Capabilities Statement

Email: info@modeldriven.com
Web site: www.modeldriven.com

Model Driven Solutions

Model Driven Solutions is a leading provider of professional services and products that leverage **Services Oriented Architecture (SOA)**, the Object Management Group's (OMG) **Model Driven Architecture (MDA)** and W3C's **Semantic Web** techniques and standards to federate processes, information, systems and organizations. We assist major organizations in achieving effectiveness and agility in a changing and collaborative world.

Founded in 1996, as Data Access Technologies, Inc., its division, Model Driven Solutions, has been a leader in the development of open standards and supporting products that result in SOA based Executable Enterprise Architectures (EEA). Model Driven Solutions' EEA focus helps drive information systems to quickly and cost effectively address business and defense initiatives.
Active in the Object Management Group (OMG), the Organization for the Advancement of Structured Information Standards (OASIS), the Open Group and other standards development organizations, Model Driven Solutions has provided industry leadership that is, today, resulting in significant technological advancements and customer satisfaction. With customers like the General Services Administration (GSA), the US Army, Raytheon, Lockheed Martin, Kaiser Permanente, Unisys and many others, Model Driven Solutions is at the leading edge of today's software technology advances.

General Information

Registered Company Name:	Data Access Technologies, Inc. (DAT)
Divisions:	Model Driven Solutions (Professional Services)
	ModelDriven.org (Open Source & Open Community)
Office Telephone:	+1.703.992.9105
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D-U-N-S Number:	019383376
EIN Number:	65-0646597
GSA FSS IT 70 Schedule:	GS-35F-0568R
CARE Code	3FL27

Business Information

Year Incorporated:	1996
State of Incorporation:	Florida
SBA Status:	Certified Small Business
Number of Employees:	5 (Others operate as subcontractors)
Number of Years in Business:	13
Payment Terms:	Due upon Receipt

Offices

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Major Clients

Government & Government Contractors

GSA U.S. General Services Administration

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

U.S. ARMY

Raytheon

LMI GOVERNMENT CONSULTING

National Institute of Standards and Technology
...working with industry to foster innovation, trade, security and jobs
NIST

Barquin International

LOCKHEED MARTIN
We never forget who we're working for™

UNISYS

Commercial

KAISER PERMANENTE

GM

DATA ACCESS WORLDWIDE

Affiliations

OMG - OBJECT MANAGEMENT GROUP	Board of directors and active member of multiple standards efforts.
THE Open GROUP - Making standards work®	Vice Chair, Architecture Forum Strategy Working Group
iac - Industry Advisory Council	Member of Leadership Team, Enterprise Architecture Special Interest Group

Partnerships & Subcontractors

- **RedHat**
- **IBM**
- **Progess IONA**
- **Sun Microsystems**
- **Active EndPoints**
- **NoMagic, Inc.**

- **Booz Allen Hamilton**
- **Ciber, Inc.**
- **Modus21 (an Intalio|BPMS Partner)**
- **Synsyta**
- **KDM Analytics**

Standard Industrial Classification Codes

NAICS Code	SIC Code	Description
541511	(7371)	Custom Computer Programming Services
541512	(7373)	Computer Integrated Systems Design
541519	(7379)	Computer Related Services
541611	(8742)	Strategic Planning Consultant Services
541618	(8748)	Business Consulting Services

Core Capabilities

Actionable Enterprise Architecture	The MDS approach to EA goes beyond paper architectures to create a coherent and integrated view of business, finance, governance and I.T. that can obtain stakeholder buy-in supported by actionable plans. Enterprise architecture captures the architecture of the enterprise, not just I.T. infrastructure. This architecture of the enterprise includes viewpoints relevant to clients needs and stakeholders perspective. Technology solutions are architected to meet business driven and mission driven requirements. An MDS actionable EA integrates Enterprise SOA, BPM, Information and Technology to help reduce costs, redundancies and errors while improving agility, efficiency, collaboration and informed decision making. A successful EA effort will improve business and systems integration, reduce redundancy and have a lower cost of ownership.
Service Oriented Architecture (SOA)	The Enterprise-SOA approach practiced by MDS applies the SOA principles of service orientation, service reuse, separation of concerns and architecture at both the business and technical level. Enterprise-SOA facilitates the integration of business units, suppliers, customers, fighting forces and systems into a collaborative solution based on the simple concept of providing and using services. Services provide the foundation for preserving valuable legacy capabilities while integrating new solutions. MDS leverages SOA modeling and infrastructure standards, including SoaML™, the standard for modeling SOA that MDS helped to create. MDS is expert in taking SOA architectures into enterprise solutions using commercial and open source web services and ESB technologies. MDS provides tooling support for SoaML and executable architectures under ModelDriven.org. SOA, for MDS, includes event driven architectures, EAI, Corba, REST and Web Services.
Business Process Management	Business process management takes a process centric approach to defining how the organization will provide value, offer services and achieve its mission. BPM helps turn ad-hoc activities into efficient processes that achieve results more quickly and less expensively. Where business processes can be facilitated with technology solutions MDS can automate the business processes using standards based BPEL engines, infrastructure and tooling. More efficient processes facilitated, where necessary, with technology support is a key enabler to a more efficient enterprise.

