State of the Industry Address
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Good Morning, and welcome to the 12th annual Electronic Entertainment Expo. This is the 11th year I've delivered these State of the Industry speeches. Some of you may have noticed that I am using a teleprompter for the first time. That's because I turned 55 in April and, what can I tell you, the eyes aren't what they used to be, let alone the memory. So thank you for tolerating my visual aids.

Also, to make sure you pay attention, I have as in some past years, interspersed into these remarks lyrics from two early seventies rock songs. If you can identify the song and the artist for both, write it on a card and place it in the bowl someone will be holding as you leave the hall. If your name is selected, we will contact you to give you this one of a kind E3 jacket.

I confess I find it harder to find themes to share with you. So I have set a modest goal this year: my goal is to make you think about this industry differently than when you came in.

I remember when we first convened in 1995. Sony launched the PlayStation, Sega launched the Saturn, and Nintendo launched the Nintendo 64. The talk was of next generation consoles, of faster processors and better graphics, and of the transition year.

Like some of you, I feel like I've been here before and it makes me wonder just what's going on. For this year two new consoles are being launched, there is talk of faster processors and better graphics, and of yet another transition for the video game industry.

You know, in the century-long history of film, there have been transitions also -- from silent to sound, from black and white to color, and most recently, to computer generated special effects and HD. But these have taken place only every generation or so. In contrast, the video game industry undergoes these technological transitions every five years. How can an industry keep growing when it keeps compelling its consumers to upgrade to new hardware not once every 10-20 years, but once every five years?

Yet, to date, we have managed to survive and even thrive. And I think we will continue to do so. That's why I don't want to spend much time this morning forecasting how things will play out in the next year. The truth is it's not terribly important how many units of hardware and software are sold in 2006. Don't get me wrong – it is important to individual companies -- but it is less important for the industry collectively. The real issue is how this year positions the industry for the future. That is, after all, what transitions are all about. Many of you understandably want to focus on what happens from May-December, 2006, but in point of fact I suggest that the relevant time frame is May, 2006 through December, 2010.

And in that span, I believe we will see continued accelerated growth and market expansion for the video game industry. So whatever occurs in 2006, and I have heard the doom and gloom, the following few years will likely be years of solid growth and stunning creative advances. We are entering an era where games and other forms of entertainment technology will fuse together even more tightly, and where the full potential of emerging platforms like online and mobile, will come more sharply into focus, an era where the artists, storytellers, animators, musicians, and programmers who create interactive game experiences will put us on a highway, show us a sign, and take us to the limit one more time.

No doubt, there will be some road kill along the way, as there always is during video game technology transitions. Some companies will be absorbed by others, unable to raise the ever larger sums of capital required to compete; some companies will disappear entirely, having failed to create games that satisfy consumer expectations; the political controversy will ebb and flow, and ESA will continue its efforts on all fronts to oppose unconstitutional efforts to regulate the industry, including through our new grassroots political network for gamers, the Video Game Voters Network. But by the time we reach 2010 – and talk of the next transition is at full volume -- the video game industry will be bigger, more important, more influential, and more relevant than ever before.

So if this is not a speech about the transition, what is it? In the past, I have talked about the challenges and opportunities facing the video game industry. I've talked about what it will take for video games to truly rival movies as a dominant entertainment medium. I have talked about the challenge of sustaining creativity and innovation in the face of soaring R&D costs and high risk market environments. I have talked about the political attacks leveled at the industry, and the critical need for self examination when it comes to creating and marketing products responsibly. I have talked about the need to broaden markets and produce a wider variety of games to appeal to new audiences. And I have talked about how to weather past transitions. These are all important and worthy topics.

But this morning, I want to talk about something I think is bigger than next generation transitions, year end sales, or the politics of the moment. I want to talk about why the video game industry is more than just an exciting entertainment powerhouse.

In the 20th Century, America witnessed the rise of several transformational industries, industries that changed America forever, and impacted the lives of virtually every American -- the auto industry, the television industry, the computer industry, and the telecommunications industry. My message to you this morning is that the video game industry is playing a pivotal role in shaping the economy of tomorrow. And I believe when we look back twenty years from now, it is quite possible that we will add the video game industry to the list of businesses that transformed America and impacted the lives of Americans, whether they are gamers or not.

What's the basis for this claim?

Let's start with demographics because the data is inescapable. In the year 2010, there will be 75 million Americans between the ages of 10 and 30 – as many in this millennium generation as in the Baby Boom Generation – and everyone of them will have grown up with video games as a central part of their DNA. Even today, ESA data shows that 35% of American parents play video games, and 80% of them play with their kids. Video games are the rock and roll music for the digital generation and Halo and The Sims and Zelda are their Grateful Deads and their Rolling Stones.

