UNIVERSAL CONVERSION TECHNOLOGIES
Smart tools for smart conversions.
A wholly-owned EquiSoft subsidiary

CAPABILITY STATEMENT

COMPANY OVERVIEW

Founded by Dan O'Hara in 1992, **Universal Conversion Technologies** (UCT) is the leader in the insurance marketplace for data migrations, particularly for life, health and annuity products. We are the only North American company dedicated to life insurance data migration projects. Our conversion tools provide one-stop-shop for data analysis, conversion, balancing and reporting. Over 20 years of R&D has provided us with a unique competitive advantage for transformation and legacy consolidation projects. With over 80 companies and policy admin vendors, as well as hundreds of insurance companies, UCT has a unique expertise, methodology and technology stack that dramatically reduces the costs and risks associated with data migration projects.

EXPERTISE SUMMARY

UCT specializes in high volume, complex data conversion projects that frequently involve multiple source and target systems. We have completed in excess of 160 actual conversions that have involved as many as 2.4 million records in one conversion. We have the tools and expertise necessary to support all aspects of any system data conversion project. Our **Data Conversion Architect** (DCA) can be licensed and used to maximize the effectiveness of our clients' business analysts, and drive down their conversion costs. Our expert personnel have an average of 25 years of industry and conversion experience that can support project planning, data analysis and auditing, project management, data cleansing, programming, conversion system development, and data balancing efforts.

UCT'S UNIQUE DATA CONVERSION SOLUTION

Data migrations are complicated projects for which you need the right personnel, tools, and methodology. At UCT, we have all three, and turnkey solutions are what we do best.

The Right Personnel

We staff every project with knowledgeable project managers, programmer analysts, and business analysts, who have extensive experience. Whether their task is project definition, data analysis, project management, business rules definition or driver development, they know what issues to anticipate and how to resolve them. Being able to anticipate the unexpected means better budget planning, less resolution time, and lower costs.

The Right Tool

UCT's proprietary data migration tool (DCA) is a collaboration tool that automatically generates conversion source code modules from business rules collected by the team. It can be installed on the client's server. On an Extract Transform Load (ETL) project, the generated code modules equate to the data transformation component. DCA is designed with a specific data hierarchy that models the typical migration project, which consists in moving data from a source system into a target system. Although DCA has been used mostly for insurance projects, it can also be applied to financial, scientific, or government data.

The Right Methodology

The traditional software development methodology is not suitable for data migration. It often results in a costly co-dependence between business analysts (BAs) and programmers, as they try to work together to evolve the high-level design, detailed-design, and implementation into a workable conversion system.

› **Capitalizing on BAs Extensive System Knowledge**
Our unique methodology turns BAs into programmers by allowing them to record the conversion's business logic in a 4GL language, which DCA automatically turns into source code. This allows reducing the key personnel responsible for the development of a source code module. It also allows programmers to focus on the I/O aspects of the conversion (or the Extract and Load portions of an ETL project), which attempt to reuse system-specific I/O APIs whenever it is convenient. This segregation of responsibility reduces the needs for programmers, and drives down the costs.

› **Making Data Visible**
Making data visible as early as possible is key to a successful conversion. By performing data analysis and auditing in the early stage of the process, the BAs use reporting features and rules to create code that highlights data anomalies or unexpected characteristics. Data cleansing can start immediately after in order to "fix" data in the legacy system, and the conversion maps and associated code modules can use the information to correctly handle all data permutations the first time. Understanding how the legacy source system differs from historical documentation, and correcting errors at the source the first time drives down costs and shortens timelines.

› **Automatically Creating Documentation**
Finally, our methodology results in the automatic creation of documentation. At the end of a project, all business rules are encapsulated in a set of "datamaps", each of which handles the conversion of a subset of business data, and is written in a 4GL language that non-programmers can read (and create). Since the datamaps are used to automatically create code modules, they are invaluable for design and code walkthroughs, as well as post-project documentation.

OTHER AREAS OF EXPERTISE

Conversion Project Planning

Our extensive experience enables us to properly staff any conversion project planning team. Whether they use UCT's tools or not, our project managers and business analysts will work with your SMEs to understand your specific needs. They can foresee common migration issues, recommend proven techniques, and steer the team away from risky plans.

Data Analysis and Auditing

Even if our DCA tool is not used for the actual conversion, it can be used for data analysis and auditing. The information that it produces about the legacy system data has tremendous value since it allows data to be cleansed before the conversion. Is also allows data anomalies to be identified and handled correctly in the conversion source code, which saves time and money.

Project Management

Every conversion project needs a strong project manager (PM) to oversee its day-to-day functioning, and to coordinate the efforts of vendors, analysts, programmers, and auditors. At UCT, we pride ourselves in having the best PMs in the industry. With an average of over 25 years of data conversion and insurance system experience, UCT experts provide leadership and guidance to both the client and the project team.

Data Cleansing

Over the course of time, a system can accumulate data anomalies that interfere with normal processing or the processing of peripheral software. Once the root problem is fixed, the deformed data persists and can only be fixed by converting the data back to its expected values. Using its proprietary DCA technology, UCT can assist you in identifying and repairing these data anomalies.

Programming

UCT started out as a data conversion company to help life insurance carriers move from one mainframe application to another. Today, we can support the transfer of data between systems on any platform in any language. Since the bulk of our work is still mainframe-related, we employ high-quality programmers whose extensive knowledge includes COBOL. This meets the growing need for mainframe expertise in the industry.

Development of Conversion Center of Excellence

Conversion system development is our specialty. We can provide a complete solution or any part of it. A DCA license can be purchased for our client's team to use; we can provide user training to their analysts and engineers; and we can also augment our client's team with additional BAs or programmers.