Model Driven Information Sharing with NIEM-UML	Information sharing is essential to collaboration, integration and cross-organizational cooperation. MDS enables information sharing using a model driven approach that encompasses data, services, processes and security.
	MDS has been a key contributor to the NIEM (National Information Exchange Model) program sponsored by the U.S. Government. MDS has helped design the model driven standard for NIEM – NIEM-UML. NIEM-UML combined with other MDS standards such as SoaML provides for a complete information sharing solution when combined with runtime technologies such as XML, EJB and others.
Information & Data Federation **Semantic Mediation**	Information and data architectures capture the essence of the vocabulary and information the enterprise deals with every day to facilitate better integration of organizations and processes. MDS captures the high-level information architecture in terms stakeholders will understand while formalizing this information into well defined models. MDS leverages the semantic web combined with model driven architecture to bring together disparate information sources, processes and organizations.
	Information and data architecture support data sharing, reduced redundancy, increased consistency, improved data quality and enhanced information analysis. Schema for XML, RDF and DBMS systems can be directly produced from the data architectures.
Model Driven Architecture (MDA)™	MDS utilizes Model Driven Architecture techniques, tools and standards to manage and connect architectures at all levels. The SOA, BPM, Information architectures and UML models are connected through MDA metadata and modeling standards supported with pervasive open and commercial tooling.
	MDA is the key to our capability for linking business and technology architectures. Many of the artifacts for a technical SOA, BPM or Data Sharing solution can be created, automatically, using MDA tools. This drastically reduces development time and costs but has an even more dramatic effect on reducing total life-cycle costs while improving agility. MDA based architectures are technology neutral, allowing technologies and vendors to change while preserving the architecture of the enterprise.
	MDS provides commercially supported open source MDA tooling, infrastructure and open models under ModelDriven.org.

Ontologies & Semantic Web Linked Data	Ontologies and the semantic web have emerged as the foundation for integrating and federating physically, structurally and organizationally diverse information. The semantic web, RDF and linked data provides an internet-scale approach to connecting, federating and understanding information wherever it is and however it is represented. Ontology languages, such as OWL and Common Logic provide the basis for formally understanding and modeling our information, process and services so that the meaning is communicated and understood – not just tags and structures. MDS has successfully utilized the semantic web and Ontologies to federate, integrate and project architectural resources from multiple sources – creating a "web of architectures" as an internet scale metadata repository. MDS is also a thought leader in the integration of architecture, modeling, metadata and semantic technologies. Under ModelDriven.org these technologies are being developed as open source resources for federated metadata management supporting multi-faceted business and technology architectures.
Metadata management	Metadata management is a foundation technology for architected solutions. The MDS's approach to metadata management is open and standards based so that crucial assets are never "locked up" in proprietary tools or formats. MDS has been active in Metadata standards for over a decade and has employed standards based solutions for our clients using both open source and commercial products. In particular, MDS utilizes products based on both the OMG "Meta Object Facility" (MOF) and the W3C's Semantic Web standards for managing Metadata. Enterprise, segment and technology designs, architectures are a crucial enterprise asset that must be managed, disseminated, integrated and evolved. Metadata management provides the capability to manage, present and leverage this crucial information.
Governance	Governance links business goals with the initiatives, assets and investments to achieve those goals. An MDS Enterprise-EA is managed by the governance process and informs the governance process on the most effective options available. The EA also helps define the "feedback loop" for governance – metrics, which are the basis for informed decision making. MDS capabilities for governance include Enterprise Architecture, as-is architectures, to-be architectures, transition plans, sequencing plans, business plans, metrics and analysis.

