

# FormDriver Technology Profile

## Executive Summary

Government, institutions and private enterprise are all rapidly moving toward a paperless, browser-based electronic forms delivery system to improve service, reduce errors and improve worker productivity. Several forms and data standards have emerged over the last several years including HTML, XML and the Portable Document Format (PDF.) Many institutions, agencies and companies have adopted the PDF standard because of its portability, flexibility and ability to maintain the exact image of legal documents in an electronic, on-line environment. With the advent of the PDF format, a distinct and inherent shortfall has emerged – limited database connectivity and real-time interactivity with on-line users.

The FormDriver technology, first introduced in 1997, has been designed to address this shortfall directly. It is a “No Programming” approach to creating related form databases, populating those databases with submitted data, then allowing the PDF format to become used within a manageable workflow process across a variety of platforms and operating systems. The key benefits of the FormDriver technology include:

### FormDriver Benefits

1. **Labor and Cost Savings** -- No custom programming, including one CGI script that works for all forms.
2. **Implementation Schedule** -- A form can be designed and database-enabled on corporate or institutional Intranets or over the Internet in a matter of hours, not days or weeks.
3. **Work Flow Customization** – Companies or institutions will be able to define their workflow and security requirements through the maintenance of the form itself, not some costly, proprietary document design and management system. Advanced features include application use through PDAs, connectivity / notification through existing email systems, and e-faxing to any fax device. Multiple, predefined or single output instructions can be submitted based on instructions built into the form itself. And upon each submission, all data is captured in an ODBC-compliant database.

Implementation of FormDriver is relatively straightforward. It is a server-based software application that can be installed in less than one hour, with a pre-authored form able to be launched on the Internet in a matter of minutes. Due to the simplicity of technology implementation, focus can be directed toward defining the workflow process requirements for individual forms or form families that are connected by defined work flow processes. When combined with the power of PDF, the FormDriver technology allows for the replication of virtually every workflow process or business practices to be addressed, again through maintenance of the Form itself. The key benefit to this simplicity is reduced implementation schedules. We have found the implementation cycle to be reduced upwards of 40% to 90%, depending on the complexity of the individual form workflow process being defined. With the pressure facing many companies and institutions today, this can translate as a strategic public relations and technical deployment tool to deliver interactive forms now -- not tomorrow, not next week, not next month.

### Document Overview

This technology paper addresses the following specific areas of information:

1. System Architecture and Design
2. Technologies and Tools
3. System Requirements
4. Company Profile
5. Strategic Partnerships

### System Architecture and Design

#### Open Architecture Philosophy

FormDriver is an open architecture platform that links electronic forms with other work processes. Since it is not proprietary, the system developer can rapidly and efficiently integrate FormDriver with a variety of existing applications. In contrast, traditional form development systems are often, if not exclusively, proprietary. They require the developer to deploy their system at the exclusion of other software platforms that may offer more cost-effective and technologically advanced features. And without exception to this point in time, do not offer “no programming” database connection to PDF forms.

#### Architectural Approach

FormDriver’s architectural approach to form workflow management and system integration is to embed the workflow processes, business practices and rules into the form itself. This is in contrast to proprietary systems that generally require that work practices be defined external to the form, limiting form Internet portability across multiple platforms and operating systems. This is precisely why the PDF form standard has rapidly gained in popularity over the last several years. As a result, FormDriver works directly with the existing and most prevalent browser-based forms – PDF and HTML. Because of the open-architecture nature of FormDriver, data can be readily exchanged between both formats. In addition, FormDriver can extract XML form data and integrate it into the PDF and HTML standards, again with no programming or custom CGI script development.

#### System Design

- **Modules** -- FormDriver is comprised of three components:
  1. **The Console** -- establishes the operating parameters of the system,
  2. **The CGI Script** -- provides communications between the user’s Browser and the Server
  3. **The Forms Server** --runs in the background and is constantly monitoring for submitted forms to process according to the instructions embedded in the forms.
- **Executable File** -- FormDriver is installed as an executable file (\*.EXE) that can be embedded in other applications. It is based on Microsoft programming technology and has proven to be a reliable program that has continued to operate for one client for over two years without any maintenance. FormDriver is launched and operated through a form accessed through a web browser. It is operated within any server-based system, either behind a secure firewall, inside a closed Local Area Network, or within any server-

based operating environment. Being browser-based, FormDriver has addressed the growing trend to operate applications from one browser desktop, a trend strongly evidenced by Internet Explorer integrating the Windows Operating system and the MSN Network seamlessly. As a result of this, FormDriver was developed to deal with all open architecture browser-based forms, including PDF, HTML and XML. These comprise over 95% of all browser forms, and by default the most common means of exchanging database data across the Internet. Institutions and business will benefit directly from this design because it is fully consistent with the expanded integration of e-commerce solutions as part of the daily strategic planning implemented by business, institutions and government alike. And, once implemented, does not require a costly IT infrastructure to maintain.

