

# Partnership Project Update

## REPORT TO THE GOVERNOR *AND THE* GENERAL ASSEMBLY

December

2006

*Building Our Future*  
Virginia  
**TAX & AMS**

REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY

TAX

CGI-AMS

December 14, 2006

The Honorable Timothy M. Kaine  
Governor of Virginia  
State Capitol  
Richmond, Virginia

Members of the General Assembly  
General Assembly Building  
Richmond, Virginia

The report summarized the progress of the Public/Private Partnership between the Virginia Department of Taxation (TAX) and CGI-AMS, pursuant to Section 58.1-202.2 of the *Code of Virginia*. This cumulative report is a continuation of the last "Partnership Project Update Report to the Governor and General Assembly" issued December 12, 2005. New information covering the past year begins at page 52.

I am pleased to report that the Partnership successfully implemented the final system planned under the contract – the new taxpayer accounting system called Advantage Revenue (AR). AR, integrated with all of the systems previously implemented by the Partnership is one of the finest revenue systems in the country. Not only were we able to complete a successful implementation of IRMS during this reporting period, but we have also successfully weathered the first filing season with this new system. IRMS has been in use for 16 months and has brought many efficiencies to the agency and has allowed us to provide better services to the citizens of the Commonwealth.

This report represents the cumulative history of the project. Accordingly, each year this report grows in length. Understandably, you may not have time to read the entire report. I commend your attention to the section summarizing year eight of the project on pages 52 through 65, the section summarizing operational successes on pages 60 through 62, and the Conclusion on pages 63 and 64.

Janie E. Bowen  
Tax Commissioner

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*“The 2005 Partnership Project Update Report to the Governor and General Assembly contains a complete discussion of the projects completed during the Partnership, including those activities described in earlier reports.”*

## **INTRODUCTION**

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A 1993 study completed by the Joint Legislative Audit and Review Commission recommended that the Department of Taxation (TAX) replace its State Tax Accounting and Reporting System (STARS), the primary hardware and software supporting the Commonwealth’s revenue system. TAX entered into a Partnership agreement with CGI-American Management Systems, Inc. (CGI-AMS), an international consulting company based in Fairfax, Virginia, that will not only replace the aging STARS systems, but will completely re-engineer operations at the department.

Section 58.1-202.2, *Code of Virginia* authorizes the Tax Commissioner to enter into public-private partnership contracts to finance agency technology needs. Any such contract must be funded from increased tax revenue attributable to the successful implementation of new technology delivered under the contract. This section further calls upon the Commissioner to prepare an annual report to the Governor and the General Assembly “on all agreements under this section, describing each technology program, its progress, revenue impact, and such other information as may be relevant.”

## **THE PUBLIC – PRIVATE PARTNERSHIP WITH CGI-AMS**

A contract between TAX and CGI-AMS was signed in July 1998, in the amount of \$122.9 million plus interest. This is the only agreement TAX has executed under the provisions of Section 58.1-202.2, except for successive amendments to the original agreement.

Initially, CGI-AMS finances the hardware, software, and services it provides. As results are achieved, TAX pays CGI-AMS from incremental tax revenues generated by the effort. The cost of the project is not supported by the Commonwealth’s general operating budget. New tax revenue resulting from state-of-the-art case management techniques, better audit productivity and selection, enhanced discovery capabilities, and streamlined collection processes pay for the project. At the same time, use of these tools reduces the incidence of false positives in the selection of audit candidates, thereby freeing compliant taxpayers from the burden of unnecessary inquiries and needless audits.

Taxpayers benefit further by gaining access to new services and an enhanced service orientation, while TAX dramatically improves its operational effectiveness. State-of-the-art information systems provide TAX’s Customer Service Representatives with immediate electronic access to returns, taxpayer correspondence, payment history, and tax laws and regulations to answer customer inquiries about their accounts and filing obligations with dispatch. Individual and business taxpayers use a variety of secure,

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technology-based tools that simplify how and when they interact with TAX. By leveraging advancements in computing, imaging, and telephone technologies, taxpayers more easily file and pay their taxes, while TAX accelerates the issuance of refunds and the processing of returns.

