

## 2006 Best of the Web and Digital Government Achievement Awards

Category:	Government to Government
Title of Entry/Nominee Name:	Virginia's Systems Partnering In a Demographic Repository (SPIDeR)
Date Launched:	July 2005
URL if available:	
Provide a project overview:	<p>SPIDeR (Systems Partnering in a Demographic Repository) is a unique Web-based system developed by the Virginia Department of Social Services (VDSS) to enable effective, efficient and much-needed data sharing between government agencies at state, local, and federal levels through virtual system integration. SPIDeR uses the latest technologies and can bridge information from all levels of government regardless of software and hardware used by legacy applications.</p> <p>Currently, SPIDeR includes interfaces to the Virginia Department of Motor Vehicles, the Virginia Employment Commission, the Social Security Administration's State Data Exchange, the Virginia Department of Medical Assistance, TALX (a third party provider of data), and all major systems at the Virginia Department of Social Services.</p> <p>SPIDeR was launched as a pilot in February of 2005 and implemented state-wide in July of 2005. It is available at no cost to localities and now has more than 2,000 users representing 120 local and district offices.</p>

1. INNOVATION: How well does the entry meet the criterion for innovative use of technology and/or innovative approaches? (Explain in 500 words or less)

**SPIDeR is based on two basic concepts -- virtual system integration and 360 degree data sharing. This enables authorized partners to seamlessly exchange information. Data in the SPIDeR demographic repository is published real-time by VDSS' own applications. Today, more than five million records are housed in SPIDeR. Using this data, SPIDeR's common client identification algorithm is able to effectively match clients from disparate systems and assign common identifiers to client records. This allows local workers to quickly find all records pertaining to a given client from all partnering systems. Using legacy applications' case and client identification information, SPIDeR is able to retrieve case level detail from all systems. Subsequently, SPIDeR users can retrieve all associated benefit/services program and participant data. SPIDeR also enables users to find clients by all names and aliases that may have been used when applying for various programs.**

**The system is composed of the following components:**

- **LDAP (Lightweight Directory Service Protocol) - allows for a secure single point of authentication and authorization;**
- **Web-based User Interface (UI) - permits users to enter search criteria and retrieve comprehensive client information;**
- **SPIDeR Web Services - facilitate efficient data exchange;**
- **Application Database - contains common client demographic information, common client identification algorithm that ties records together, and listener programs at partner sites to enable fast and secure retrieval of information.**
- **Detailed audit trail - records information on all inquiry transactions performed through SPIDeR.**

**LDAP gives local Security Officers full control over their users' access privileges. SPIDeR's access to various systems is granted based on local policies, agreements with partners, and policies of VDSS' system owners. SPIDeR's LDAP accounts make workers' tasks much easier since single, individual user IDs can be used for inquiry of disparate systems.**

**SPIDeR includes a Web-based User Interface (UI) and Web services. Authorized users can use these components to search for information in SPIDeR and partnering systems. The UI provides users with a ready-made and convenient interface to needed information. Web services provide partners with the flexibility of using their own front-end and/or batch processes to retrieve information in a seamless fashion. Listener programs provide a secure real-time interface to legacy data. The amount and content of information available for retrieval is restricted only by the system owners' policies. Policy rules are reflected in and enforced by the legacy listener programs. This guarantees that laws and regulations governing security and privacy of client information within a particular system are under the full control of the rightful owners of the data. SPIDeR has a built-in audit trail that tracks all transactions. LDAP account, worker name, IP address, date/time stamp, and inquiry search criteria are recorded in the audit trail. The availability of this information enables authorized personnel from local agencies, VDSS Home Office, and partnering systems to validate that SPIDeR is being used for business purposes and that search activities are consistent with the existing policies, agreements, and regulations. Audit information is available upon request or through an on-line audit trail inquiry subsystem.**

2. FUNCTIONALITY: How well does the entry meet the criterion for creating intuitive, easy-to-use transactions that are integrated end-to-end in the back office? (Explain in 500 words or less)

**SPIDeR's User Interface is simple and intuitive. It consists of four basic screens -- logon, search criteria, demographic results, and drill-down composite results. VDSS has disparate benefits and services systems, and records for many clients may exist in multiple databases. Since the same records are manually keyed into each of the systems, the quality of data is far from perfect. Names, dates of birth, addresses, and Social Security numbers may be different in each of the systems for the same client. SPIDeR's common client identification algorithm is able to match records together even in cases where the information does not match exactly. For example, the algorithm takes into account common keying errors (i.e. transposition of month and date in the date of birth field) and is able to produce accurate matches. This functionality makes reconciliation and cleanup of client data possible.**

**One of SPIDeR's key features is its ability to drill down into partnering applications and to present to the end user a comprehensive composite profile of a client. This information includes: all programs, all cases, all services, all resources, and all associated individuals available in the partner systems. This enables workers to provide faster and more reliable services to their clients. The comprehensive client profile also makes the job of state and local fraud investigators much easier. SPIDeR's 360 degree data sharing ability will go a long way in fraud prevention and reduction. The system is designed to allow any system, including those used by localities, to publish their data to SPIDeR's demographic repository. Theoretically, this enables localities to share information with each other, potentially preventing clients from applying for the same benefits at multiple local offices.**

