

CISCO BUSINESS TRANSFORMATION SERIES
SEGA CORPORATION CASE STUDY



CUSTOMER PROFILE

- Customer:** SEGA® Europe, Ltd.
- Background:** SEGA Corporation is multinational video game developer based in Japan whose famous protagonists include Sonic the Hedgehog and the Total War franchise. After exiting the gaming console market in 2001 to focus on video games, SEGA needed to rethink its entire networking architecture to improve collaboration, eliminate redundancy and inefficiency, and lower costs.
- Region:** London
- Industry:** Entertainment
- Employees:** 550
- Business Issue:** Network-based transformation of international development processes

HIGHLIGHTS

Goal:

- Replace inadequate and cumbersome legacy network system with a new, streamlined architecture capable of delivering massive amounts of bandwidth, sophisticated collaboration tools and the heightened security levels needed to secure SEGA's position in the gaming industry and lay the foundation for future expansion.

Solution:

- Backbone based on Cisco Catalyst 6500 Series switches, Unified Communications Manager, Unity Connection, WebEx, and MeetingPlace Express for collaboration; 5500 Adaptive Security solution to manage all voicemail, online meetings, video conferencing, and security for 200 developers across five European offices and Australia.

Results:

- Reduced file transfer time from hours to minutes
- Doubled data throughput
- 80% reduction in time dedicated to supporting and maintaining the network
- 60% cut in licensing costs and streamlining networking vendors from 30 to five
- Freed IT and engineering staff to focus on higher-value work

STRATEGIC NETWORK AND COLLABORATION TECHNOLOGY HELPS PROPEL SEGA TO THE TOP OF ITS GAME

Unleashing Sonic the Hedgehog's power to run faster than the speed of sound and roll himself into a lethal blue ball in pursuit of the evil Dr. Robotnik, are just some of the action-packed plot lines, stunning visuals, and tactical challenges that have captivated millions of gamers worldwide and propelled SEGA Corporation into a top tier international video gaming company.

Although video games power the business today, they were not always SEGA's core business: for several decades, game

consoles were. The company began in Hawaii in 1940 as Standard Games, which provided coin-operated amusements for American servicemen on military bases. In 1983, the company, by then renamed SEGA, released its first gaming console, the SG-1000. SEGA followed this with a series of console platforms, including the Genesis, Saturn, and Dreamcast. Until the year 2000, SEGA ranked as the world's No. 3 console seller, behind the Sony PlayStation and Nintendo Wii.

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– Stuart Wright, IT & Network Director, SEGA Europe

Eventually, however, growth prospects for game consoles dimmed, leading to SEGA's strategic decision in 2001 to exit the console business and shift its focus to developing software and game titles for third-party platforms such as the Microsoft Xbox, Nintendo Wii, and Sony PlayStation. The decision proved to be a smart one. Opportunities in video game development were just beginning to explode and by 2008, revenue for the industry reached \$11.7 billion, according to the Entertainment Software Association.

As part of its new strategy, SEGA consolidated operations to create SEGA Europe, and plans were laid to expand into Eastern Europe and other new markets. Sonic the Hedgehog and other games made famous by SEGA were on their way to going global, multilingual, and "platform agnostic". Today, the London-based SEGA Europe, a division of Japan's SEGA Sammy Holdings, develops some 40 game titles a year for the international video game developer. SEGA consistently ranks among the top 12 video game publishers worldwide, with annual revenue in excess of \$1.6 billion. In Japan, SEGA holds the top spot among gaming software makers in revenue, topping Konami.

MASTERING THE GAME

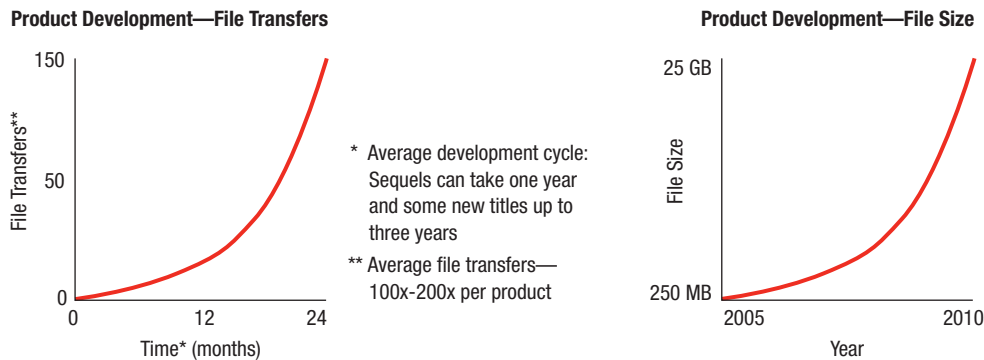
In an industry fueled by creativity and innovation, video game companies must negotiate the fine line between giving creative latitude to their star developers while staying on track to meet strict development cycles and marketing deadlines — as well as adhering to stringent security standards and budget constraints. Moreover, game makers are entering the business in record numbers, forcing established companies to continually deliver faster, better, bug-free games. Poor coordination between teams or technical delays can be costly, impacting both revenue and market share.