TAX and CGI-AMS are combining a variety of best practices drawn from industry successes with the latest technological tools. “Placing the customer first in everything we do” is the underlying theme in the projects TAX is undertaking now and in the future. One key objective is to create a dynamic environment for taxpayers to understand tax requirements clearly and to file and pay in a timely, efficient, and convenient manner.

Partnership initiatives include re-engineering all processes and replacing the entire technology platform, including the latest network infrastructure and Web-based technologies that link individual taxpayers, businesses, and employees who may be located in the central office, a district office, or working from their homes. Taxpayers are able to file returns electronically (gaining electronic access to account information, tax rulings, and regulations). Customers also benefit from access to Customer Service Representatives who, in turn, have faster access to information pertinent to their inquiries. By using case management and Customer Relationship Management (CRM) tools, TAX ensures the prompt handling of cases, eliminates misplaced or misrouted paper, and reduces correspondence backlogs.

TAX’s antiquated data entry equipment and huge paper warehouse are being replaced with modern Optical Character Recognition/Intelligent Character Recognition (OCR/ICR) technology. OCR/ICR captures and retrieves data and images and eliminates paper storage of returns and correspondence. The project will also replace TAX’s automated accounts management system (STARS) with a new Integrated Revenue Management System (IRMS), which is easier to modify and adapt to constantly changing legislation and processing needs.

This 2005 “Partnership Project Update Report for the Governor and the General Assembly” contains a complete description of the projects completed during the Partnership, including those activities from the first five years as described in earlier reports. In addition, this report includes a section devoted to describing the incremental changes in services and operational efficiencies that have been achieved as a result of the initiatives implemented by the Partnership, many of which were achieved long before the conclusion of the Project. These improvements are described in the section titled *Operational Success*.

*“TAX and AMS implemented new and enhanced audit and collection programs to generate incremental revenue to pay for the project.”*

## **YEAR ONE: JULY 1998 – JUNE 1999**

### **FAST TRACK STRATEGY**

A number of tactical “Fast Track” initiatives were completed in the first year of the Partnership Project. These initiatives were intended to, and indeed succeeded in, jump-starting the revenue stream needed to fund the project. In addition, two non-revenue-generating initiatives were implemented in order to produce visible “early wins” for TAX’s customer service objectives. As the project is not supported by a general fund appropriation, TAX and CGI-AMS implemented new and enhanced audit and collection programs to generate incremental revenue to pay for the project. CGI-AMS undertook the risk that the price it charges TAX for systems development, hardware, software, and other deliverables would not be fully reimbursed from revenue generated by the Fast Track projects.

### **STRATA COLLECTIONS**

The installation of CGI-AMS’s STRATA Risk Management System was implemented in October 1998, to prioritize TAX’s delinquent accounts based on potential for collection. Using a retrospective statistical analysis of delinquent accounts, STRATA organizes current tax receivables into risk categories designed to help Collectors determine which accounts and associated collection strategies will produce the best return.

With a finite number of available Collectors in the central and district offices, STRATA helps TAX devise collections strategies that:

- maximize collections by in-house Collectors
- outsource accounts to private collection agencies
- designate accounts for self-cure
- write-off accounts that are too costly to collect

As new collection strategies are attempted, STRATA will continue to analyze statistical patterns and reassign risks, providing a continuous means to improve collections strategies and deploy staff efficiently. STRATA has been the project’s most productive revenue initiative, generating \$157.6 million in additional revenue through Fiscal Year 2004, when sufficient accumulated Partnership revenue was available to cover all remaining anticipated contract costs.

### **DISCOVERY AUDIT PROGRAMS**

A number of new initiatives are designed to use the latest data-matching technology, along with new third-party data sources, to discover entities that do not file tax returns. At the heart of these initiatives, a software product called Trillium allows TAX to match its taxpayer database with external data obtained from

government or private databases to discover individuals and businesses operating in Virginia, but who are not registered or filing the appropriate taxes. Trillium has the capacity to perform data matches even when two databases use different keys. For example, TAX can match its business registration database (keyed by a unique account number) to the Department of Alcohol Beverage Control's (ABC) database of restaurants (keyed to a different account number). By matching databases with incompatible keys, Trillium gives TAX a new tool to identify discrepancies in data reported by taxpayers to different entities and to discover taxpayers operating in Virginia who have not disclosed their existence to TAX.

