

## Hitachi Storage Solutions at Work

### Spanish Patent and Trademark Office (SPTO)

**INDUSTRY** Government

**SOLUTIONS** Tiered Storage/Virtualisation

**Hardware**—Hitachi Universal Storage Platform™ model USP100, Hitachi Thunder 9570V™ high-end modular storage

**Software**—Hitachi ShadowImage™ In-System Replication, Hitachi Universal Volume Manager, Hitachi HiCommand® Dynamic Link Manager, and Hitachi Universal Replication software

**Services**—Provided by Hitachi Data Systems Global Solution Services



“The highly secure and scalable storage architecture from Hitachi Data Systems enables us to safely manage all of our records. At the same time we can offer online users a fast, responsive experience.”

*José Antonio Martín Pérez  
IT Director  
Spanish Patent and Trademark Office*



# SPTO Unites 21st Century Users and 200 Years of History via Hitachi Data Systems

The Spanish Patent and Trademark Office (SPTO) registers all intellectual property in Spain. With three million paper files, the organisation needed to modernise storage and improve the users' experience. A move to new offices led the SPTO to seek a scalable, high-capacity storage architecture. It chose Hitachi Data Systems to supply and manage the solution implementation to deliver online services in a secure, well-managed archive that is supported by virtualisation and remote data protection.

The SPTO traditionally kept its paper records in six large basements in its headquarters in Madrid, Spain. Two hundred years' worth of documentation, including three million files and the complete patent records for Spain since 1968, had resulted in one of the country's most extensive archives. It totaled a staggering 40 linear kilometres of shelves and 180 million pages. The organisation needed to provide fast, long-term access to active patent records but the antiquated filing system hindered its efforts.

SPTO initiated an ambitious paperless office project, aiming to digitise all of its archives to form a new online resource, called *epoline*®.

This task was made more acute by plans to move to a location with limited space in the heart of Madrid's financial district.

A storage area network (SAN) was already in place, and included Hitachi Thunder 9570V™ modular storage. This supported a small number of databases for daily management tasks and limited archiving. However, it did not provide the storage capacity or the tiered structure that the SPTO needed—and data security was compromised as there were no off-site backup and recovery facilities.

The SPTO needed to address a number of key requirements with its new storage infrastructure:

- Provide rapid access to services for users globally, 24/7
- Ensure high data security to safely store valuable patent rights
- Comply with the European Patent Office's applications standards
- Minimise operating costs and total cost of ownership to support massive databases and enable smooth scalability for expected strong growth

## Building the Solution

José Antonio Martín Pérez, IT Director for the SPTO, ran a number of evaluations to establish the best solution. After comparing Hitachi Data Systems, EMC, and Sun Microsystems, Martín was impressed with the replication capabilities of the Hitachi Data Systems solution, as well as the high standard of technical service and support. "We needed storage that would scale well without breaking the bank," he explained. "The virtualisation capabilities of the Hitachi Universal Storage Platform™ enabled us to leverage our existing hardware investments, which was very appealing."

The company invested in disaster-tolerant tiered storage from Hitachi Data Systems which included Thunder 9570V modular storage, holding up to 61TB, which is virtualised behind the Universal Storage Platform. Over time, Hitachi Adaptable Modular Storage model AMS100 will be added as the SPTO's storage requirements expand.

The intelligent tiered solution was devised and implemented by the Hitachi Data Systems Global Solution Services (GSS) team. This simplified management of the storage pool with the advanced virtualisation capabilities of the Universal Storage Platform. It

also assisted in fine-tuning the new architecture to ensure the SPTO enjoyed the full benefits of the infrastructure's speed and responsiveness.

Implementation was quick and smooth, lasting just three months in total, with no disruption to users of the existing SAN.

The new architecture delivers three dynamic levels of storage, adaptable to the particular needs of the SPTO in terms of access, security, and cost. The top, high-speed tier

maximum delay of just 10 seconds." The GSS team leveraged the unique technological advantages of Hitachi Universal Replicator software's journaling to provide no-data-loss replication across the two sites. "The solution is also highly scalable," he continues, "which is essential for us, as we receive new patent applications daily, resulting in an ever-growing body of data."

Thanks to the advanced virtualisation technology embedded in the Universal Storage Platform, the SPTO's IT management

## Looking to the Future

As the organisation's archive grows, Martín intends to make further investments with Hitachi Data Systems to meet its ongoing storage challenge. "The Spanish Government will soon require its agencies to offer all of their services and resources online, so we're staying ahead of the game by starting to do this now," he explains. "When new regulations come in, we should already be equipped to meet them."

The organisation also plans to extend its data protection strategy by creating additional data centres to enable remote backup and recovery in an emergency.

Martín concludes, "Hitachi Data Systems has given us the technology to push the SPTO into the next phase of its long history and modernise its image while delivering a smooth and fulfilling user experience."



**"The electronic archive has revolutionised the way we work as a business. Data security is guaranteed, and we have the scalability we need to cope with an ever-growing archive of patent applications."**

José Antonio Martín Pérez  
IT Director  
Spanish Patent and Trademark Office

is used to support essential Oracle databases, Microsoft Exchange and SQL Server, and the Internet. The middle layer holds folders and system files, while images and less critical databases are held on the lowest tier.

The solution now underpins the new epoline resource. In the first phase, access to these resources was provided to SPTO workers, with plans to make them available to the general public a short time later.

## A Revolutionised Business Model

"The electronic archive has revolutionised the way we work as a business," Martín comments. "We have secured our data by creating a remote back-up server in the MOITC building. This replicates with a guaranteed

team can monitor the storage infrastructure simply and cost-effectively. The capacity of the existing storage has been optimised to ensure as much data as possible can be stored securely without the need to invest in new hardware. The low operational costs and fast, in-budget implementation were important for the organisation, which as a government department must account for all expenditures.

Martín was also impressed by the improved user experience the new storage platform brings: "The online resources are making life easier for users of our services, too. In our emerging paperless office, information is available at the touch of a button thanks to the superior speed and capacity utilisation we are enjoying."

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