**SPIDeR's Web service enables end-to-end system integration regardless of the software and hardware used by the other components. For example, Fairfax County has partnered with a private vendor to implement an imaging solution. Rather than using manual processes of scanning client information into the system, as was originally planned, the new solution will use SPIDeR's Web service capability. A Fairfax worker, using one system and a single logon, can search for client information through SPIDeR (including all partner systems) and store data in the imaging system seamlessly and efficiently. The number of manual steps and the amount of paper required by the old process are substantially reduced. A subscribing Web service is already utilized by VDSS' Adult Protective Services (ASAPS) system. The service enables ASAPS workers to retrieve data from SPIDeR and pre-fill ASAPS demographic information. At that point the workers can change information and update ASAPS. Subsequently, ASAPS publishes the record back to SPIDeR and new information becomes available to all authorized partners. This is an excellent example of how SPIDeR enables 360 degree data exchange between partnering systems and reduces double-keying for workers.**

3. EFFICIENCY AND ECONOMY: How well does the entry meet the criterion for realizing financial and operational efficiencies? (Explain in 500 words or less)

**SPIDeR has positively impacted efficiency and effectiveness by allowing users to realize tremendous improvements in their processes and procedures. Through SPIDeR, operations of system administrators, internal and external partners, and auditors have become far more efficient. For example, prior to SPIDeR, it took a screener nearly ten minutes to access data from all disparate sources for a three member household. Each system required a separate logon and password. Therefore, user frustration was high and productivity was low. SPIDeR provides information from a greater number of sources in less than three minutes. One office reported that SPIDeR is saving 2.5 man/hours per day compared to the old process - a tremendous gain in productivity.**

**Additionally, SPIDeR automatically matches records from disparate systems and provides a composite client profile. Previously this activity required a significant amount of redundant manual work. There are currently more than 2,000 SPIDeR users and this number is expected to more than double. Productivity gains experienced by the individual workers multiplied by the number of workers expected to use the system will result in substantial efficiency gains for the localities and the state.**

**The need for multiple logons put a tremendous burden on system administrators at all levels. Local administrators and those at partner organizations had to create and maintain user accounts and associated paperwork. Due to complicated logistics associated with routing security requests, it sometime took days to set a user up with the necessary permissions in all systems. At the same time, the user community had to manage periodic password changes on their many accounts.**

**SPIDeR has substantially reduced this bureaucratic process. A single form is filled out by the user, approved by the director or designee, and the user is set up in LDAP with a single logon. Subsequently, the user has to change only one password. Partner organizations no longer have to be involved in the user administration process. Additionally, audit trail capability that did not exist prior to SPIDeR, provides partner organizations with greater control; they now are able to monitor usage of their data and take corrective actions if necessary.**

**SPIDeR's upcoming real-time interface with Social Security Administration will replace an existing batch process that currently involves a 24-hour turn around. The new functionality will greatly expedite the delivery of benefits and services.**

4. For Web site entries: What is the number of average monthly unique visitors on an annualized basis (total the number of unique visitors to the site for each of 12 months then divide by 12)?

5. For application entries: How well does the entry meet its own performance expectations?

In order to assist the judges with viewing your entry uniquely and on its own merits, what would you like us to know?

(Include as many of the following as possible: What was the projected usage rate at project inception? What is the actual usage rate as of June 1, 2006 (or as current as possible)? What was your projected and actual for the following: launch date; development time; development cost; and cost savings?)

**SPIDeR's current usage rate is exceeding all expectations. The prototype, which was developed in less than six months at a cost less than \$300,000, was initially piloted in February of 2005. State-wide implementation followed in July of 2005; the number of users at that time, representing a handful of the localities, was well under 100.**

**Concurrent with SPIDeR's implementation, several third party products were competing with SPIDeR for users. Prior to SPIDeR's implementation, many local agencies were interested in these tools despite their high cost. One such product was marketed for \$60-90 per month/per user/perpetually. Other products relied on outdated screen scraping technology. Free to localities, SPIDeR is based on current technologies and offers better search functionality. These factors, combined with a 12-month marketing campaign that included more than 100 presentations and training sessions, have helped to win over the user community.**

**SPIDeR's user base has grown 20-fold from SPIDeR's state-wide implementation. Currently, there are 2,000 users of SPIDeR's User Interface, representing 120 local and district offices. 5,000 other users take advantage of the information stored on SPIDeR's database through a legacy application's relational interface. The number of on-line users is expected to double in the next twelve months as the legacy search application is phased out.**

6. Please list any private sector partners.

**Thus far, SPIDeR has forged partnerships with several private vendors. Current production implementation already includes interface with TALX, which provides SPIDeR users with wage information from large employers.**

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