Data from the following third parties were matched by Trillium: Department of ABC, business license databases from local governments, American Business Information (ABI), and several databases from the IRS. Begun in September 1998, the Discovery program has generated \$776,465 through June 30, 2004.

#### **FIELD AUDIT PRODUCTIVITY/SELECTION TOOLS**

In June 1999, the Partnership replaced 225 old and obsolete laptops used by Field Auditors to perform Sales and Use, Corporate, and Withholding tax audits of businesses. The new state-of-the-art laptops, distributed to Auditors during a three-day training program, were loaded with Windows NT, Office 97, and newly designed audit software that reduces the computational burden faced by Auditors performing data capture and complex tax

calculations in the field. A new Invoice Capture Tool (ICT) was implemented to download accounting data directly from a taxpayer's system to perform Sales and Use tax audits.

As with the Discovery program, TAX is using Trillium and external sources of information to develop audit selection models. These models are designed to improve the candidates picked for field audits. Before the Partnership Project, approximately half of TAX's field audit hours were expended on audits of businesses with tax liabilities of less than \$10,000. New audit selection models, operating under a new centralized audit selection process, are improving the yield of TAX's field audit program by picking audit candidates with the highest probability of non-compliance. Improvements in audit selection help eliminate nuisance audits of candidates for which field audits are likely only to disclose substantial compliance.

External sources of information used by the new audit selection tool include databases from: Department of ABC, ABI, IRS, Department of Professional and Occupational Regulatory Boards (DPOR), Department of Accounts (DOA), General Services Administration (GSA), Virginia Lottery Department, and the Virginia Employment Commission (VEC).

These audit productivity/selection tools are meant to:

- reduce the amount of time TAX's Field Auditors take to perform audits
- increase the number of audits performed annually by Auditors
- improve the yield from field audits



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- reduce the burden field audits impose on businesses selected for audit

Since May 2000, these field audit tools have generated \$63.8 million in additional revenue through the end of Fiscal Year 2004.

**WRITE-OFF/LIEN PROGRAM**

Using the data matching tools developed by CGI-AMS, TAX is searching its inventory of inactive collection accounts previously written off by TAX or its outside collection agencies.

Using payroll information from the VEC, TAX matches recent payroll data to its write-off database. When a match is discovered, the write-off account is reactivated and a third-party lien is issued to capture a payment on the account. This technology has helped TAX wring out additional revenue from its inactive collections inventory. Since its inception, this program has generated \$9.3 million.

<b>REVENUE ATTRIBUTED TO PARTNERSHIP PROJECT</b>	
<b>Fast Track Initiative</b>	<b>Actual Revenue Thru June 2004*</b>
STRATA Collections	\$157,620,856
Discovery Audit Programs	\$ 776,465
Field Audit Productivity/Selection Tools	\$ 63,799,254
Write-Off/Lien Program	\$ 9,305,306
<b>Total Revenue</b>	<b>\$231,501,882</b>

\* THROUGH JUNE 30, 2004 THE FUND'S BALANCE WAS SUFFICIENT TO COVER THE REMAINING CONTRACT COSTS. BECAUSE OF THIS ACHIEVEMENT, STARTING IN FY 2005, NO ADDITIONAL DEPOSITS WERE MADE INTO THE FUND, MAKING ALL REVENUE BENEFITS GENERATED FROM THE PARTNERSHIP'S REVENUE INITIATIVES AVAILABLE TO THE COMMONWEALTH.

*“The purpose of the Blueprint is to guide TAX in realizing its Vision for 2004 and beyond...”*

## **YEAR TWO: JULY 1999 - JUNE 2000**

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### **WEB PAGE/TELEFILE/ BLUEPRINT/TRANSITION PLAN**

The second year of the project focused on the redesign of TAX's Web site, the individual income Telefile Pilot, the agency-wide Blueprint, and the Transition Plan.