Federal Enterprise Architecture (FEA) and transition framework	The Office of Management and Budget (OMB) has defined a set of standards that define the standard terms and exchange formats for high-level government architectures. The FEA includes the Performance Reference Model (PRM), Business Reference Model (BRM), Service Reference Model (SRM), Data Reference Model (SRM) and Technical Reference Model (TRM). The FEA viewpoints support the federal transition framework for reducing redundancy in government services. MDS is able to relate Actionable Enterprise Architectures to the FEA and FTF, producing OMG required artifacts and viewpoints from standards based models. MDS can help agencies improve their EA "score" with OMB.
SOA, BPM & DBMS Infrastructures & Technologies	Realizing business driven architectures with technology support requires a secure, flexible and reliable technical infrastructure. MDS can help architect and implement an effective technical infrastructure that allows for integration of legacy systems as well as deployment of new solutions. A key capability of the infrastructure is the ability to deploy components and processes as services that are able to be connected and reused. By providing "out of the box" technical capabilities to support secure application components with modern containers and Enterprise Service Buses (ESB), each application component becomes simpler, less costly, easier to manage and easier to integrate. While MDS architects for technical diversity, there is no reason to "re invent the wheel" for every application. The architected and reusable infrastructure(s) provide the foundation on which to deploy SOA and model driven solutions. MDS technical infrastructures leverage current but proven technologies including: XML, XML Schema, Soap, WSDL, BPEL, WS-*, Policy Management, WS-Security, xQuery, xForms, JBI, SCA, SQL, HTML, Java, JEE, JavaScript, RDF, Sparql, OWL, Etc. Specific infrastructure products include: JBoss, Glassfish, Oracle, Intalio, Websphere, Weblogic, Ect. The MDS approach to infrastructure technologies is to use open standards and open technologies wherever possible and to integrate commercial and proprietary solutions, as required, into the open infrastructure.
Architecture Driven Modernization (ADM) and systems modernization[i]	Utilizing, integrating and modernizing valuable legacy systems is a central part of any architected solution. The MDS approach utilizes information and artifacts from existing systems to understand the "as is" architecture as well as the information and services exposed by existing systems. This clear understanding of what exists is factored into and becomes part of the enterprise "to be" plan. Where substantial legacy analysis, re-engineering or ongoing support is required MDS utilizes tools based on "Architecture Driven Modernization" (ADM), an OMG standard, to capture and analyze existing systems. Information from ADM tools is then used to validate and inform target architectures.

Agile MDA, SOA & BPM Implementation	MDS uses actionable architectures combined with MDA tooling to support a rapid and agile development process. Time and costs for developing solutions is reduced due to the ability to generate implementation solution components from models. The resulting solutions implement the enterprise services, processes and manage enterprise information – all consistent with the architecture.
	Since technology artifacts can be produced from models, independently developed components, services or applications can be tested and validated against the architecture – making the acquisition process more reliable and well defined.
	The MDA based implementation process used and supported by MDS allows for adaptability and change: supporting changing technologies and business requirements.
Model Based Acquisition	Model Based Acquisition is the development of acquisition specifications from models, providing more precise and testable acquisition specifications. Results from these acquisitions can then be tested using MDA techniques derived from the same architectures.
	Model based acquisition is better for the government because it helps make acquisitions focused on business requirements, enhances precision and support validation. Since the acquisitions are more complete and precise there is a level playing field to provide the government with best value.
Modeling tools and standards	MDS has specific expertise in a wide variety of modeling standards and tools.
	Standards include: UML, BPMN, EDOC, ER, SysML, DoDAF, Etc.
	Tools Include product suites from: NoMagic, IBM/Rational, Sparx, Metis, Eclipse, Etc.
Open Source	MDS supports and provides expertise in using and developing open source tools, models and infrastructure. MDS regularly uses and contributes to open source projects such as Eclipse, Sun, jBoss, Red Hat and Apache while sponsoring open source efforts under ModelDriven.org.
	The MDS approach to open source is supportive but not exclusive – commercial products are utilized along with open source products to best meet customer's needs. MDS provides commercial support and training for selected open source products.
Standards Development & Support	MDS is active in the standards process and helps organizations understand standards as well as develop standards and reference implementations. MDS is active in the OMG, Open Group, Oasis and W3C standards efforts. MDS helps in aligning SOA standards across industry groups.
	MDS has contributed to multiple standards, including: UML, SoaML, BPMN, MOF, UPDM, Corba, EDOC, ADM, CWM, XMI, BPDM and others.
Training and Mentoring	MDS provides training and mentoring for Enterprise-SOA, MDS, Modeling, Open Source and Architecture. Please see our course schedule for more information.

Recent Projects

Phase 1 of a complete Segment Architecture for GSA's Office of the Chief Human Capital Officer. This phase analyzed and modeled the As-Is state and developed a To-Be projection for Human Resource Core Services as defined by OMB's HRLoB. We are continuing this project analyzing and modeling non-core services.

Developing and Open Source SOA Registry Service for the GSA OCIO.

Evaluating various SOA platforms and JBI implementations and matching these capabilities with those of BPMN for the Office of the CIO at the Federal Acquisition Service (FAS) at GSA.