- **Database** -- The FormDriver system has been designed around an ODBC-compliant database. As a result, setting up the ODBC drivers can connect FormDriver with any ODBC-compliant database. This can be set up to export data automatically or in batch mode.

### Implementation and Operation

Implementation and operation of FormDriver is straightforward and simple. The following steps describe FormDriver's implementation and operation.

1. **Form Design and Setup** -- It starts with creation of the PDF or HTML form. You create the form in your choice of development tools. Once the form has been properly authored and set up, it is saved in the forms directory on a secured server. *Please see page one of Appendix A, Form Design and Setup, for a graphical depiction of this step. Please note that throughout Appendix A reference is made to EFN technology, also known as FormDriver.*
2. **User Interface** – A User can launch the FormDriver process through the browser on any workstation across the Internet. The form is launched within the browser via URL link between the workstation and the FormDriver web server. When the form is filled out, the User “Submits” the form data, transferring that data to the web server for further processing. *Please see page two of Appendix A, User Interface, for a graphical depiction of this step.*
3. **Workflow Processing** – The form data is saved in the Inbox by the CGI script. FormDriver then detects the new Inbox submission. FormDriver reads the data file, looking for special instructions embedded in the form. FormDriver then processes the data to the database and follows these special instructions, launching other applications if requested. *Please see page three of Appendix A, Processing Flow, for a graphical depiction of this step.*
4. **RoundTrip Work Flow Processing** – A special feature of FormDriver is its ability to allow the User to query the database or process special instructions in the form, and then return the form or related forms back to the User for further processing with pre-filled data in the forms. Any changes made by the User or new data entered will be captured by the database on the next “Submission.” This unique ability allows for complete User interaction with the entire workflow process and ensures data integrity through complete database recording of all submitted data. *Please see page four of Appendix A, Round Trip, for a graphical depiction of this step.*

### Enhanced Workflow Processing

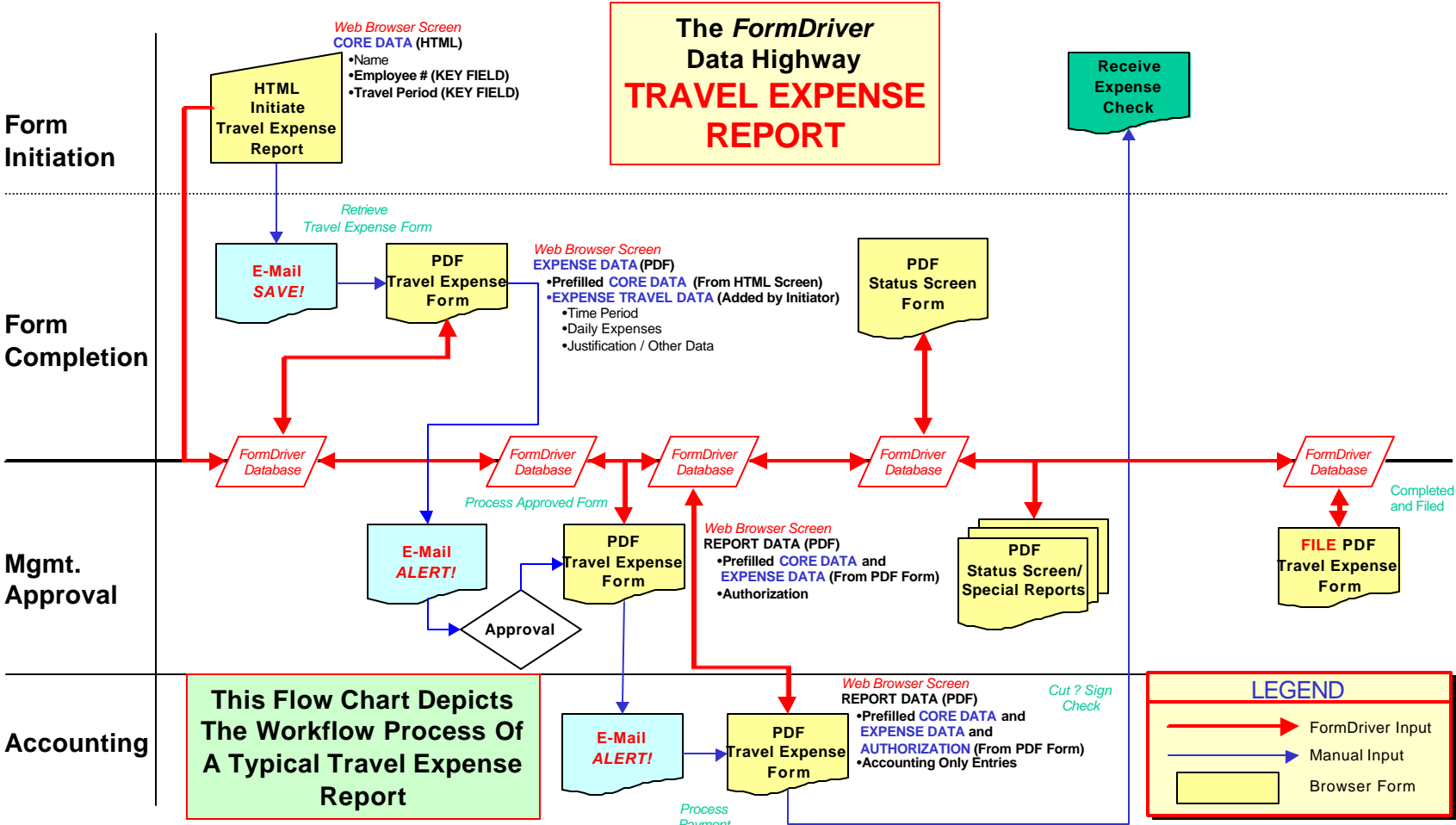
The Forms Administrator can set up other workflow functions within FormDriver. Special or hidden fields on the Form itself trigger these functions. These include:

1. **Email Notification** – The Forms Administrator can pre-define the output to one or more recipients, or the User can specify where to route the Form to for further processing.
2. **Other Forms** – Special instructions can trigger related forms to be returned to the browser with pre-filled information. This way form families can work together as part of a larger form or workflow process.
3. **E-fax Output** – The Forms Administrator can provide for a fax output of a form to any fax terminal merely by typing the fax phone number in the form. This can be pre-set or defined by the User.
4. **PDAs** – The growing popularity of PDAs has resulted in testing to confirm the operability of FormDriver in this environment. Initial tests have successfully been conducted on Palm 5 and Blackberry devices. The process is launched through an HTML screen input, and the PDF format output can be directed to any output device or saved for further processing.
5. **Database Connectivity** – FormDriver's ODBC data can be linked with any other ODBC-compliant database through the setup of ODBC drivers. Data can be processed in batch or upon each submission. Many businesses prefer to use the FormDriver database as a "suspense" or holding account before processing to back end database systems to ensure data integrity and block access via the Internet. Therefore, the FormDriver database can become an integral part of the security firewall while allowing for advanced workflow processing.

### Workflow Integration

FormDriver is a tool that integrates related applications and forms to work as a complete system over the web browser-driven Internet or secure corporate Intranets. It serves as the database data highway for the workflow process. Shown on the following page in Exhibit A is an example of how this integration takes place. A typical Expense Report is used to depict this process. The various steps outlined above under Implementation and Operation are illustrated and how the data is carried along the data highway. A powerful feature that is illustrated throughout this flow chart is access to the FormDriver Database by the Forms Administrator. Valuable information regarding usage patterns, summary management information and other Administrator-defined reports can be created using tools such as Crystal Reports to extract data from the ODBC database. For example, a weekly snapshot report can be created for monitoring Expense Report submissions to assist with managing cash flow. Or data can be summarily reviewed before submitting to a legacy system to ensure data integrity. Access to the database is simple and can be secured by placing the database on a secured server with appropriate security protection levels.

### Exhibit A Workflow Integration



### Technologies and Tools

FormDriver integrates with proven, off-the-shelf, technologies and tools. They include:

1. Console and Form Server are an executable file.
2. Perl CGI Script – one CGI script for all forms
3. E-mail system – calls existing e-mail system to send email notification
4. Web Browser – Works with MS Internet Explorer or Netscape on Windows, Unix or Macintosh user workstations.
5. Integrates with PDF, HTML and XML standards
6. Outputs to any printer through all printer drivers
7. Outputs to any fax machine through optional (fee based) faxing option
8. Works with popular PDAs – currently operational with Blackberry and Palm V PDA platforms in beta test environment.