#### **REDESIGN OF TAX'S WEB SITE**

Intended as a customer service initiative, TAX rolled out a newly designed Web site. The site has a new look and feel and allows for easier navigation through its content. New computational tools were added, allowing taxpayers to calculate their tax liability automatically without resorting to tax tables, and to help married taxpayers allocate their exemptions and deductions to their best advantage when using the two-column format required by filing status 4 (for tax year 1999) or assisting filing status 2 taxpayers complete the Spouse Tax Adjustment Worksheet (for tax year 2000). These new features are available in addition to the present content that provides various filing instructions, news about TAX, e-mail to Customer Service Representatives, and online ordering of tax forms.

#### **INDIVIDUAL TELEFILE PILOT**

In January 2000, Individual Income tax filers who filed short forms

(Form 760S) from at least 17 localities were asked to file their 1999 short form by telephone. These taxpayers were given a PIN and instructions on how to dial into the Voice Response Unit (VRU) with a touch-tone telephone. The VRU provided voice instructions on how to enter the necessary filing information to receive a refund or pay any tax due by credit card. Telefilers need not use a paper return or send W-2s. Approximately 59,000 taxpayers participated in the Telefile Pilot.

#### **THE BLUEPRINT**

In February 1999, the Partnership Project embarked on the development of a Blueprint that provides a view of what TAX will be in the future. The Blueprint projects lasted nine months and covered every operational area of TAX. CGI-AMS and TAX studied existing operations and identified opportunities for improving the way TAX performs its work. The purpose of the Blueprint is to guide TAX in realizing its Vision for 2004 and beyond by defining new and re-engineered business processes and recommending strategic initiatives.

A number of strategic initiatives were identified in each major process area, a few examples of which are shown below. In many cases, these innovative approaches involve the application of state-of-the-art technologies not contemplated prior to the Blueprint.

**Customer Service**

*Self-Service Tax* – use the Internet to provide the capability for our customers to conduct transactions independent of contact with TAX staff.

*Customer Relationship Management (CRM)* - integrate the telephone and robust system applications that will provide Customer Service Representatives with a consolidated view of the customer, and use all available information about a customer to improve the service provided to the customer in a single telephone call without the need for follow-up, when possible.

*Correspondence Management* – use imaging and automated workflow to support the processing of correspondence and use standardized templates to make outbound correspondence consistent and professional across TAX.

*Proactive Customer Education* – establish a centralized Customer Education Unit to plan and deliver education efficiently, as well as a central repository for all customer education materials.

*Online Registration* – use the TAX Web site to make it easy for taxpayers to register.

*Automatic Assignment of Federal Employer Identification Numbers (FEIN)* – partner with the Internal Revenue Service to allow TAX to assign FEINs to new businesses.

*Knowledge Workers of the Future* - provide the necessary tools to enable Customer Service Representatives to provide consistent and high quality service to customers.

**Channel Management**

*Automated Return Data Capture* – develop and promote electronic channels for filing and payment, including Telefile and Internet filing. For remaining paper returns, implement imaging and automated character recognition using Optical Character Recognition/Intelligent Character Recognition (OCR/ICR).

**Compliance**

*Compliance Operational Tools* – incorporate decision analytics, including risk assessment and modeling, to determine the best way to select compliance cases and the most effective treatment for bringing selected customers into compliance.

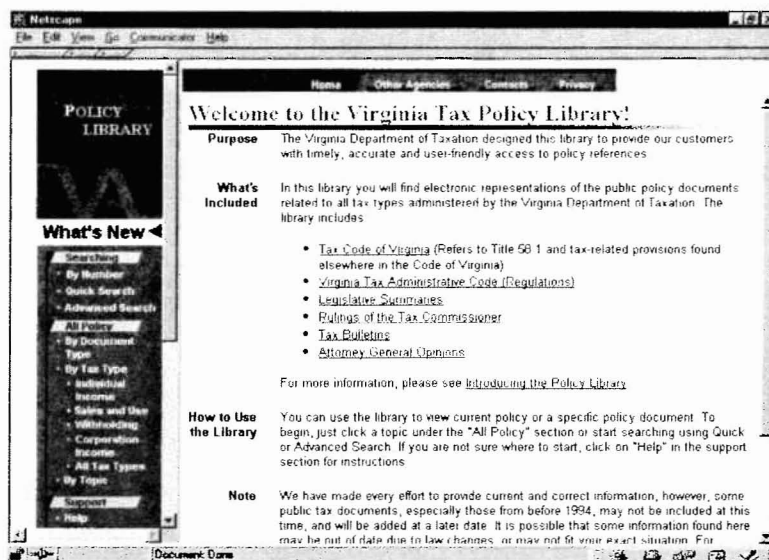
*Mobile Office* - implement the technology and tools necessary for Compliance personnel to perform auditing, tax discovery, criminal investigation, and collection activities effectively regardless of where they are located.