Timeliness is everything, acknowledges Mark Nutt, senior producer at SEGA Europe. "At SEGA, we develop many high-visibility titles in which success is tied to making the release date," he said. "Football Manager is one of our most popular titles, and it's very important that we release the new version of that game just before the start of the new English Premier League season. Having a fast and secure network to ensure that product development teams can work collaboratively, without impediment, is imperative to our business."

The trend toward larger-scale, higher graphics and performance related games as well as a wider diversity of game platforms has made the technical and collaborative challenges even greater. It has pushed the average size of games to more than 25 GB (see Figure 1) while increasing the number of file transfers and game-building cycles needed during the development process.

At SEGA, these challenges are compounded by the company's global reach and its extreme production volumes. Each of its titles under development involves multiple teams, including a design team or partner company, a quality-assurance testing team, a production team, and a platform partner such as Microsoft or Nintendo. Each of those teams is constantly moving files between SEGA's offices in Paris, Munich, London, Madrid, Amsterdam, and Sydney. Each game can average between 100 to 200 file transfers across the developmental lifecycle, accelerating rapidly as the game gets closer to its release date (Figure 2) to work out any kinks and make last minute adjustments.

Figures 1 and 2: Growing File Sizes, Faster Turnaround



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OVERCOMING LIMITS

By 2008 — seven years after its strategy shift — SEGA found itself at another crossroads. Years of robust growth had left the game maker with a patchwork of networks and systems that were driving up costs and erecting barriers to precisely the kind of collaboration and rapid workflows it needed to succeed in a fast-evolving marketplace. Bandwidth limitations got in the way of file transfers, conferencing options were limited, and supporting multiple networks was time-consuming and expensive.

“We had been growing organically without a lot of centralized planning and strategic thinking about our business infrastructure,” said Stuart Wright, IT & Networks Director for SEGA Europe. “Our legacy environment was becoming increasingly fragmented and eventually bottlenecks developed across our sites that created latency problems when we transmitted files.”

Over time, these impediments grew as the company’s 200 developers tried to collaborate and share large game build files over a limited network infrastructure. Rich graphics capabilities, a must for platforms such as Blu-ray and 3-D play, had swelled with game file sizes up to 25 GB per game. Furthermore, titles needed to be developed in multiple versions to accommodate various platforms, languages, and regions. With all this size and complexity, transferring game build files could take up to a day, disrupting Europe’s tight design schedule. Security was also a concern as piracy has been a challenge for the industry.

The patchwork of networks was also needlessly expensive, requiring too many vendors and licenses, too much power consumption, and too much time spent by SEGA’s IT and engineering staff putting out fires and apply temporary fixes. “What we really needed was a more strategic, forward-looking view of how technology could support our business,” says Wright.

“We needed to build a new network and collaboration platform from the ground up.”

NEW NETWORK FOR A NEW ERA

SEGA Europe started its transformation project in 2009, turning to Cision Limited to design and build a new unified networking and collaboration platform from Cisco. A Cisco UK Gold Partner, Cision is a major provider of converged network solutions in the United Kingdom. The initiative consolidated SEGA Europe’s architecture, eliminating more than half of the company’s network devices as it standardized on the Cisco Catalyst 6500 Series switch, which formed the backbone of the new high-bandwidth network.

Integral to the project was the roll out of a unified communications system relying on Cisco Unified Communications Manager and Unity Connection technology, and a sophisticated collaboration platform built around WebEx and MeetingPlace Express to support online meetings and on-demand videoconferencing. To address security concerns, SEGA selected Cisco’s 5500 Adaptive Security solution creating a ‘self defending’ network architecture.

Implementing a unified architecture was a forward-thinking break with precedent, and one calculated to change SEGA’s IT network from a liability to an asset. “Traditionally, SEGA viewed its information technology system as a support function rather than as an enabler,” Wright said. “I saw two factors as critical in changing this perception: having a staged implementation and choosing the right partners for the job.”

Taking this approach, Cisilion designed a three-stage implementation process that would give users adequate time to acclimate to the new options and changes:

Phase 1 – Network Re-Architecture:

A unified, resilient and high performing network architecture was implemented.

