

## *Automated Tools for Mainframe Applications*

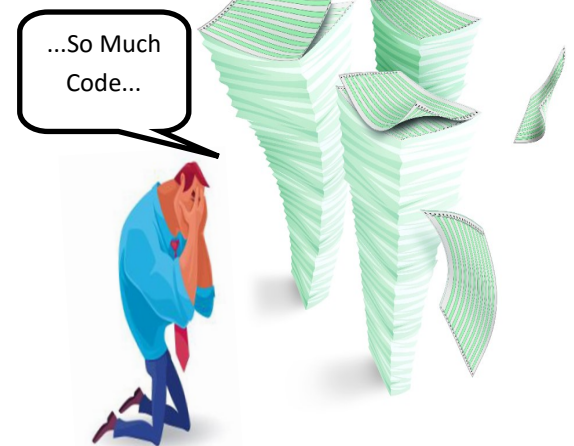
Understand and modernize your legacy applications with unparalleled accuracy and confidence with CM First. Our code analysis products enable your staff to comprehend your software more quickly and ensure the code change is applied consistently across all software artifacts. Whether you use CM First products to empower your staff or hire CM First services to assist you with automated code understanding and mass change, CM First will help you reduce the cost and risk of transforming large legacy applications.

### **Our Automated Analysis Products Enable**

- Business Rules Harvesting
- Detailed Impact Analysis
- Data Dependency
- System & Data Flow Visualization
- Dead Code Identification
- Complexity Metrics
- Instant Documentation

### **Benefits**

- Accurate Project Scoping
- Increase the Agility of Mainframe Applications
- Reduce Risks (Project, Operational, Compliance)
- Enhanced Decision Making for Maintenance, Rationalization and Migration activities



## **What's the Cost of Reading and Misinterpreting Code?**

Your mainframe systems embody decades of business and technical expertise, but the problem is that knowledge is buried in the million plus lines of code of a typical legacy application. That is the equivalent to 33 John Grisham novels. Think of all of the time your analysts spend reading code in scan results and filtering out the false-hits. Worse yet, what's the cost to fix a mistake if the analyst misses a path due to the complexity of the code, inconsistent data naming, or human error.

With CM First's automated analysis products, analysts find answers 80% faster than scanning and reading source code. Our code understanding products bring the accuracy of a compiler to the analysis process. Analysts are able to step through a focused analysis path to get the exact information they need from any starting point digging into the details within minutes.

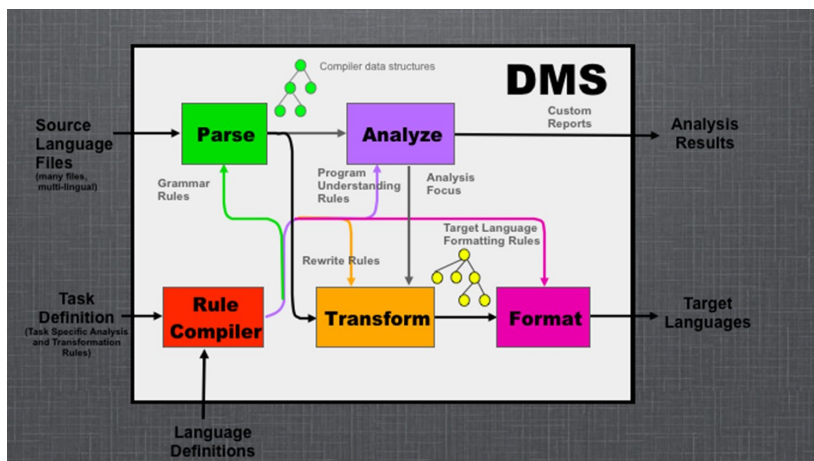
# Automation When Significant Change is Needed

Your development staff provides the creativity to point wise modify your code base to meet your day-to-day organization's business goals. However, sometimes a massive number of changes must be made to code base to solve system wide dysfunction. Projects such as increasing a commonly used field size too small for present day needs, or architecting for SOA, implementation of a new DBMS, or integration with new technologies can require hundreds if not thousands of programs to be modified. It is hard to carry out large-scale code base changes manually in a reasonable length of time with high reliability, especially as your staff already have their hands full trying to meet direct business demands.

Big jobs require big machinery. CM First's advanced configurable compiler technologies and programming language processors (DMS® Software Re-engineering Toolkit) can complete the desired changes with far less human effort and greater consistency. Honed over twenty years, DMS® uses explicit, flexible code change rules that are executed repeatedly and reliably across the entire code base until all system changes are completed. Just as important, our process does not disturb your staff during most of the project. Your team can continue to make changes to the system as dictated by the business until the mass change is ready to install.

## Benefits

- ◇ Solves problems and removes technical roadblocks that cannot be completed manually
- ◇ Repeatable, testable reliable change — Automation reduces risk
- ◇ Your development team stays focused on supporting the business
- ◇ Makes the software more accessible to modern programmers



## Mass Change Projects

- ◇ Field Size Expansion
- ◇ Code Modernization
- ◇ Language Migration
- ◇ Green Screen to GUI
- ◇ Architectural Shift
- ◇ Add Data Access Layer
- ◇ Convert to SOA

## Languages & Subsystems Supported

CM First is an industry leader in supporting all versions of COBOL and where appropriate the accompanying screen definitions, databases, transaction processing, flat files and JCL. We also support: PL1, Natural, Java, C#, VB.net, VB6, JavaScript, Progress, PHP, XML Perl, C, C++.

Have a problem not on the list? The DMS Software Re-engineering Toolkit has been proven to support customer re-engineering tasks since 1995. This experience and tooling can tackle tough problems not practical with conventional development teams and tool vendors.