**Policy and Research**

*Proactive Policy Development Process* – implement a proactive policy development process that uses analysis of business trends, federal legislation, and other external sources to identify issues.

*Distinct Dispute Resolution Process* - separate the Dispute Resolution and Policy Development processes, allocating dedicated staff of analysts and reviewers to the Dispute Resolution process. This allows case resolution to proceed smoothly throughout the year and enables Policy staff to focus on its core activity—policy development.

*Policy Library* – implement a policy library that is universally accessible to customers using the Internet.



## TRANSITION PLAN

The Blueprint provided more than a list of process improvements and technology recommendations. It also put the whole re-engineering effort into a context that revealed a vision for the agency and its programs through the year 2004. With the Blueprint complete, TAX and CGI-AMS jointly decided which elements of the Blueprint could be delivered under the contract and when. Specific projects were grouped into seven areas, and a strategy was developed to make sure all project initiatives were consistent with each other and with the Blueprint and Vision. The result was a detailed Transition Plan that showed the scope of the remainder of the project.

*“The redesign of the Form 760 was driven by a clear focus on the needs of the customer.”*

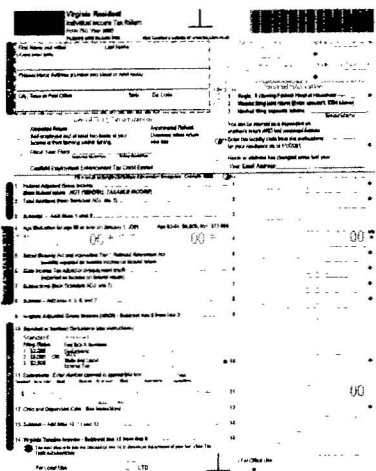
**YEAR THREE: JULY 2000 - JUNE 2001**

**NEW FORM 760/IMAGING/  
CUSTOMER FACING APPLICATIONS**

Several major projects were implemented in year three that replaced outmoded data entry equipment, installed new imaging capability, enhanced customer service, provided new filing channels, and redesigned tax forms including:

**INDIVIDUAL INCOME TAX RETURN AND INSTRUCTIONS REDESIGN**

While the implementation of new scanning and imaging equipment for return processing required some changes



to the Individual Income tax form, TAX decided to “reinvent” the form and instructions for the first time since 1972. As a result, the tax year 2000 Virginia Resident Form 760 and instructions for filing Individual

Income taxes were completely redesigned. Focus groups were conducted around the Commonwealth, and suggestions from taxpayers and tax professionals alike were examined and incorporated into the design

of the new form and instructions. The form redesign effort was driven by six key objectives:

- Support automated data capture (OCR/ICR)
- Reduce filing burden
- Balance customer service and compliance
- Enhance processing efficiency
- Increase the flexibility to make future changes
- Eliminate the need for paper attachments

Within the obvious boundaries of conformance with state tax laws, great strides were made in designing a tax return that is simple, easy to complete, and minimizes the amount of supporting material and paper attachments required to be filed with the return. At the same time, the new form provides greater flexibility to support legislative changes and data capture for research and compliance needs. The form supports a high degree of automation in processing and will, in the long run, reduce the processing effort required to handle the high volume of paper returns.

**REPLACE OUTMODED DATA ENTRY SYSTEM**

TAX’s old Motorola key-to-disk data entry system was obsolete. Replacement parts could be obtained only by cannibalizing existing equipment. The

only company still servicing these machines was near bankruptcy. Continued operations on this system would create an unacceptable risk to the Commonwealth's revenue administration.

TAX and CGI-AMS installed a new PC Data Entry system in a newly renovated facility that houses 80 workstations. The system runs on software called LifeWorks and is capable of handling the data entry of any tax form in use by TAX. Data stored by the system is backed up nightly by a modern tape backup system.