Phase 2 – Intrusion Prevention and Security Solutions:

Security solutions were then added to the network architecture to protect against piracy and malicious cyber-attacks.

Phase 3 – Collaboration Productivity Solutions:

With a robust and secure network in place, SEGA added collaboration productivity solutions such as Cisco’s WebEx online videoconferencing and MeetingPlace Express tools.

SEGA considers the timetable and project a complete success. “Cisco and Cisilion provided architectural and technical expertise, knowledge of SEGA, and a ‘get it done approach,’” Wright says.

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BUSINESS TRANSFORMATION

The benefits of the new Cisco network and collaboration technologies have been nothing short of transformational, removing bottlenecks, cutting costs, and accelerating collaboration across multiple business and game development teams.

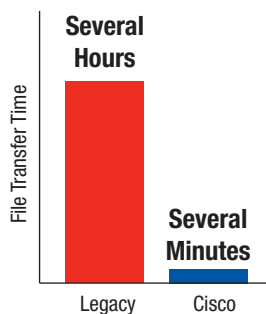
With more network capacity and advanced router technology, SEGA has reduced the average file transfer time from several hours to minutes (Figure 3). “Transmitting files

from developers to QA testers was taking hours and now only takes minutes,” said Kelvin Pritchard, a Cisilion director. “This is a critical improvement, especially when deadlines approach and SEGA needs to make extremely fast changes to games.”

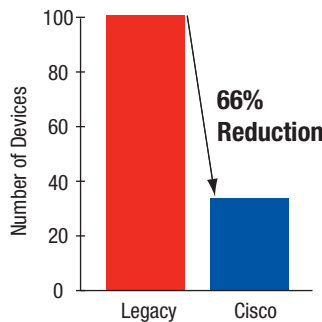
Likewise, workstation speeds have doubled from 100MB per second to 200MB per second; and Cisco 5500 Adaptive Security has delivered integrated firewall, intrusion, and content security.

Also boosting efficiency and productivity is the addition of a range of new collaboration options. SEGA’s product development team can now select the best communications medium for the moment, including e-mail for less pressing queries to desktop video-conferencing for complicated, real-time resolution of issues. For example, QA testers now use video conferencing technology to show game designers where bugs are cropping up, helping accelerate fix turn-around time. “Everyone is connected now,” says Nutt. “We’re really benefiting from higher levels of participation and collaboration from all our teams and stakeholders.”

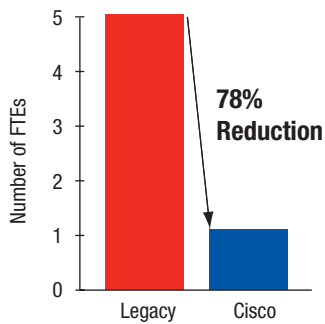
**Figure 3:
Average File Transfer Latency**



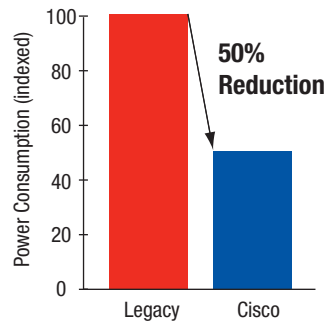
**Figure 4:
Network Device Consolidation**



**Figure 5:
IT Network Support Personnel**



**Figure 6:
Network Power Consumption**



Also, by simplifying and consolidating its network, SEGA has seen IT costs drop dramatically. Since the Cisco rollout, more than 60 percent of the company’s network devices have been eliminated (see Figure 4).

Furthermore, the amount of time needed to support and maintain the network has dropped by nearly 80 percent (see Figure 5), freeing SEGA’s IT staff and engineers from putting out fires to working on higher-value projects. The number of networking vendors has been slashed from 30 to five — an 83 percent reduction.

Eliminating redundancy and inefficiency has also brought substantial savings in power usage: consumption has dropped 50 percent (See Figure 6), and SEGA expects to reap an additional 50 percent savings by 2011.

As SEGA further taps the potential of its new network, it looks forward to extending the workstation throughput from 200 MB to 1 GB. It also intends to use the system as the foundation for a vigorous expansion into new markets, beginning with Eastern Europe. SEGA is also ready to take

advantage of high growth areas such as online gaming and social media gaming. In fact, explains Wright, “Online gaming is all about your network, without [a] high-quality kit, you haven’t got a business.”

This would not have been possible with the previous system, Wright acknowledges. “Not only do we now have a superior network infrastructure, we’ve gone one better and set ourselves up for the emerging opportunities that will keep the SEGA brand at the forefront of the industry — where it belongs.”

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