

## Chapter 27

# How has the Internet Evolved the Videogame Medium?

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### **ABSTRACT**

*In this chapter we review and discuss the impact of mass adoption of the Internet and its assorted technologies is having on the evolution of the videogame medium. Specifically, we reflect on how the Internet has enabled the creation of novel game platforms and types, triggered the improvement of game development process, expanded the game audience and increased innovation in game creation. Crucially, the Internet has transformed videogames into a massive socialization platform with far reaching consequences into society and economy.*

### **INTRODUCTION**

Rapid changes are taking place throughout the videogames industry that change the way we design, create and play videogames. Advances in rendering technology have enabled the most realistic virtual worlds ever seen, raw CPU power and advanced Artificial Intelligence algorithms have created human-like opponents and complex physics simulation in games. Gaming systems' interfaces have become simpler and more acces-

sible by all. Advanced manufacturing processes enable lower the videogame platforms' cost to an all-time low. Technology is continuously redefining what is possible in videogames in terms of world size, scope and interaction giving game developers unprecedented opportunities and freedom to materialize their vision. However, no single technology has changed, and has the potential to change the culture and medium of videogames even more in the future, as much as the Internet.

The Internet's evolution and maturation as a technology as well as its penetration to an increasing number of households all over the

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world, is one of the largest and most important factors that influence the videogame industry in the recent years. The Internet has introduced to the videogame industry new gaming platforms and game types, new distribution models, new economic models, new marketing ways and has returned the videogame medium to its true socialization platform roots, something that had eclipsed since the early days of videogaming. In addition to that, it has changed the way companies develop games, development costs have decreased in many cases, innovation is on the rise again and gamer communities are increasingly involved in the development process.

Drawing from both academic research and industry sources, this chapter reviews how the Internet has evolved videogames as a medium in all its business, technological and social dimensions. The analysis includes new game types and platforms, the creative freedom afforded to developers by the new distribution channels, and the socialization encouraged by the online connectivity and massive participation of players in videogames games. The effect of the largely expanded game audience on the videogame medium is also explored. Furthermore the influence of these factors on the way we create and play games in the recent years is also analyzed.

To put our discussion into context, we start by briefly reviewing the Internet's history from its humble origins as a limited research project to the mass market service it has evolved to. Also, we briefly present the history of videogames.

### **A BRIEF HISTORICAL PERSPECTIVE**

In October 1972 the U.S. Defense Advanced Research Projects Agency (DARPA) organized a large, very successful demonstration of a new network technology at the International Computer Communication Conference (Leiner et al. 2009). This was the first public demonstration of ARPANET, the progenitor of the Internet. Several

years of standardization attempts followed and by 1985 the Internet was established as a technology supporting a broad community of researchers and developers and was beginning to be used by other communities for daily computer communications (Odlyzko 2003, Leiner et al. 2009). The first popular Internet application, electronic mail, was being used broadly across several communities, often with different systems, demonstrating the utility of broad-based electronic communications between people. In the late 80ies, several commercialization attempts of the primitive Internet were made by major companies like CompuServe and AOL. Each network had its own proprietary interface and a limited selection of content providers, and charged a premium for the service (Odlyzko 2003). Tim Berners Lee's invention of the World Wide Web, as a more user-friendly interface to the Internet in the early 90ies, gave a boost to its popularity. By mid-1995, popular culture had begun to notice the web, and Netscape Navigator became the de facto standard for web browsing at that time (Peter 2003). In the same year Microsoft released its first edition of the Internet Explorer browser. Since the mid-90ies the Internet has been growing at a rapid rate, further fueled by Web 2.0 technologies and the ability given to users to create their own content and sites. In addition to that social networking sites, which were launched as early as 1997 (Boyd et al. 2007) and became massively popular with MySpace and Facebook, encourage the creation of ever expanding social networks of people, allow the sharing of information of any type and have made the Internet known to and used by an even broader audience.

Coincidentally, Atari released to the public its first successful coin-op game, Pong, in 1972 (Kent 2001). Attempts to create and release games to a broad audience before then either failed (Computer Space) or were impossible due to the niche market of mainframe computers. The enormous success of Pong followed Asteroids, Space Invaders, Pacman, each game broadening the videogame medium and attracting an increas-

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