#### **IMAGING – PHASE I**

TAX's first experience with imaging technology began with the installation of three high-speed scanners and an OSAR system for the automated data capture, electronic storage, and retrieval of tax returns and correspondence. This technology is TAX's answer to the growing burden of filing, storing, and retrieving mountains of paper generated by tax processing and correspondence. An entire warehouse devoted to the storage of tax returns will be replaced by imaging technology. Retrieval of returns and documents stored at the warehouse takes an average of two weeks. Using imaging technology, document retrieval should be a matter of seconds.

In Phase I, TAX and CGI-AMS developed and installed the system to image a limited number of 1999 income tax returns and business registration forms (Form R-1). These forms were scanned, indexed, and stored on OSAR platters for the purpose of electronic retrieval. Image

retrieval was also activated under which end users with PCs could search for and view images of scanned returns.

#### **IMAGING – PHASE II (PILOT)**

Imaging – Phase II entailed the high speed scanning, automated data capture, indexing, and storage of tax year 2000 Income Tax returns on a pilot basis under controlled production. The Phase II system was rolled out in February 2001, and is capable of handling handprint and machine-print income tax returns. TAX succeeded in its goal of imaging approximately 471,000 paper returns by June 30, 2001. The Phase II Imaging system went into full income tax production in January 2002.

#### **TELEFILE**

For tax year 2000, Telefile was expanded from its 1999 pilot and made available statewide as a replacement for the Virginia Resident Form 760S short form. Nearly 670,000 taxpayers were eligible for using the Telefile program for their 2000 tax returns. This application is a simple way to file taxes, with the average toll-free telephone call lasting just seven minutes. Direct deposit of refunds also makes this application an effective way for qualified users to receive refunds in the shortest possible amount of time.

Telefile is simple, easy to use, and promotes an extremely low error rate among filers. Telefile captures all return data electronically and performs all math functions automatically for the user. For tax year 2000, TAX received 160,000 Telefile returns. These returns had an error rate of less than one percent. For tax

year 2001, TAX received approximately 141,000 Telefile returns, again with an error rate of less than one percent.

### **INTERNET APPLICATIONS**

As part of the vision to offer self-service options for taxpayers, and to make government more accessible to its citizens, the Partnership developed a series of Internet applications that provide online filing services and information. With these applications, Virginia citizens enjoy access to electronic tax services and information that are among the most complete anywhere in the country.

Each Internet filing application performs all relevant mathematical calculations and edit checks to help ensure that each user submits a return that is nearly “error free” and complete, minimizing any chance that returns will be subject to manual error resolution/correction and subsequent follow-up with the user. Each application also supports delayed payments, a feature that allows the return to be filed at any time during the relevant filing period, while payment is delayed for execution on the due date of the return. Payments can be made either by check or credit card, or in some cases, electronic funds transfer.

### **iFILE FOR BUSINESS**

The iFile for Business application allows taxpayers to file Sales and Use and Withholding taxes over the Internet. It also allows taxpayers to view the past twelve months of account history online, regardless of how previous returns have been filed. This level of account access is

the first of its kind in the nation and is consistent with the vision of providing a complete self-service channel for taxpayers.

In addition, the iFile for Business application will be integrated with the Virginia Employment Commission (VEC) to allow taxpayers to file and pay unemployment insurance taxes at the same time as they file and pay their taxes with TAX. This intra-government cooperation will provide taxpayers with a first step toward “one stop shopping” when it comes to paying business taxes.

*“This is the best government innovation I’ve encountered in a decade.”*

Actual quote from iFile for Business user

Integration with the Virginia Employment Commission became available to the public in July 2001.

iFile for Business is currently available online through TAX’s Web site at [www.tax.virginia.gov](http://www.tax.virginia.gov). As of June 2004, over 73,000 businesses have registered for iFile since it first became available.

### **iFILE FOR INDIVIDUAL**

The iFile for Individual application allowed taxpayers to file their 2000 Virginia resident Individual Income taxes over the Internet. This application provides a level of interactive customer service that was new in Virginia. For example, taxpayers are not only able to file and pay their taxes, but can also make name and address changes and conduct other simple account management

functions, such as checking the status of their refund online.

