

**STATEMENT OF WORK**  
**FOR**  
**PRINCIPAL SYSTEM ARCHITECT – SOA/JAVA**

**C. INTRODUCTION**

C.1 The District of Columbia, Department of Motor Vehicles (DMV) operates a Motor Vehicle Information System (DESTINY) that was developed and implemented to support Driver License issuance, vehicle registration and titling, inspection, insurance, medical, parking permits and other DMV related functions.

In order to provide technical and architect leadership for the DESTINY e-architecture with emerging business solution practices, conceptualizing and experimenting with alternative architectural approaches, development and creating model components and interface specifications for the infrastructure products and enhance the capabilities of DESTINY application, there will be architectural design with industry proven software design patterns to migrate the existing application with numerous revisions, and expansions required in the support of the system. Current DESTINY computer software applications, database management, and application activities must be supported. This involves customer interaction with client to determine business requirements, documentation for existing modules and new enhancements with business rule changes, extensive testing – unit, stress and regression, quality assurance, and deployment. Current application architecture includes CICS-COBOL-DB2 that blends with PowerBuilder and Web, COBOL programs in Online and Batch environments with DB2 databases.

Senior level technical architect with in-depth knowledge of application development on Java/JEE with object oriented distributed Services Oriented Architecture environment is required because of the size and complexity of the system which requires extensive analysis before new or changed elements are introduced. DMV requires contractual technical support with the proper skill-sets to support its information technology requirements. This person must be able to work with customers and team members to elicit requirements, validate understanding with customers, interpret and design business requirements, and write technical specifications. This person shall evaluation the legacy environment, analyze system requirements, recommend solutions, and document all findings. Solution shall include method for migrating from the legacy application in phases with no disruption to DMV business operations.

**C.2 BACKGROUND**

C.2.1 The Office of the Chief Technology Officer (OCTO) in conjunction with the DMV is moving from the current platform to web-based Service Oriented Architecture. OCTO and the DMV are seeking a principal application architect who will evaluate the current application environment, plan the approach for migrating to the new platform, and documenting recommendations for the overall architecture, provide options for migrating from the legacy application to Java, APEX, SOA, and documenting plans in detail.

**C.2.2 DESTINY Application Overview**

The current DMV system, DESTINY, is a three tier client/server system that blends a PowerBuilder 7.0 GUI client with the IBM middleware and Distributed CICS middleware products to access data stored in a DB2 database residing on the District's IBM mainframe. The DESTINY application provides a data entry and lookup GUI, batch processing, reporting, and multiple external system interfaces to more than 300 internal users. The application provides both Web static pages and web applications for use by the District of Columbia citizens.

The District of Columbia Department of Motor Vehicles (DC DMV) DESTINY application allows you to perform a full spectrum of driver licensing, business licensing, and vehicle registration functions.

★ General Functions

- ▲ Financial – collection of payments
- ▲ Interrupt & Restart Capability
- ▲ Notices and Letters
- ▲ AAMVA Interfaces
- ▲ Graphical User Interface

★ Driver License Functions

- ▲ Non-commercial driver license
- ▲ Commercial driver license
- ▲ Medical Information
- ▲ Violations and Withdrawal Tracking
- ▲ On-line SSA SSN Verification
- ▲ On-line PDPS/CDLIS Verification

★ Vehicle Registration Functions

- ▲ Titles and Registrations
- ▲ Fleets
- ▲ Personalized Tags
- ▲ Insurance
- ▲ Parking Permits

**C.2.3** The DESTINY system is based on transactions and windows. These transactions are made up of windows that contain information pertaining to a customer, business, or vehicle. Transactions (fee and no-fee based) are processed through the Determine Transaction and Bulk Transaction Icons.

DESTINY offers the following features:

- Since the permits and registration functions are integrated, this helps manage and avoid record duplication.
- Links to other systems like Ticket Information Management System (TIMS), and Problem Driver Pointer System (PDPS).
- Automated Management Reports
- Automated transaction flow and control i.e. Documents Required, Fees, Validation Rules, etc.
- Stores History and has the ability to record comments.
- Promotes “One-Stop” by allowing multiple transactions to be processed together.
- Allows for financial reconciliation and cash management.

Integrated with the PowerBuilder DESTINY application is the DC DMV Internet functionality:

- Non-commercial driver license renewal (if driver is eligible)
- Duplicate driver license issuance
- Appointment scheduling of skills test
- Sample knowledge tests – non-commercial, commercial, and motorcycle
- Vehicle registration renewal (if owner is eligible)
- Duplicate vehicle registration card issuance
- Fleet Inspection Status
- Fleet Vehicle Registration Renewal
- Vehicle and Driver’s Information Request
- Dealer temporary tag assignment and monitoring
- Personalized plate request and payment
- Mayor’s Office low tag request
- Q-matic wait times by service type (driver license and vehicle registration) at DMV offices

### **C.3 SCOPE OF SERVICES**

**C.3.1** Contractor shall possess a combination of technical and leadership skills, including in-depth knowledge of IT infrastructure, architecture, SOA and JAVA. The contractor shall work closely with business Leads and Subject Matter Experts to capture application environment requirements, determine migration approach from legacy to the new environment, determine SOA business modules, and document all findings which will be used as the primary source for a development Statement of Work.

**C.3.2** The contractor shall provide technical and expert consultant services to DMV. Services shall include:

- Analysis of legacy application environment
- Technical JAD Session facilitation
- Application Architectural design
- System software recommendation
- Re-architecture the current application with Java/JEE, SOA, and Websphere.
- Provides expertise regarding the integration of applications across the business.
- Prototype of the Design Architecture
- System Documentation using Business Process Management Notation.
- Work with DMV Management, Development and Quality Assurance team to translate requirements into full-featured, robust SOA system to support the core business of the DMV.

**C.3.3** The Contractor shall be required to provide expert knowledge in the following technical areas:

- Preparing, leading, and facilitating JAD sessions among business and technical stakeholders.
- Performing Gap and Risk Analysis.
- Creating process BPMN charts, class, activity and sequence diagrams for application environment
- Object oriented design and analysis principles
- Application integration, including the use of XML and Mule ESB
- Experience with J2EE spring framework, Spring Web flow, Spring MVC, AOP and Hibernate persistence framework
- Extensive experience in architecting large, mission-critical application environments.
- Provide in-depth technical recommendations for all aspects of the environment, particularly SOA, JAVA, and application middleware integration.
- Rational development environment

#### **C.4 TASK REQUIREMENTS**

The contractor shall provide:

- Architectural and technical leadership to migrate the current modules to web based solution using SOA, Java/JEE framework with AJAX.
- Capability to keep current application in compliance with new legislative and administrative requirements during migration process;
- Estimation of solution level of effort for migration of current application to SOA, JAVA, APEX application with Websphere using Rational IDE;
- Architectural deliverable accountability
- E-Architecture design
- Mentoring for development staff
- Documented code standards and methodology
- Deployment methodology
- Change request capture in UML with class, sequence and activity diagrams.
- Documented process flow from the core stakeholders in JAD sessions.
- Detailed Functional and Technical Requirement Specifications from the JAD using Rational suite.
- Create Class and Sequence diagrams using Rational Rose
- Ant Build configurations.
- Recommendation to management for system performance parameters

**C.4.3** The District will furnish desks, telephones, and general office supplies for the contractor.