Title of Nomination: FIRE SERVICE TRAINING RECORD SYSTEM (FSTRS)
Project/System Manager: ADAM THIEL
Title: EXECUTIVE DIRECTOR
Agency: VA DEPARTMENT OF FIRE PROGRAMS
Department:
Address: 101 N. 14th STREET -
City: RICHMOND
State: VA
Zip: 23219
Phone: 804-371-0220
Fax: 804-371-0219
Email: athiel@vdfp.state.va.us
CATEGORY: Enterprise_Information_Architecture
Person Nominating (if different):
Title:
Address:
City:
State: AL
Zip:
Phone:
Fax:
Email:

Virginia-Fire Safety Training Record System

2003 NASCIO Recognition Award Nomination
Virginia Department of Fire Programs Fire Service Training Record System

Executive Summary

The Virginia Department of Fire Programs (VDFP) is the state agency with overall responsibility for training structural and airport firefighters; supervisory fire officers; local fire marshals; hazardous materials first responders; and heavy/technical rescue personnel. Through five geographically-dispersed area offices, two program offices, and a central office in Richmond, VDFP principally serves an estimated 80,000 fire-rescue personnel statewide[1]. A major percentage of the administrative duties of VDFP is managing firefighter training records and certificates.[2]

As a requirement for maintaining the national accreditation of Virginia's fire-rescue training programs, the VDFP currently manages over 450,000 fire service training records—with approximately 19,000 additional records added and 42,000 records updated each year. Given the typical 25 to 30 year career of a Virginia firefighter, these records must be retained essentially forever.

Historically, VDFP's training records management process was not uniform and relied upon staff intensive processes and paper forms/files. Each of the area/program offices maintained traditional files for each individual student, with each file containing numerous paper forms documenting course registration, testing, and certification details. The steadily increasing growth in training program deliveries statewide (with a resultant increase in the number of records), ongoing resource limitations (state budget cuts resulting in administrative funding and staffing reductions), a lack of usable management information on training program delivery/demographics, and customer demand caused VDFP to examine potential technological solutions for handling the burgeoning workload associated with training records management.

VDFP partnered with the Virginia Department of Information Technology (DIT) to develop a web-based records management tool known as the Fire Service Training Record System (FSTRS). FSTRS was designed to streamline, unify, and ultimately reduce the cost of VDFP training records management and administrative functions.

FSTRS allows data sharing among all area/program and central offices; streamlined data collection, administrative processing, and statistical reporting; and the development/analysis of demographic and cost information to support management decision-making.

FSTRS' key objectives are to expedite the certificate generating process, improve accuracy, decrease personnel costs/time and increase customer's accessibility.

Customers access FSTRS using the VDFP website (www.vafire.com) as a gateway.

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[1] Since there is no current mandate for fire-rescue personnel to register with the Commonwealth, the exact number of firefighters in Virginia is unknown.

PROJECT DESCRIPTION & LENGTH OF TIME IN OPERATION

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Historically, VDFP's training records management process was not uniform, totally manual, and relied upon staff intensive processes and paper forms/files. Each of the area/program offices maintained traditional files for each individual student, with each file containing numerous paper forms documenting course registration, testing, and certification details. The steadily increasing growth in training program deliveries statewide (with a resultant increase in the number of records), ongoing resource limitations (state budget cuts resulting in administrative funding and staffing reductions), a lack of usable management information on training program delivery/demographics, and customer demand caused VDFP to examine potential technological solutions for handling the burgeoning workload associated with training records management.

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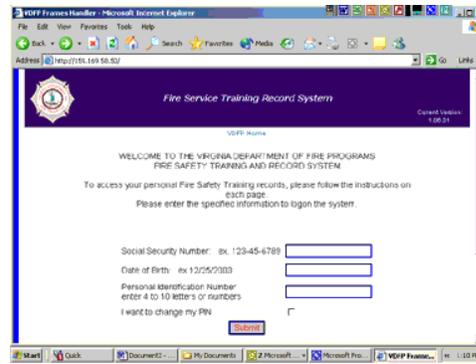
Homepage of VDFP Website   **Homepage of FSTRS**

Customers access FSTRS through the VDFP website. Features of FSTRS include user access by student identification number AND date of birth; easy-to-use, web-based graphical-user interface; "opt-in/opt-out" capability for those uncomfortable with technology without sacrificing back-end functionality; secure socket layer; and up-to-date information.

FSTRS is currently operating in four area/program offices. The "front-end" web-enabled functionality of the FSTRS is scheduled to GO LIVE on July 1, 2003.

SIGNIFICANCE TO THE IMPROVEMENT OF THE OPERATION OF GOVERNMENT

FSTRS promotes technology within the fire service and drastically reduces the burden of filing and other duties formerly associated with records management. Online interaction is considerably faster than former methods of records management with 24x7x365 access. A primary focus of FSTRS is to provide operational efficiencies within the agency as well as to our customers. FSTRS allows for management information to support performance measurement, budgeting, quality assurance, and fiscal due diligence to be readily available.