As with all of our Internet filing applications, iFile for Individual supports the concepts of “error free” filing and payment warehousing. While we are able to provide new services to the taxpayer through this application, the iFile for Individual application is a fairly simple application that is not intended to compete with sophisticated commercial software applications. iFile for Individual was available to all taxpayers filing a Virginia resident income tax return in 2000 who also filed in 1999. A small proportion of taxpayers, those with tax credits (using the CR schedule) and those required to attach federal schedules, are unable to use iFile for Individual.

Available in January 2001, iFile for Individual was released on a pilot basis. No promotion or public awareness campaign was conducted so that the new system could be tested under controlled conditions. Approximately 20,000 users discovered the application on TAX’s Web site and used the application to file their year 2000 income tax return. These returns averaged a very low error rate of 4.5 percent. User feedback was very favorable. In 2002, almost 84,000 taxpayers used iFile to file their returns. As of June 2004, another 272,000 taxpayers had used iFile to file a return.

#### **POLICY LIBRARY**

The Policy Library is an Internet application that provides unprecedented access to Virginia tax policy information to the citizens of the Commonwealth. Developed with the assistance of

Commerce Clearing House, Inc. (CCH), this searchable database includes not only the tax sections of the Code of Virginia, but the Virginia Tax Administrative Code, Rulings of the Tax Commissioner, Tax Bulletins, Attorney General Opinions, and Legislative Summaries. The library can be searched by keyword or phrase, or browsed by topic or document type. The Policy Library became available to the public late January 2001. Its electronic library now contains all documents as far back as 1985.

#### **iREG FOR BUSINESS**

The iReg for Business application allows new businesses to register online and existing businesses to add business locations, consolidate filings, and update address and contact information. It simplifies the registration process by reducing a complex registration form of several pages to a simple interactive paperless application. At the end of an iReg session, new businesses are fully equipped to perform all their tax filing obligations. The iReg application will assign new account numbers, provide instructions on filing returns, and will print sales tax registration certificates for display at business locations.

Since becoming available for public use in April 2001, it has exceeded TAX’s expectations by capturing approximately 50% of all new business registrations. More than 57,000 new businesses have registered through iReg by June 2004. On an average day, between 50 and 100 new business registrations are conducted through iReg.



As of July 2001, iReg became integrated with VEC, enabling businesses to register for VEC taxes at the same time they register with TAX.

### **CUSTOMER RELATIONSHIP MANAGEMENT – PHASE I**

Customer Relationship Management (CRM) is a series of tools that enable a Customer Service Representative (CSR) to provide faster, consistent, and better service to taxpayers calling, writing, or e-mailing TAX. By providing a “consolidated view” of the customer, electronic scripting, reference material, and seamless navigation between computer systems, the TAX CSR is able to provide a higher degree of consistent customer education and service.

In Phase I, CRM provided “screen pops” and “scripting” for CSRs. Screen pops occur during the routing of an incoming call to a CSR. When a call is connected, the CSRs’ computer screen automatically pops with the caller’s account information, thereby sparing CSRs the time and tedium of asking for and entering SSNs or account numbers on every call taken.

Scripting provides a set of question and answer trees available to CSRs as a computerized aid in answering questions posed by taxpayers over the phone. TAX developed about 90 scripts devoted to fielding questions from taxpayers about the new Form 760 and instructions. Each script is activated when a CSR clicks on the subject of a call, prompting the CSR’s screen to pop with a question for the taxpayer. Depending on the taxpayer’s

answer, the screen then prompts the CSR with an answer or with another question for the taxpayer. In this way, the scripting system guides the CSR through the question and answer tree necessary

*“CRM tools provide the user with information about every interaction between a customer and TAX. . . .”*

to solve the taxpayer’s problem. Phase I scripting and screen pops were rolled out to CSRs in December 2000 in time to assist with the income tax filing season. Scripts are also available in electronic form for use by income tax staff employed by local Commissioners of the Revenue.