As can be seen, careful attention has been made through the open architecture approach to integrate with a variety of existing technologies to rapidly integrate forms deployment through existing infrastructure.

### Form Development Tools -- The Workbench

The Workbench has been created to simplify the process of activating forms on the Internet. The Workbench contains “trigger” form fields that can be copied and pasted to activate the FormDriver functions. This makes the process of placing an “authored” form live on the Internet simple. It takes about five minutes to launch a form live on the server or Internet once the form is authored.

In addition to the Workbench, the most common tool for authoring a PDF form is by utilizing Adobe Acrobat. Acrobat has all the basic tools to create PDF forms and implement advanced workflow and business decision rules. There are other forms development tools that may be used. In the end, as long as a valid PDF form has been created, FormDriver will automate the embedded workflow process.

HTML forms can be created with any of the popular HTML development tools; the key issue is one of preference by the designer. As with PDF, once an HTML form has been created and authored, it can be launched live on the Internet in a few minutes for QC evaluation prior to general release.

The above tools are all that is required to set up and run FormDriver and integrate with existing system architectures.

### System Requirements

FormDriver has been designed to work on Windows 95/98, Windows NT or Windows 2000.

The basic requirements include:

1. Pentium-based processor (the faster the better)
2. 32Mb RAM to start, with the ability to expand.
3. 10 Mb of hard disk storage space for the FormDriver application. Expandable storage as system storage requirements are defined. Your form library and applied workflow processes may become a variable for determining ultimate storage requirements.

4. Works on Windows NT, Windows 95/98 or Windows 2000 platforms. Future versions will be adapted to Unix and Linux.
5. User Platform – Requires Acrobat Reader 4.0 or later (freeware) and web browser (Netscape or Internet Explorer).

### ***Company Profile***

#### **Corporate Overview**

CEO and President Nicholas Duncan founded e-Forms NOW! in 1997 after recognizing the need to take data from hard-to-get formats and turning it into usable, easily accessible formats. He created and developed FormDriver. Corporate Headquarters are at 7872 Liberty Avenue, Suite B, Huntington Beach, California.

The company's first client was Disney Travel Products. FormDriver was used for several years to manage the global tracking of Disney licensing with its travel partners. Until this Disney division was merged into other operations in late 1998, FormDriver operated without interruption and any maintenance requests, processing all PDF forms to the database around the world. Since then clients have included the City of Los Angeles, City of San Luis Obispo, Greater United Way of Los Angeles, Answer Financial and Sony Electronics.

#### **Vertical Market Strategy**

e-Forms NOW! is expanding the use of FormDriver through development of strategic alliances with its customers, vertical market joint venture partners, distributors, value-added resellers, original equipment manufacturers, software developers, systems integrators and service providers. The central component of this approach is vertical market development. Strong demand has been experienced in:

1. Government (international, federal, state and, local)
2. Insurance
3. Real Estate / Mortgages
4. Other Financial Services
5. Healthcare
6. Education

There are more vertical markets that will ultimately be embraced. These are the first areas to be addressed with the assignment of vertical market leaders to address industry workflow issues and assist with special business analysis requirements.

As these markets are established, an ASP business model (Application Service Provider) will be implemented to host forms and forms processes for small businesses and those companies that wish to outsource the form workflow process. With hundreds of millions of forms moving toward a paperless environment, this segment will grow to become a significant part of the overall business.

#### **Key Personnel**

e-Forms NOW! is led by an experienced management team with a combined 55 years of experience both in the application of technology as well as the startup and growth of new business enterprises.

**Nicholas Duncan, President and CEO**

Mr. Duncan provides the vision and overall strategy for making e-Forms NOW! the leader in data acquisition and processing. His career has been focused on reducing paperwork and manual data processing with the use of electronic forms and databases, slashing hours of work to mere minutes. Mr. Duncan is responsible for project implementation, new product development and oversees programmers and software developers.

**James Filanc, Vice President of Sales and Marketing**

Mr. Filanc has 29 years of business experience, including 18 years in the sales and marketing of professional services, technology products and software applications. He also developed one of the nation's first desktop publishing businesses with the first edition reaching over 40,000 paid subscribers. He is responsible for developing market strategies for the deployment of FormDriver, overseeing all sales efforts within the vertical market integration and the execution of all marketing programs.

**Public Relations Contact**

Kelli Baker  
KC COMM PR  
Tel/Fax 949-837-8793  
[kellibaker2@home.com](mailto:kellibaker2@home.com)