This millennial generation is gradually assuming the seats of power in commerce, the media, academia, and government. Unafraid and unintimidated by games, unburdened by uninformed and unhealthy stereotypes, they are uniquely comfortable with technology and interactivity, and are more prepared to embrace and accept video games however they cross their lives whether in the office, at home, in schools, or on the road. In short, video games will have an impact on our culture because a huge segment of the country, indeed the world, will regard them as a central part of their daily life.

If demographics dictate that the impact of video games on the country is inevitable, economics add the exclamation point. Earlier this year, ESA asked J Gregory Sidak, Visiting Professor of Law at Georgetown University, and Robert W. Crandall, Senior Fellow at The Brookings Institution, to determine if the video game industry had any effect on the high technology sector of the U.S. economy and, if so, to document it in a white paper. We were not sure what they'd come up with, though we suspected there were indeed a range of positive impacts. We asked them to look at this issue because it had become clear to us that the generational divide which leads to political attacks on the industry also reflects something more serious: a lack of understanding about, and a tendency to marginalize and trivialize the industry.

If this simply meant that we would engage in a few more years of constitutional battles before politicians move on to the next flavor of the month, it would not be terribly important. But if it means people will fail to see the nexus between a flourishing video game industry and critical components of economic growth, that's not healthy for the country at large

Today, we are releasing this seminal white paper entitled "Video Games: Serious Business for America's Economy." I want to share some of the key findings with you.

Relying on data reported by Price Waterhouse Coopers and their own analysis, Crandall and Sidak calculate that U.S. sales of video games for consoles, the PC, the Internet, and mobile platforms reached $10.3 billion in 2004. But more importantly, Crandall and Sidak estimate that above and beyond software sales the video game industry stimulates an additional $7.7 billion in spending each year in the US alone, bringing the total economic impact of the game industry on the US economy alone to $18 billion. And even this understates the reality because it does not consider the

industry investment in human capital and R&D which in turn create additional benefits that ripple through other sectors of the economy.

As Crandall and Sidak put it, “the video game industry has grown into a vibrant business that creates thousands of jobs, improves the performance of other industries, and spurs technological advancement. Clearly, this is an industry about a lot more than fun and games. It’s a serious business that improves training, efficiency and productivity in a variety of industries and has led to innovation in other segments of the technology industry. We found that video games play a real role in maintaining America leadership in information technology and are a powerful driver of the digital economy so important to America’s economic future.”

The report is filled with supporting evidence. I want to share a few examples with you but urge you to read the entire study which will be on the ESA website today.

Everyone here can no doubt recite from memory the impressive specs of the CPU and GPUs on the X-Box 360 or the PS3. But few consider how all this power strengthens other sectors of the economy. Both the X Box 360 and the PlayStation 3 have staggeringly powerful new processors whose development is largely attributable to the insatiable appetite of game developers and publishers for machines that can deliver ever more compelling interactive experiences. Dr. John Kelly, Senior Vice President and Group Executive for the IBM Technology Group told Crandall and Sidak that, “IBM places great value on chips made for entertainment software that goes beyond revenue and profits. These chips help drive technology in other areas.”

What’s that mean to people like you and me, or, better yet, to my parents who never have and never will play a video game in their lives? On one level, it is as simple as the fact that most major advances in home PCs flowed from the extreme processing demands of video games which spurred PC makers to create ever more powerful machines with better sound, graphics, and ability to multi-task. As a result, non-game applications can piggyback on new processor technologies developed for games. In effect, demand for games expands the boundaries of computing beyond that which would be required for the more common home applications. So the clarity and quality of the sound my Dad hears when he listens to his beloved Cornell football and hockey games on that computer sitting in my old bedroom in Manhattan is in part due to the stimulative impact of video games.

But the impacts occur on a more important level as well. The field of medical imaging requires the same high speed processing that video games use to create 3D images in real time (just watch the medical drama House and you’ll see what I mean). Advanced scanning techniques now permit a single scan to capture 2-3,000 images, or slices. But using traditional processors, reconstructing an image takes two seconds per slice, or over five minutes for a full image. But IBM is selling the CELL processor it developed for the PS3 to medical technology companies among other high tech sectors. And the CELL chip can process the entire image in seconds, leading to improved diagnostics and patient care. Beyond the medical field, CELL processors are also now being used

to handle sonar and radar computations on US submarines and aircraft. Both of these uses in the medical imaging and defense arenas are just the beginning of how an R&D investment by the video game industry is migrating across society in ways large and small, noticed, and unnoticed.

