting game discuss making an XBLA/PSN game on a tight budget, at an unusual angle for the established, competitive genre, and for an audience of skeptics.]

As a show, Deadliest Warrior has been a huge success for Spike on multiple platforms, and is among the most downloaded TV shows on Xbox Live and PlayStation Network. Creating a video game around the series was a logical next step for the franchise.

The game, the first published by Spike Games, launched on Xbox Live Arcade on July 14th and on PlayStation Network on October 5th. To date, the game has sold over 225,000 units.

In this postmortem, Prithvi Virasinghe, Spike Games' creative director, and Jeremy Mahler, the game's producer at Pipeworks, tag-team on how the game's development process went.
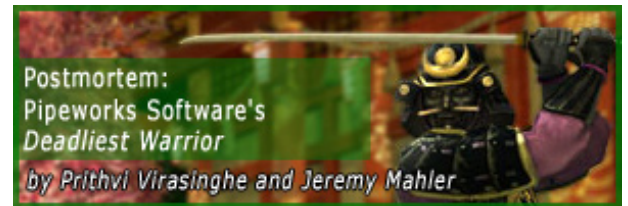
What Went Right

1. A Common Vision and Goal

Prithvi Virasinghe: I was initially worried we were going down the wrong path by choosing to do a fighter for this game. We would invariably draw comparisons to retail titles like *Street Fighter IV, Tekken*, and *Soulcalibur IV* that have been in the market for many years and gone through multiple iterations to become what they are.

We were a downloadable game with a drastically different budget and timescale. Luckily, Pipeworks had experience in the genre by virtue of its Godzilla titles, so we had a good base to start with.

In the very early phases of the project I would brainstorm with my producer, Carlos Giffoni, to determine what would make this game different. What about this game would really appeal to the Deadliest Warrior show fans, hardcore game fans and casual game fans? And how could we create a great gaming experience while also staying true to the main premise of the show?

One of the brainstorm sessions lead to discussions of *Bushido Blade* and the strategic combat system Square's PlayStation 1 classic used. No fancy combos, no ridiculous powers and health systems -- just timing, spacing and strategy. It really resonated with what we were trying to achieve on *Deadliest Warrior*.

I immediately called Jeremy Mahler, game producer for Pipeworks, and asked to speak with the design team. Incidentally, they had just had their own brainstorming sessions and before I could get into my discussion, he told me that the team had been thinking that if this game was to be a fighter, it should be a realistic fighter much in the vein of *Bushido Blade*.

At that moment, we were all on the same page, and had the same vision for this game. This immediately made both Spike Games and Pipeworks gel from a design perspective, after having reached the same conclusion from our own

paths. From then on we were able to have really meaningful design discussions throughout the life of the project, as well as use each other for support when facing pressures to move away from the realistic fighting style and embrace a more arcade-friendly format.

Jeremy Mahler: It was early in the project and we had just submitted a build to Spike which had a knight and ninja running around in a Roman-style coliseum, where players could hack away at each other until one warrior died. We weren't really happy with we were seeing, so we called a team meeting to discuss the build and the game in general.

The consensus of the group was that if we created your average run-of-the-mill fighter, we would be compared to all of the *Street Fighter*s and *Soulcalibur*s already on the market, and we would fail miserably. A new direction had to be taken. What would set us apart from the other fighting games out there and what would make the game fun to play?

We fired up a couple of different fighting games and began brainstorming the core elements of our game. It soon became apparent to us that hardcore and brutal fighting, with bloody dismemberment and one-hit kills, hadn't been done in years.

Not only did this style of gameplay jive with the IP, it was also something that we, as gamers, wanted to play on our own time. We immediately started solidifying core gameplay mechanics while eliminating those elements of the original design that no longer supported the direction that we were moving in.

By the time our meeting was over, we had a solid game plan, there was no question in anyone's mind what we were making, and the entire team was absolutely pumped (some might even say giddy) about what we were about to unleash from our skulls. As it turns out, the end product is exactly what we set out to make from that single meeting which we had at the start of the project.

