How id Software went from skeptical to excited about Google Stadia streaming

Enlarge / Google Stadia’s controller.

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SAN FRANCISCO—Back in 2016, when Google first approached id Software about bringing some games to a potential new streaming service, the game developer was skeptical to say the least. “The proposal immediately bumped against our main bias,” id Senior Programmer Dustin Land said during a talk at this week’s Game Developers Conference. “Streaming adds latency to the thing we desperately want to remove latency from.”

Fast forward more than two years, and id was proudly on stage this week showing a version of *Doom Eternal* running on Google’s newly announced Stadia streaming platform. But getting from that initial skepticism to that grand unveiling wasn’t always an easy process, Land said.

Getting to yes

For years, Land said, Google had been watching their YouTube analytics, waiting for a big enough group of users to reach the point where their connections would be able to handle game streaming. By September of 2016, Google thought the broadband market was mature enough to give it a try, and the company approached id for some real-world help with game testing.

Porting the 2016 *Doom* to that very early version of Stadia took just three weeks of full-time work by two people, Land said. That process was made easier because the game already ran on Vulkan graphics with Linux support, things that Land said made it a "good time [for developers] to adopt" after two years of improvements from Khronos.

But that first streaming version of *Doom* was "lackluster," he said, with apparent lag even when running on a local network. So after a bit of iteration, Google came back to id that November with a new version that ran on a nearby cloud instance using a wireless router, a Chromebook, and an Android phone for input.

"Needless to say, it was a night and day difference," Land said. "We were stunned by how much things had improved… It [only felt] like someone just forgot to enable game mode on the TV." That was enough to convince id to move forward with the project, even though there were still some kinks to work out.

More recently, Land said Google came to the id offices to set up a "Pepsi Challenge"-style blind test between Stadia and local hardware "to keep themselves honest and really drill down on eliminating perceivable differences in the play experience. They also wanted to demonstrate that Stadia could be superior to a local experience in certain eyes."

In that blind test, you could "hardly tell what was local and

what was remote," according to Land. The results were strong enough to get non-gamers in the company excited, he added, and convincing enough to get Google's executives to greenlight the whole project for production, leading to this week's announcement.

Building a platform

Aside from the streaming quality improvement, Google's first entry into the gaming platform world has had some other growing pains, Land said. The company's first version of a Stadia development toolchain, for instance, was just "bad," with lots of bugs and a complicated sequence of steps for setting up and migrating developer environments.

After complaints from id, though, Google brought in a user experience team and pivoted quickly based on feedback, setting up easy SSH instances and global environments complete with Web-based administration portals. "One thing that really impressed us the degree to which Google listened," Land said. "Even as they took on more and more, their attentiveness and hunger have not diminished."

Google has also had to launch from a standing start when it comes to the platform services side of running a gaming company. The first version of the service id saw was literally just a streaming video window with the ability to read inputs, Land said. With id's support, though, Google has now added Achievement tracking, identity and profile management, leaderboards, parental controls, save games, stat management, matchmaking, and the kind of social graph that developers and players expect from a modern game platform. "Just because you're Google doesn't mean you get [these] things for free," Land noted.

Now that they're convinced the technology works, Land said id is optimistic that streaming could let high-end games reach a market of mobile phone, tablet, and laptop users that's

potentially ten times the size of the current console and gaming PC market. The company also sees big benefits in the reduced friction of users not having to download game files and the added security of the game binary not being exposed to the end-user.

Land also teased that id was busy working on ways to differentiate the Stadia version of *Doom Eternal* in ways that aren’t possible on other platforms. “That is all I’m allowed to say on the subject” for the time being, he added.

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