



Keeping the information flowing...

innovation

Experian is one of the world's leading suppliers of information on consumers, businesses, motor vehicles and property. With headquarters in Nottingham (UK) and in Orange (California, USA), the company employs over 12,000 people, supporting clients in over 50 countries and generating sales of over £1 billion. Chris Blood is one of the Project Managers based in the UK—

“We’re an Information Solutions Company. Information is our business. On the technical side, we have to ensure that our data is stored securely and efficiently...and that it is available whenever the business needs it...”

Many of Experian's high-profile applications rely heavily on VSAM, IBM's ubiquitous access method. This includes the Account Management systems, which are at the core of the company's credit card processing activities.

Back in 1991, Experian purchased IAM® (the Innovation Access Method) to improve the performance and efficiency of some of the critical VSAM files. IAM eliminates VSAM performance bottlenecks and reduces file sizes by more than 50%. Chris Blood still remembers the dramatic effect that it had on their ability to store and process information—

“IAM made a huge difference to us! CPU usage and I/O's were drastically reduced and the DASD storage requirements for the system were more than halved. Also, at the time, we were suffering from the 4Gb limit on several VSAM files and IAM resolved that issue for us as well...”

IAM was later used to improve the performance on some of Experian's other critical VSAM-based applications, such as Credit Scoring and Vehicle Data Checking. But there was one VSAM file that was still causing concern...

The Problem

One of the largest files within Experian's Vision+ system is a VSAM Alternate Index (AIX) called the 'TRAMS Cardholder Transaction History File', which contains information about each credit card transaction. Until the middle of 2000, the file had been primed to retain transaction information for up to 180 days. However, business requirements dictated that this retention period be increased to 400 days, which had an instant and dramatic effect on both the overall size of the file and on the resources required to process it.

It was clear to Chris and his team that the increased processing overheads would not be accommodated during the forthcoming Christmas peak period. A solution had to be found that would reduce the size of the file and significantly decrease the processing overheads.

This solution eventually came in the shape of the recently released IAM/AIX support...

Prior to testing IAM/AIX, the team had already done some interim testing with a VSAM Compression package. This had produced a reduction in the size of the TRAMS file, but the saving came with a massive increase in both CPU usage and batch elapsed times, which simply couldn't be accommodated during the forthcoming Christmas peak periods.

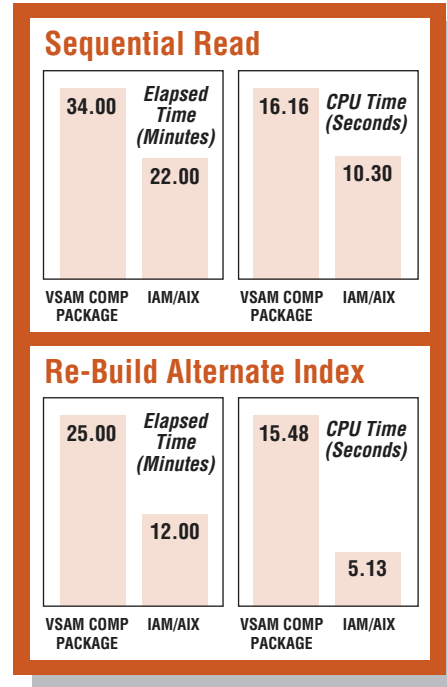
Chris Payne, a Technical Consultant working on the Vision+ system, then carried out some tests comparing the VSAM Compression package with the newly installed IAM/AIX support. Some typical results are shown here. At the time, the TRAMS file held over 8 million records and, after being compressed by the VSAM Compression package, occupied 72,000 tracks.

In the test shown, a Sequential Read and Reload of the file was carried out, followed by a Rebuild of the Alternate Index. IAM/AIX made significant reductions in both the Elapsed time and CPU usage for the Sequential Read and Index Rebuild jobs, with similar savings on the interim Reload step. It also reduced the file size by a further 4,500 tracks over and above the saving made by the VSAM Compression package.

Chris was understandably pleased with the results—

“IAM/AIX gave us even better space savings than the VSAM Compression package without the penalty of increased CPU usage and Elapsed times. In fact, they were drastically reduced...!”

To ensure that the results were not limited to just the TRAMS file, Chris Payne then did some additional testing against another key file in the Vision+ system—the Account Management History File (AMHS). As you can see from the figures below, IAM/AIX produced equally stunning results. Notice in particular how it fared against the VSAM Compression package, which had again increased both the Elapsed Times and CPU usage compared to standard VSAM—



Step Description	Elapsed Time (Minutes)			CPU Usage (Minutes)		
	VSAM	VSAM (Comp)	IAM/AIX	VSAM	VSAM (Comp)	IAM/AIX
Seq Read/Write	4.17	4.36	1.27	0.52	1.45	0.47
Index Re-Build	2.41	3.00	1.14	0.53	1.31	0.42

“IAM/AIX saved the day for us. Without it, we simply wouldn't have been able to get through the Christmas period last year. Now we're looking to implement it across the rest of our critical VSAM Alternate Index files...”