2. Close Integration with the Show

PV: The *Deadliest Warrior* team was very involved in the development process, which kept us honest from a historical accuracy perspective but also was invaluable in keeping the game in line with the TV series. Data collected in the show was used in development, and some of the weapons experts featured in the show even did some of the mocap for the game.

Pipeworks went down to the set of the show and trained with the weapons smiths from the show. The show also weighed in on the warrior and weapons designs, as well as gameplay itself. All and all, it was a team effort and we

are very grateful for all of the support from the network that the game received.

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3. A Good Working Relationship

JM: Spike was absolutely great to work with. From design ideas to schedule changes, they were always open to listen and give their feedback. Not to say that there weren't requests that made the team groan and shake their heads, but if there was a reason we couldn't do something, or a direction that we wanted to lean towards, Spike was extremely reasonable and ready to make accommodations if need be. Open and honest communication was the key to this.

For instance, after the production team's meeting where we defined what type of game we were going to make, I hopped onto a phone call with Prithvi. I laid out our plan of attack and what we wanted to accomplish with the game.

He replied that he had been thinking about the game's direction as well and what we were proposing was in line with what he envisioned would make a standout title. Having both the developer and publisher in sync was awesome and it made the whole development process go a lot smoother.

PV: A funny anecdote related to this is when we were initially seeking developers to work with, it came down to Pipeworks and one other studio. That studio came into the pitch with a fully working demo, and Pipeworks had a rendered game trailer. Being a producer, I was immediately impressed with the demo and felt that it created a good base for iterative development.

However, the rest of our management team felt the game trailer better captured the spirit of what we wanted the game to be. Plus the head of Pipeworks, Robert Daly, is an ex-Army Special Forces member, so he brought a lot of combat awareness to the team.

Even after we chose Pipeworks, initially I was not sure we made the right call. It was a risk to choose a promise of a game versus a game in early working order, but now I have no doubt that we made the right call.

Through the life of this project, our working methodology has felt like a partnership more than a traditional developer/publisher relationship. We are very open with our goals for other projects such as downloadable content (DLC) and sequels, and Pipeworks is great about working with us and the multiple avenues we are currently exploring. That openness on both ends makes having a singular goal possible.

4. Double Compliance

PV: I am putting this in bold, as I think this is the second best decision we made as the publisher (choosing Pipeworks as our development partner being the first). We used two QA teams. Pipeworks is a part of Foundation 9 Entertainment, which has its QA group, F9QA. It made sense to partner with them as they already had an internal pipeline established to hand over builds and communicate on-the-fly about bugs.

We also partnered with VMC to QA the already QA'd builds. Using a staggered build delivery schedule, we were able to get F9QA to go through all the functional and compliance issues, have Pipeworks make the fixes, and then send the game to VMC for a final compliance check.

This sanity check was great, as the project passed QA in its first attempt and it forced both QA teams to be thorough and honest with the issues that they were finding. Many issues were logged into the database that would not constitute a certification failure, but having that extra set of eyes on everything made the final product that much more stable.

5. Team Build Reviews

JM: As a team, build reviews helped us to see what was going on in the game at that particular moment. It was a snapshot, if you will, especially for those on the project who had their heads down grinding away at their tasks.

I can't even begin to count the number of times I've heard the phrase "I thought that was fixed" while sitting in a build review. Just because a fix or a change was submitted didn't always mean that it was working correctly, or made it into the game.

Speaking of working correctly, without our build reviews, we would have had to rely solely on the QA teams to verify whether or not the game's shell, assets, and gameplay in general were all working as intended. If it was a subtle or obscure change/fix that we made, there would have been no way that they would have been able to verify it one way or the other.

Our reviews also helped us to recognize areas of the project that needed more attention, either by the dev team, or by the QA team if what we were seeing wasn't being reported in the database. The only thing that we would have changed about our team build reviews is that we would have had more of them. They always helped the project.

What Went Wrong

1. Selecting and Processing The Motion Capture Data:

JM: Even though the decision to go with motion capture was the correct decision to make and the end result was what we wanted, our initial methods of selecting and processing the mo-cap data caused us quite a bit of extra work.

