

# SERVICING MANAGEMENT

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## Technology: A Long, Strange Trip

*From paper tapes to the Internet, mortgage servicing technology has evolved from awkward processes to advanced operations.*

BY DAWN GIBBS

The last two decades have seen a seismic shift in technology across the board, and the mortgage servicing industry has been no exception.

From purely manual processes to real-time, Web-based technology, servicing companies have continued to utilize new technologies and resources to better serve their customers and increase their profit margins.

For industry veterans, this retrospective will conjure memories of days gone by (both good and bad), and for professionals who have joined the mortgage industry more recently, this brief recount may prove enlightening - showing where we have come from technologically and where we are headed in the future.

### ***In the beginning***

In the beginning, mortgage loan servicing was an inefficient process at best. Servicing companies would manually calculate interest for the month for each loan and then post total payment, interest payment and escrow on a special card that was read by an NCR posting machine.

The cards were then double-checked with a 10-key adding machine to verify that the postings were accurate and that no mistakes had been made. Once the data on the cards had been verified as correct, the servicing company would post the transactions on a paper tape that would then be sent off to a mainframe or third-party service center to read the tape and update the records.

Memory space was a significant issue for servicing companies back then, so they were tied to these time-intensive, mainframe-based processes.

### ***The 1980s***

It was during the early 1980s that many of the technological concepts and the very idea of personal computing began to take shape and gain popularity. The PC was a revolutionary new device and was beginning to find its way into our homes and offices.

Through PCs, the entire paradigm of mortgage servicing operations began to change as well - first through individual work stations and then eventually to fully networked offices.

In 1983, the first mortgage loan servicing system was developed for use with the PC. The software was developed using an IBM PC with 512K of memory, two single-sided floppy disks, a four-megahertz processor and a 10-megabyte hard drive. This hardware configuration was the only option available at the time and enabled a mortgage company to service up to 1,000 loans.

This PC-based system was important because it brought the power of a big mainframe system into servicing companies' local offices. This enabled them to have access to real-time data without the investment of a dedicated, high-powered phone line, which was usually required and also very expensive.

In addition, the introduction of the

PC-based system eliminated much of the need for batch processing and its associated expenses because servicing companies could now generate their own reports, including trial balances, investor reports and all of the other things that they were once dependent upon the third party vendors to provide.

"The introduction of the PC-based system greatly affected how we did business," says Bill Hagan, executive vice president of Rocky Mountain Mortgage, El Paso, Texas. "The biggest difference was the ability to post payments, calculate interest and prepare rudimentary investment reports in real time, which represented a huge step in terms of economies of scale for the small servicer.

"In effect, it freed the small servicer from the dependence upon third-party vendors to manage data and enabled the servicing company to dictate when reports were run and exactly what information was to be included."

At that time, there were few choices in operating systems and programming languages. The DOS oper-



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ating system and the BASIC programming language used for PCs were very elementary in comparison to the high-level languages and operating systems in use by mainframes.

However, the need for affordable in-house mortgage software was increasing. Large mainframes and their peripheral systems were far too expensive for smaller servicing companies



that were not servicing 30,000 to 40,000 loans. The impact of this early, PC-based mortgage loan servicing system is that it opened up the market for smaller servicing companies by enabling them to compete with the large servicers in a cost-effective environment.

The main problem in early mortgage software development was the limitation of hard disk space available to store the massive amount of data required to service mortgage loans and the processing speed required to perform complex accounting for a large number of loans.

These types of problems required significant investments in time and money and innovative programming to overcome. Continual re-programming of the software was necessary to adhere to regulations and to keep up with programming language, operating system and hardware advancements. The pace was fast and furious as new versions of mortgage software were released on a monthly basis.

Early networking operating systems were also unstable and unsophisticated in the 1980s. Standards had yet to be established that developers could easily adopt. Issues such as file sharing, record locking and security imposed another layer of complexity to the systems and introduced a totally new group of inde-

pendent developers into the already intricate quilt of system design.

### **The 1990s**

By the mid-1990s, DOS-based mortgage servicing systems had been stretched to their breaking point by modifying and extending the basic elements of the language and operating systems on which they ran. There was little else that could be done to increase the required speed and capacity.

However, newer technology, including 32-bit Windows operating systems, improved developmental languages and tools, and ODBC databases became available. The

need for a complete rewrite to take advantage of emerging technologies was readily apparent, so an entirely new design approach was required.

In addition, the new systems had to incorporate the requirements for Y2K and had to be completed and released by 1999 in order to fully comply with regulations and industry requirements.

As it turned out, government regulations and industry hysteria demanded the extensive testing and modifications for Y2K, resulting in excessive workloads and expenses from 1995 to 1999.

Adding to this increased workload was the emerging importance of vendor relationships as technology allowed for more automated and streamlined operations. As new technologies emerged, the supporting interfaces had to keep up.

As a result, the number of interfaces developed between servicing systems and other mortgage industry vendors grew exponentially. Hundreds of interfaces between servicing systems and various other vendors, such as coupon/statement printers, real estate tax services, insurance providers, tax authorities, investors, credit bureaus, MERS, core banking systems, general ledger packages, voice response systems, lockbox providers and LOS developers, also dictated the need of a rewrite.

### **The 21st century is now**

In the 2000s, technology, including the Internet, greatly impacts how mortgage servicing companies interact with their customers and do business with their vendors.

Servicing companies now have access to real-time interfaces that synchronize mortgage information in a servicing company's core database with that in its servicing system database. This enables borrowers to instantly receive updated mortgage loan information through audio response or home banking systems and further guarantees that loan data is up-to-date for customer service representatives when helping borrowers, regardless of the communication channel (in-person, telephone or Internet).

Also, the Internet has proven itself as an effective delivery and communication channel of mortgage loan information between borrowers and their mortgage loan servicing companies. The Internet now serves as a principle resource for mortgage servicing companies to establish customer loyalty as mortgage rates remain low and hyper-competition among lenders threatens to steal existing customers away.

### **Higher quality**

"The Internet is a great customer service tool for us because our customers can now access real-time data from home through their PCs," says Hagan. "This change impacts servicing companies because it provides our customers with a higher level of quality in our customer service and cuts our costs because we no longer have to dedicate precious resources to handle the frequently asked questions that previously occurred either on the phone or in person at the loan servicing office."

In addition, the Internet is now giving mortgage servicing companies the ability to run their system through popular, browser-based technology and also provides staff with greater freedom to utilize information by enabling them to access the company's portfolio

directly through their Web site.

From a vendor standpoint, more and more software developers are now ensuring consistency of data through the utilization of the Internet as a mechanism to exchange data. This reduces or eliminates the previous interface methods of sending tapes, diskettes, CDs or dial-up delivery.

The impact of the Internet is also being felt in regards to imaging technology. Traditionally, imaging systems have been a cost-prohibitive option for many servicing companies.

With the availability of cost-effective imaging systems and inexpensive storage facilities (such as RAID drives), imaging technology is now a viable resource for lenders of all sizes.

Through this technology, servicing companies have a mechanism at their disposal to electronically image all of their documents and reports - effectively saving them tremendous amounts of storage space and printing costs.

Once scanned and stored, the electronic images are accessible from multi-

ple locations and can easily be shared with borrowers, at their request, through protected Internet sites.

While the changes for mortgage servicing companies and their technology over the past two decades has been astounding, the driving force behind these changes has always remained basically the same - streamlining internal processes in order to better serve their customers.

Each new development and step in the process has been met with challenges, but the desire to constantly improve will continue to prevail. **SM**