Necessary VDFP administrative functions for fire service record management have been reduced drastically. All records are integrated into one database that can easily be accessed by multiple users. Decentralized network topology essentially creates seven identical "back-up" databases in separate locations to support business continuity and disaster recovery. FSTRS virtually eliminates paper processing. Clerical time required to enter and index items is less than half of that required to manually file and retrieve folders of information. Paper files are no longer misfiled or lost. Records management is handled via an easy-to-use interface. Management information to support performance measurement, budgeting, quality assurance, and fiscal due diligence is readily available.

FSTRS supports the Commonwealth of Virginia's initiative on technology. VDFP can budget for ongoing system maintenance and continuous quality improvement over a known lifecycle.

BENEFITS REALIZED BY SERVICE RECIPIENTS

Prior to FSTRS, each area office conducted course scheduling and budgeting "ad hoc". There was no consistent set of business rules or cost drivers and limited oversight by

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management. In order to track training hours, test results, and progress toward certification, forms were completed by hand and mailed to the area/program office for the data to be hand-keyed or scanned into a "homegrown" database with minimal connectivity to other area/program offices.

In order for an individual to register for a course prior to FSTRS, he/she had to download a registration form via the website (or have one mailed), fill it out and send it back for VDFP staff to manually register applicants. A similar lengthy process was necessary to obtain transcripts. An individual had to contact an area/program office staff member, who would search the files for the appropriate information. Once found, the records were mailed to the individual's fire department. In extreme cases, students have been known to wait months to obtain records/transcripts.

Due to the fact that VDFP did not keep student personal information, only fire department information, certificates, test results; and inquiries were forwarded to the fire department and subsequently the individual. This added to the delay in students receiving records.
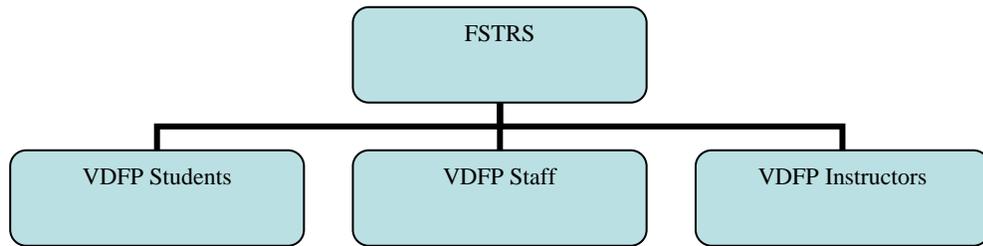
Instructor scheduling and payment of instructors was a time consuming and labor-intensive process handled by telephone, email, snail-mail, or in-person. Limited documentation was available for quality assurance and fiscal due diligence. Demographic and cost information for training programs was developed "ad hoc" from paper forms.

With FSTRS, any VDFP student/instructor with Internet access can access his/her records or update his/her personal information. FSTRS allows data sharing among all area/program and central offices; streamlined data collection, administrative processing, and statistical reporting; and the development/analysis of demographic and cost information to support management decision-making.

Features of FSTRS include a common database with a decentralized network topology; improved back- and front-end user functionality; incorporation/utilization of consistent business rules; 24x7x365 Internet access; increased responsiveness to customer-driven information requests; reduction/elimination of data storage and reporting inefficiencies; a single form for student registration and testing; and reduced administrative costs.

Students are able to view and print transcripts, view course schedules/requirements/prerequisites, register online 24x7x365, and change their mailing address from any web-enabled PC. Instructors have the additional capability to register to teach courses, view their teaching credentials, and view/print their teaching schedule. The FSTRS automatically generates certificates to show attendance or certification and handles all aspects of training event planning, including the preparation of billing/payment information.

Diagram of who can access FSTRS

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                    │    FSTRS     │
                    └──────┬───────┘
         ┌─────────────────┼─────────────────┐
  ┌──────────────┐  ┌──────────────┐  ┌────────────────┐
  │ VDFP Students│  │  VDFP Staff  │  │VDFP Instructors│
  └──────────────┘  └──────────────┘  └────────────────┘
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The benefits to VDFP customers are equally as vast as the benefits to VDFP. There is no software required to access FSTRS. Nor is there a cost associated with FSTRS. FSTRS offers an easy-to-use, web-based GUI. Access to records is available 24x7x365. Registration for courses is available 24x7x365. A toll free help line (1-800-4VAFIRE) has been established to help customers with any problems/questions/concerns. FSTRS uses a Secure Socket Layer (SSL) encryption for data security. Open source coding and COTS hardware/software are the backbone of the system (SQL Server 7, Access, Visual Basic), which will allow for relatively easy programming updates.

RETURN ON INVESTMENT, SHORT-TERM/LONG-TERM PAYBACK

The application development cost associated with FSTRS is approximately $400,000. This encompasses the fee for coding, project management, and implementation.

The average staff time to process a single training event or "school" prior to FSTRS was five hours. reduced from to one hour. With an average 1,300 schools delivered each year statewide and an average cost per staff hour of $12, a nominal reduction of $48 per school x 1,300 schools/year = $62,400 per year in administrative cost savings. This is an 80% cost savings for VDFP each year.

From a purely quantitative, administrative perspective, the FSTRS will pay for itself in six to seven years. The qualitative increase in customer service and the availability of management information is a primary benefit of the FSTRS, albeit hard to measure in dollars.