Video Games: What the heck?

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The video game industry is growing up. Over the last 7 years the content delivery media for games has gone from 64 megabytes to 9 gigabytes. The processors and associated graphics cards have increased in power. It is now feasible to render fairly realistic characters. It is also realistic to render cartoon characters. In short we can now focus on the story and the experience rather than on the technology. We can start to answer the question, what is an intelligent avatar?

It used to be the case that the game engine was the crucial part of a game. This is no longer the case; the task of building an efficient game engine is well understood. The primary task before a game team is now content production. Thus the engineering task in game building is focused on tools for the artist and the art pipeline that bakes the data for the game. What are the tools that we need? Well, we basically need the same tools that the movie industry needs, and then some. We need to manage transition trees between animations that may have 10000 transitions in them. We need to blend between arbitrary frames on animations. We need our artist to be able to instantly see his/her work on the target platform.

In this talk I give a historical perspective of the games industry. I talk about the changes that have occurred over the last 7 years and I talk about our future directions and what our biggest technical challenges are.