We were definitely unaware of the complexities and time required for selecting hundreds of motion capture moves based off of videos of said moves (each move having multiple takes).

This caused us to put in our order for our moves much later than we would have liked, and also resulted in us receiving some of the data later than desired. Luckily the studio we used, House of Moves, was extremely helpful and got us everything that we needed while answering all of our questions.

Processing the data once we got it back also took us by surprise since we had to take a move that had, say, 100 frames, and then cut it down to 50 frames or so in order to keep the action moving quick enough for a fighting game while still maintaining the realistic movements of each warrior. The animators definitely had their hands full.

Since there was more cleanup work than we expected and the game relied so heavily on the warrior animations, this

put a lot of pressure on the team to work on other aspects of the gameplay while chomping at the bit for each processed mo-cap movement to come in.

Because of this, we had to condense some of our milestone deliveries towards the end of the project, which gave us more time to get all of these animations hooked up while still delivering what we promised the publisher, but which made us work harder than we would have liked.

2. Unprepared for Localization

PV: We opted for double compliance testing, which was great, and we foolishly underestimated the amount of work required for localization. We also thought the game would be in a more polished state than it was when we started localization, and this caused us to have to add new text to the project as we went on.

Not only was it hard to manage, but we also worked with an offshore team that did not keep the same hours. Normally this would not be a problem, but since we did not have all of the text ready from the start it meant that we would receive new text from Pipeworks during the daytime but the localization team was out of office and could not get to it until the next day.

Since they were out of office, they could not schedule resources for the next day and thereby we would miss a day while we got everyone assigned again. This seemed to happen all the way to the very end of the project, even after our contract with the localization team was over. We basically had to reach out to all of our friends all over the world to get them to translate pieces of sporadic text. My Facebook status updates were pretty funny for a while -- something random like "How do I say 'sever limbs' and 'decapitate your enemies' in German?"

JM: Our original plan to have all of our in-game text ready for localization was foiled for a number of different reasons. The main reason was our focus on tweaking and refining the actual gameplay fighting mechanics, and not concentrating on what would make the UI better.

As we were compiling all of the in-game text for translation, we realized that we still hadn't named all of the warriors' moves, nor had we come up with hints and tips for the loading screens. We ended up sending updated drops of text to be translated after our initial drop -- much to the chagrin of the publisher and localizers, I'm sure. There are always a few pickup lines here and there, but the amount of pickup text that we sent was more than we felt comfortable with.

3. A Need for More Multiplayer Testing

PV: The hardest and most vital part to get right in a fighting game is character balance. We played over 100,000 battle simulations, had a full-time team of dedicated testers, and bought in new players for game testing sessions throughout the project, in order to get the intricacies of each character right.

After releasing the game, the thousands of multiplayer mode users quickly discovered the ninja was overpowered. For experienced players, they could avoid most of these issues, but for newbies, going up against the ninja was a frustrating experience. After about a week of observation we were able to get a good handle of balance issues and began work on a Title Update immediately.

One of the great things about the gaming community is that the dedicated fans are very vocal. We were able to get a lot of great feedback from the players on the forums, Xbox Live, and Spike.com. Using this feedback and running some ideas past the players, we were able to create a Title Update that addressed all the balance issues. If we were not listening to the community, it would not have been possible to get this done as quickly as we did, so a big thank you must go out to all the fans that played this game for hours on end and gave us excellent feedback.

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4. The License-Based Stigma

JM: Anyone who's ever worked on a title based off of any sort of non-game related IP knows that there's almost always a hurdle to overcome before any contracts are signed or any game design thoughts are even written down on paper. *Deadliest Warrior* was no exception.

The premise of the IP makes perfect sense for a game, yet there were countless gamers and reviewers that immediately blew this game off as garbage without picking up a controller to give it an honest go.

I heard it numerous times at E3: gamers would come up to the *Deadliest Warrior* booth, play the game and then tell me: "I have to admit, I was a skeptic, but this is actually really fun to play." We literally had people coming back to the booth to play the game again and again for three days straight.