Developing an Open Source eGovernment Reference Architecture (OSeRA) under the direction of the GSA OCIO. This industry leading-edge project targets the management and integration of multiple tools, visualization capabilities and execution platforms in a single Open Source, semantically grounded environment.

Development of a Model Driven, Service Oriented Open Source Financial Application that takes the Architecture developed in the GSA Financial Management Enterprise Architecture for the OCFO (see below) and implements a portion of it (Asset Accounting).

Development of an integrated IT Portfolio Management program that provides a management and governance framework for GSA to identify opportunities to both reduce the cost base for the agency and to improve services to customers (i.e., sharing, reuse, collaboration, new capability development, etc.) It provides Service and Staff Organizations (SSO's) greater insight into the enterprise impact of their investment decisions and improves understanding of GSA's capabilities, allowing GSA to better leverage and support cross-agency initiatives, as laid out in the upcoming Federal Transformation Framework (FTF) and Federal Enterprise Architecture (FEA). This project also served as a communication and education vehicle to more effectively show the value of Model Driven Architecture (MDA) and Service Oriented Architecture (SOA) solutions.

Developed a detailed architecture for "Contract Writing" within GSA. This project details the business processes and supporting technologies required to meet the requirements that are part of the overall Federal Acquisition Architecture.

In February, 2006 Data Access Technologies, Inc. was awarded a (up to 5 year) Blanket Purchase Agreement (BPA) for support of GSA's Office of the Chief Information Officer. DAT was the Prime contractor on this successful bid that was supported by subcontractors Booz|Allen|Hamilton, Ciber and OmniSolve.

The development of a detailed Enterprise Architectures for the GSA OCFO. In OMG MDA terms, this comprises a Computational Independent Model (CIM), a Platform Independent Model (PIM) and a Platform Specific Model (PSM). The end result was a streamlined target Financial Management business process supported by the detailed specifications for a number of Service Oriented Architecture (SOA) based components that, together, will comprise the Financial Management Line of Business. Each area maps to the appropriate OMB FEA Reference Model.

Detailed business process integration modeling of a wireless telecommunications start-up to provide it the agility to react to both business and technology changes rapidly.

Information modeling, in UML, of the domain vocabulary used in the use case specifications of FEA components for records management, as developed by the National Archives and Records Administration (NARA) in conjunction with several agencies across the Federal government.

Providing an industry expert review of the application of MDA standards, best practices and methods in the development of the DoD Strategic Integrated Air Picture (SIAP).

Modeling, under the direction of the GSA OCIO, the CIM (business) level integrated Enterprise Architecture for the entire GSA known as the "One GSA" architecture.

Modeling a major portion of the C4I Driver simulation environment for the US Army PEO STRI.

History of Model Driven Solutions

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Date	Activity
1996	DAT founded and incorporated. Originally a spin-off from Data Access Worldwide (http://www.dataccess.com), a successful development tooling/4GL developer and marketer
1996	DAT Joins OMG, participates in the development of CORBA
1997	DAT obtains a multi-million dollar NIST development grant
2001	DAT develops the EDOC UML profile that is standardized by OMG
2002	DAT wins a major contract for EA development with Kaiser Permanente
2003	DAT wins a Unisys development contract
2003	DAT wins its first GSA proof of concept (POC) project
2004	DAT wins a modeling simulation contract with the US Army PEO STRI
2004	DAT awarded a pilot GSA project based on the success of the POC
2004	DAT awarded subcontract to develop GSA's OneGSA EA
2005	DAT awarded subcontract to further enhance GSA's OneGSA EA with a major "drill-down" and system specification sponsored by the GSA OCFO
2006	DAT leads a major industry team bidding for a Blanket Purchase Agreement for continuing OneGSA EA work with GSA OCIO
2006	DAT awarded two contracts (Contract Writing and Integrated IT Portfolio Management) under its BPA with GSA
2006	DAT begins operating as Model Driven Solutions
2006	Model Driven Solutions initiates operations of ModelDriven.org
2007	MDS wins its third task under the GSA BPA – Financial Management EA Implementation
2007	MDS wins task under GSA BPA – Human Resources Enterprise Architecture
2007	MDS wins task under GSA BPA – Open Source Enterprise Reference Architecture (OsEra) – Services Integration Platform
2008	MDS wins two additional tasks under GSA BPA – Federal Acquisition Service - Service Oriented Infrastructure and OsEra Services Registry
2008	MDS more than doubles it office facilities in Vienna, VA to meet growth requirements
2008	GSA Human Resources extends Enterprise Architecture project work with MDS

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[i] MDA, Model Driven Architecture, SoaML, BPMN, MDA and ADM are trademarks of the Object Management Group.