Progressive Casualty Insurance Company

Conversion from IDMS to DB2 using Modern Systems and DB-Shuttle™

Challenge:

Migrate Progressive's missioncritical Core Claims database and application from CA-IDMS to IBM's DB2 without disrupting the business operations performed by 10,000 users and 2,000,000 transactions a day

Solution:

Modern Systems DB-Shuttle Automated Refactoring Technology, patent pending

Success:

Full migration of IDMS and ADS/Online to DB2 and COBOL CICS was performed in 10 months with production implementation in May 2006, without disruption to claims related activities

Key Benefits:

- Lowered total cost of ownership
- Increased efficiency of operations
- Easier access to central data from web-based applications
- Flexibility for the future

"The task of refactoring all our IDMS databases and systems to DB2 was a formidable challenge. The Modern Systems automation technology allowed us to achieve a rapid modernization with minimal disruption to our users"

Progressive Casualty Insurance Company (Progressive), headquartered in Mayfield Village, Ohio, is the third largest auto insurance group in the USA. In business since 1937, Progressive allows consumers to purchase their policies online, over the phone or via an agent.

Progressive's Core Claims data was all stored on CA-IDMS databases, and the related online applications were written using an IDMS proprietary language called ADS/Online.

To support its continuing growth and market expansion, Progressive began research on how to best eliminate IDMS, its non-relational database technology and its proprietary processing languages from the Progressive claims processing cycle.

Migration Goals

Progressive required that their refactoring solution be 100% automated, while still guaranteeing functional equivalency and maintaining all existing business rules. The migration needed to be transparent to the end user community and could not disrupt any business-related activities. After extensive research into their options, Progressive selected Modern Systems and its unique DB-Shuttle automated technology to perform the modernization.

The conversion of the CORE Claims System was the last step in a long series of changes Progressive had made to modernize their database structure. The need to access data directly from multiple web applications without complicated programming was a driving force in the decision to change. Progressive required a system that could function efficiently in their high demand environment.

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Another factor driving the changes was the increased difficulty and expense of finding skilled team members to work with the IDMS database and applications. Transitioning to a relational database and more open languages would guarantee the availability of a larger pool of skilled resources to maintain and enhance the applications into the future.

Progressive's timeframe was to complete the project by the end of June 2006.

Project Summary

The primary phases of the Modern Systems DB-Shuttle automated refactoring process included:

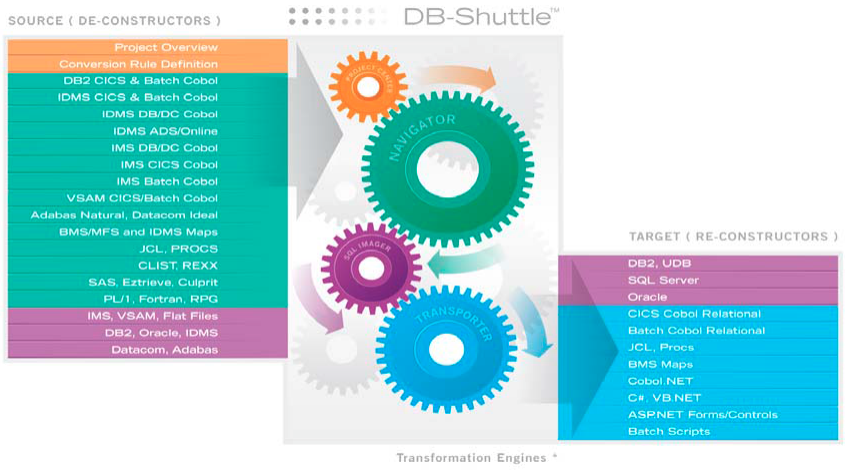
- Portfolio Analysis to gather and inventory the Progressive software and database components
- Database Refactoring to provide a fully functional relational database to replace the former IDMS hierarchical structure
- Data Refactoring including IDMS extract programs custom-generated by DBShuttle based upon the former IDMS database structure
- Application Refactoring including the application of Progressive standards for the new application languages and database access routines
- Support by the Modern Systems teams as the Progressive teams verified the results of the database, data and application refactoring, and as they implemented the new applications and databases into production

Portfolio Analysis

Modern Systems performed an in-depth automated analysis of the IT environment at Progressive. In the Portfolio Analysis phase, goals and areas of concentration were fully defined, and all source code and database components were collected, counted, inventoried and measured. The inter-relationships of the components were identified and reported. Even the methods of database access were detailed.

This very detailed, targeted assessment of the entire mainframe application environment provided the Modern Systems and Progressive teams with the information required to fully define the refactoring project plan, task assignments, responsibilities, timeframes and costs.

As a sub-phase of the Portfolio Analysis, Modern Systems performed a Proof of Concept illustrating two different methods of implementing the target databases and applications. This process allowed the Progressive teams to select the solution best suited for their future processing.



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Database Refactoring

The Progressive teams responded to a set of workbook questions regarding their standards for database table and column naming, as well as their requirements for space allocation and index usage. Using several DB-Shuttle workbenches, the Modern Systems team selected rules for Progressive's conversion to the new DB2 database.

Modern Systems used DB-Shuttle to generate the new DB2 Database Definition Language syntax. The Progressive teams reviewed and adjusted the rules throughout the project lifecycle, ensuring that the relational database structure and configuration met the Progressive processing needs for the future.

Data Migration

DB-Shuttle used the structure of the original IDMS database (including 265 record types and hundreds of set relationships) to generate a set of high-speed extract programs and the JCL required to run the extracts.

The IDMS extracts were delivered to the Progressive teams, who compiled and executed them on the Progressive mainframe, producing sequential files in the format required by the DB2 load utility. Progressive's data was never moved from the Progressive mainframe, and only the Progressive teams required access to any of the Progressive data.

Additional data cleansing and relationship definition rules were defined through another DBShuttle workbench to further customize the data extract and population process.

Application Refactoring

The Progressive teams responded to a set of workbook questions regarding their standards for application naming conventions for their new CICS COBOL DB2 environment. Using the DBShuttle workbenches, the Modern Systems team defined the re-naming rules for all IDMS maps, programs and copy modules for Progressive.

With the naming standard rules in place, DB-Shuttle generated the new application code, refactoring the ADS/Online language component to CICS COBOL and all COBOL IDMS calls to DB2 access through a high-performance data access layer. The new applications were immediately ready for testing by the Progressive teams.

Testing & Development Support

The Modern Systems teams provide support, rule changes and other adjustments throughout the Progressive Team's detailed testing process. Modern Systems was also onsite at Progressive for the actual cutover weekend in May 2006.

Conclusion

A total of 5 IDMS databases and 5 million lines of code were modernizaed to use the new DB2 relational database, including:

- 397 IDMS Maps
- 603 ADS/Online dialogs
- 10 IDMS ADSA structures
- 1,797 IDMS COBOL programs

The refactored applications are high performance, non-proprietary and fully relational. The new configuration reduces overall cost, improves access to the data, and provides the business with greater agility and flexibility for adjustment and future expansion.