Here's another everyday example: video game engines that were developed to model 3D landscapes for first person views of combat video games have been adapted for use in residential real estate. When home buyers go on a website and see a home virtually, right down to looking out windows and seeing actual views they would get from a prospective home, they're benefiting from video games. Theodore Beale, co-founder of the 3D engine firm Trevada, said that real estate agents would not use these features of the technology had they not been previously developed for video games.

Video games are also positively impacting rollout of broadband and wireless networks. Economists have recognized that ubiquitous adoption of broadband will produce large societal benefits. Crandall and Sidak show that games induce more users to connect via the Internet and thus spur greater use of fixed and mobile broadband. In fact, data suggests that consumers are more likely to invest in broadband Internet access for the home if they use entertainment software, and they are also more likely to set up home networks. In other words, games are fueling demand for broadband and home network services; indeed, cable and DSL providers will tell you that demand for video games is a major driver spurring investment in and rollout of a new generation of super high speed Internet pipes. And those mobile phones on your hips: they have more processing power and graphics capability in part because of the drive to enhance their functionality for games.

The report touches on many other ways that video games are influencing everyday lives from workplace training to pollution control. The Office of Naval Research is creating a nursing simulation trainer based on the video game Half Life; Game2Train has developed training games based on Doom and PacMan for such white glove companies as JP Morgan Chase and American Express; and the Dutch Government commissioned a game called NitroGenius to spur a search for reducing air polluting emissions. These "technological spillovers" which are not even included in the $18 billion economic impact estimate, represent a significant video game contribution to the overall economy because they drive increases in productivity that translate into a higher overall standard of living in the future.

Beyond the hard dollars the industry generates, there are the jobs it spawns. According to Sidak and Crandall, relying on standard Bureau of Economic Analysis (BEA) formulas, the $8.2 billion in video game sales in 2004 means that the video game industry supports 144,000 jobs nationally, a figure they forecast will grow to 265,000 by the end of 2009. Moreover, many of the jobs created by the video game industry are high skilled and highly compensated. Typical entry level video game industry jobs pay $50,000 or more, well above the average paid to typical college graduates.

And even before those jobs are filled, there's another subtle, but equally important way the industry is impacting America's future: math and science education. In my generation, when kids wanted to get into media, it meant they wanted to attend either journalism school or film school. Today, though, with the proliferation of specialized degree programs and courses in the video game field, colleges and universities are responding to the demand among high school students for careers in our industry. That's important because many of the jobs in the industry require a strong grounding in math and science. So in an era where national politicians of all sides are expressing great concern over how to turn out a new generation of highly literate science and math students, the video game industry is helping to draw kids to these disciplines so critical to America's future national and economic security.

Which brings me to one last area which is actually not part of the Crandall-SIdak report. Later this month, the Federation of American Scientists will release a groundbreaking report on Video Games and Education. It concludes that, "The success of complex video games demonstrates games can teach higher order thinking skills such as strategic thinking, interpretive analysis, problem solving, plan formuation, and execution, and adaptation to rapid change. These are the skills U.S. employers increasingly seek in workers and new workforce entrants. These are the skills more Americans must have to compete with lower cost knowledge workers in other nations."

The report is noteworthy not just because it calls on government, educators, and private industry to collaborate on stimulating use of video games in schools, but because it represents the most powerful declaration to date from a mainstream part of America's academic and policy literati, that video games are vital to America's future.

Looking ahead, Crandall and Sidak anticipate that the video game industry's importance will grow, albeit in unpredictable ways. Is it possible that the PlayStation 3 could model the human genome better than a $100,000 super-computer? Will processors originally designed for gaming applications be used to capture faces in a crowd with six million pixels, and even zoom in to distinguish between the fold of a parka or a concealed bomb? The possibilities for how video games and the video game industry will impact the future economy and culture and security of the US is limitless.

Earlier, I suggested that video games could have the kind of effect on this country as other transformational industries have. Each of those industries was recognized and embraced. But we now know that not everything they brought was positive – automobiles brought pollution and reliance on fossil fuels, TV brought concerns about sedentary lifestyles, telecommunications breakthroughs have brought concerns about depersonalizing social interactions. Yet, everyone would agree that the positives overwhelm the negatives. We are here today to launch a three day celebration of the entertainment virtuosity of video games. That is worth our attention and excitement. But my hope is that as we do so, and as we begin this business transition, we may also acknowledge that we are beginning another, far more important transition: the transition from video games as pure entertainment to video games as a central feature in the economy and business and education of America.