Data Balancing

A typical UCT-led conversion includes data balancing, which measures the success of the conversion by comparing converted data to the data after it is loaded into the target system. But if your conversion effort includes balancing, then we have the right expertise and tools to help you identify appropriate fields to balance on, control the creation of balance maps, augment maps to perform specialized balancing, etc.

Number of clients:	100
Life or health insurance:	95
Property/casualty insurance:	4
County Court:	1

UCT's unique methodology
› Emphasizes the role of the business analysts
› Clarifies and minimizes the focus and role of the programmers
› Seeks to make actual data visible as early in the lifecycle as possible, and
› Automatically creates documentation

UCT'S DATA CONVERSION ARCHITECT (DCA)

DCA is UCT's proprietary data conversion tool. It is a web-based collaboration tool with a number of critical features and components that automate parts of the conversion system development lifecycle. DCA does not perform conversion as no customer data is loaded into the tool. It's role is rather to aid the team as they develop a separate conversion system.

DCA offers many benefits to our clients:

BENEFITS OF USING DCA	
Turns BAs into programmers	› Converts 4GL to 3GL › Accepts and stores conversion logic expressed in a natural form and generates code modules that can be compiled and executed on the conversion platform. › As opposed to other ETL products, DCA gives the BA the ability to improve the conversion logic and resulting conversion module without involving a programmer. › The mapping language not only has commands that support conversions, but it also includes commands that perform auditing, report errors, do balancing, and many other tasks.
Allows team members to work together	› Web-based collaboration application › Provides data locking features that prevent users from colliding or overwriting each other's work › Allows team members to share files/ideas, and to see and evaluate each other's work.
Automates common lifecycle tasks	› **Import the source system copybooks** The copybooks define the structure of incoming data. DCA uses the information to insure that BAs only reference existing source and target fields as they create the conversion logic. › **Process DDL for the target system database tables** When a DDL is processed in DCA, it creates a copybook that references the columns in the database table and includes any fields necessary to handle NULL values. DCA can move data from source system copybooks into copybooks derived from target system DDL. These "target system copybooks" can then be used as input to I/O modules that load the target system database, or as input to DCA-generated CSV programs that create CSV streams from the data in a copybook. › **Create map templates and conversion logic** Once the source and target data elements are imported, DCA creates map "templates", and its map editing features enable BAs to create conversion logic. › **Execute code generation engine** DCA's map validation feature executes the code generation engine that turns the conversion logic in a map into a source code module and identifies logic errors.
DCA utilities can be reused by programmers	› DCA offers a suite of utilities that can be used by programmers to perform various tasks: standardize messages generated by a map module or other part of the conversion system; create formatted Excel reports from standardized messages; bit-level processing or load runtime conversion tables, etc.
Testing intentionally starts early	› Data anomalies are part of every conversion projects. The sooner they are detected, the easier they are to deal with, and the more time we have to resolve complicated data issues. Testing is also important to fully understand the development requirements in advance. › In our conversion system development lifecycle, the testing and auditing of conversion and source systems starts as soon as data has reached an acceptable level of maturity. › Our solution enables to disassociate conversion module development from driver and I/O module development, and with DCA being used by the BAs to develop the conversion modules, these activities can occur concurrently.

BENEFITS OF USING DCA (CONT'D)

DCA's features evaluate conversion success	› Once testing begins, DCA provides features that collect the error messages and perform success evaluation. The generated code modules and drivers are set up by the BAs and programmers to trap and report conversion errors from I/O failures to data format problems. › DCA's Reporting feature allows to drill down into the message data to understand the root cause of a problem. › UCT's BA Spreadsheet feature formats Excel reports from the messages that include summaries and reports by user, by record, or by map.
DCA automatically generates maps	› In many conversions, it is common to evaluate incoming source data either before or during a conversion. This is was we call "auditing" in our conversion lifecycle.DCA can automatically create complete audit maps and auditing code modules. › Balancing is another common task in conversions. One form of balancing is to extract converted data before it is loaded into the target system, and then compare it to the same data after it is loaded. DCA features can automatically create maps and code modules to perform this kind of balancing.
DCA is essential to data migration success	› Many, if not all, of the above features will be used as required during system conversion. DCA will turn conversion logic expressed by BAs into source code without the help of programmers. › As a result: • BAs will be more effective in their efforts; • Programmers will focus on I/O and the overall driver, and work concurrently with BAs; • Testing and data anomaly detection with begin earlier and there will be more time to address he unexpected; • Balancing and auditing will be conducted to ensure that data meets expectations and is converted correctly; • The conversion, auditing, and balancing data maps that are used in DCA to collect the logic will be exported from DCA as text files and reviewed or archived for posterity; • When this time-saving application is combined with experts and a proven lifecycle, it ensures a successful conversion.

DCA ARCHITECTURE

Core technologies and	› User interface: ASP.NET, C#, and VBScript › Code generation engine: C › DCA's code is portable to any environment
Supported operating systems	› OS/370, AS/400, Windows and UNIX › DCA is installed on a 'Wintel' class server using Windows 2000 or higher
Supported data storage formats	› Databases: SQL Server, DB2, Rdb, MS Access, etc. › Proprietary data storage: flat files, delimited data files, VSAM files, XML data, etc.

VIRTUAL OFFICE ENVIRONMENT

By allowing our consultants to work in a virtual environment, our business model increases productivity and helps to reduce overall project costs. Depending on the client requirements, our consultants typically spend less than 10% of their time on site (25-50% for PMs). We use industry-recognized anti-virus softwares and customer-approved access mechanisms. Since our methodology does not require that any of our clients' data ever be stored on consultant computers, the data is always protected behind the access mechanisms provided by the client.