Regardless of the game's content and fun factor, the stigma of being based off of a TV show is still present.

There are a ton of people who have picked up on the game's subtle complexities and depth by really playing the game and seeing what it has to offer, but on the flip side of that, there are just as many who either refuse to play it, who briefly skim through the game with their opinion already set in stone, or who try to pigeonhole *Deadliest Warrior* into the *Street Fighter* or *Mortal Kombat* mold while becoming upset when they discover that there aren't any complex 20 button combos to master or warriors that fly through the air and shoot lasers from their eyes. Perhaps some of this stigma will fade over time.

PV: We knew this would be an uphill challenge especially from the review side. We tried to be prudent and do as many previews of the game with press as possible during GDC and E3. We wanted the game to speak for itself on its own merits. Getting the game into the hands of as many members of press as possible leading up to the launch was our strategy to overcome the automatic negative stigma attached to games based off movies/TV shows.

This strategy partially worked, as we were able to get a lot of positive press coverage -- most in the vein of "I really thought this game was going to suck, but was really surprised by how much fun it was." But there are only so many people you can see and arrange meetings with, so we still got a lot of negative reviews that disregarded the game because it was based off of a TV show or did not match up to the feature set of retail titles.

It stings when your downloadable title is compared to a retail title and blasted for not having as robust a feature set. It really is a no-win situation trying to deal with this. You just have to take your lumps and hope that the players see the value in the game by playing it, as opposed to reading a review of it and internalizing those opinions.

The game has done really well, so I think the players have spoken, and in the end what is most important is delivering a great game to the fans. In the end, I stand by the title and know that *Deadliest Warrior* is a game for players and

fans of the show, not critics.

5. Sound

PV: I can't tell you how many times I've been producing games and got wrapped up in the gameplay and later realize that I didn't allocate enough resources to sound design. I feel that editorial and sound design is the most neglected part of game production, because we get too focused on features and graphics and making the game look awesome. However, when you put it all together, sound and copy make such an impact on the final experience.

I fully understand this principle and am very aware of the recurring problem, yet I find myself in the same situation over and over again. It is really hard to make a decision to not spend time developing a game feature and instead allocating that resource to better sound. A game feature is tangible and immediately gives you results, whereas getting the right sound FX or audio cue for an action is more subtle a payoff. It is a design pitfall that I often preach whenever I give talks on game design, and I feel that by now I should have learned to practice what I preach.

JM: We originally had no plans to use any VO in the game except for grunts, cries, and other sounds of battle. When we were at the motion capture shoot, we put a headset on the actors in order to capture a few of these, with the intention of recording any pickup grunts in-house.

What ended up happening was that the actors ad-libbed some really great lines, especially TJ Storm (who played the pirate), so there was no way that we couldn't include them in the game.

Unfortunately, since we never planned on grabbing VO from the get-go, the audio quality wasn't the greatest. Our audio designer did what he could to improve the audio quality, given the circumstances, but in hindsight we would have given the actors lines and recorded them in a controlled environment to improve the quality.

Conclusion

PV: This game was a great experience for us from start to finish. We feel that we learned a lot of valuable lessons that we can apply to our next project. Having a great level of trust in Pipeworks has allowed us to start a lot of preproduction tasks for future games and given us a valuable head start. We are planning a DLC pack for *Deadliest Warrior* with new characters and game modes.

Another commodity we have earned is a great fan base that is engaged and we are actively talking to. Having an open level of communication with our fans is great, as it allows us to bounce ideas off them, and refine our designs in the preproduction phase. The most important asset to have is time, and forging better relationships can help you save a lot of it!

Data Box

Developer: Pipeworks Software
Publisher: Spike Games
Release Date: July 14th on XBLA, Oct. 5th on PlayStation Network
Platforms: Xbox 360, PS3
Number of Developers: In-House: 60
Contractors: 130
Length of Development: 10 months
Lines of Code: 784,304
Development Tools: Microsoft Visual Studio 2008, SN Systems ProDG, Photoshop, Notable Tech, 3DS MAX, SN Tuner, GPAD, PIX, Fmod

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