### **LOTUS NOTES ROLLOUT**

TAX’s e-mail system was upgraded and replaced with Lotus Notes in December 2000. With its higher capacity, the Lotus Notes system was extended to many more users in the central office. For example, for the first time, all CSRs in the Office of Customer Service were connected by the same e-mail system, enabling managers and supervisors to communicate instantly during income tax filing season on the volume of incoming calls and the condition of critical systems. Expansion to users in district and home offices occurred in year four of the project.

Lotus Notes also provides robust document management and retrieval functions that will help provide important reference materials to tax employees. For example, a project is underway in which all operating policies and procedures will be placed in a Lotus Notes database for electronic searching and retrieval by TAX

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CGI-AMS

employees. In addition, official documents such as procurement approvals or revenue impact statements can be originated, tracked, routed for approval, revised, and electronically approved in a paperless process using the document management features of Lotus Notes.

*“With answers to the questions of why, how, and how frequently customers need assistance, TAX can improve the level of service provided to customers and focus on reducing a customer's need to contact the department.”*

## **YEAR FOUR: JULY 2001 – JUNE 2002**

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The fourth year of the project focused on additional phases of CRM, replacement of the collections system, implementing the production version of the Imaging system, and expansion of Internet functionality.

### **CUSTOMER RELATIONSHIP MANAGEMENT (CRM) – ADDITIONAL PHASES**

New releases of the CRM tools developed by TAX and CGI-AMS rolled out in fiscal year 2002, with an additional phase planned for fiscal year 2003. Together they will provide a full-featured CRM suite of tools for Customer Service Representatives (CSRs) to better serve customers.

To ensure an effective rollout of the CRM tools, TAX developed an implementation strategy consistent with the underlying goals and vision of the agency. The first release of CRM tools in Virginia supplied call center management functionality to assist during the 2000 filing season – the first with the redesigned Form 760. The second release added correspondence management and integrated TAX's imaging system with the CRM software.

The third release of the CRM tools focused on enhancing functionality for the Customer Contact Center. Incoming

correspondence is now imaged and routed electronically to Indexers who associate it with a taxpayer account and categorize it, a process that provides actionable information about the reason taxpayers are sending correspondence. After customer correspondence is imaged and indexed, the correspondence is then assigned to available staff based on CSR skills and established workflow rules.

With this latest release, all customer contact channels are now integrated, including telephone calls, correspondence, e-mail, fax, and secure messaging. The design of this phase incorporated the concept of a holistic or “consolidated” view of the customer, a philosophy that leverages what TAX knows about the customer to ensure an appropriate interaction and response.

The Virginia CRM solution also allows electronic routing of calls and correspondence to employees in different work units and even those located remotely. For example, during peak call volume periods, incoming phone calls are routed to different work areas, including district offices, so that staff resources can be used effectively to meet the peak needs.

Remote staff who can retrieve work from electronic queues are also answering correspondence that is imaged and routed electronically. In January of 2002, TAX had a backlog of 55,000 pieces

of incoming correspondence. Using CRM, TAX electronically distributed unanswered correspondence to qualified staff in district offices and staff working from their homes. By June 2002, the correspondence backlog had fallen below 10,000 letters and faxes. Mastery of the new CRM system continues as the correspondence backlog in October 2004 fell to 2,295 pieces, equivalent to less than one week of normal inbound volume.

This new CRM functionality was developed to aid the collections process also. A key benefit of CRM is its ability to provide staff with a comprehensive view of customer information through a single screen: the "Consolidated View." At the click of a button, Collections and Customer Service staff can immediately retrieve scanned customer correspondence and other electronic contact records through an on-screen image viewer.

Since the adoption of the CRM tools, TAX has handled 1.8 million calls, 351,000 pieces of imaged correspondence, 108,000 faxes, and 134,000 e-mails, all of which have been indexed and categorized providing useful information for trend analysis. With answers to the questions of why, how, and how frequently customers need assistance, TAX is improving the level of service provided to customers and focusing on reducing a customer's need to contact TAX in the first place.

### **REPLACE COLLECTIONS SYSTEM (CACSG)**

In December 2001, TAX implemented a new Computer Assisted Collections System for Government

(CACSG), replacing the Enhanced Collections System (ECS) that had been in operation at TAX since 1994. TAX was forced to replace ECS because the company that developed it no longer provided technical support for the product. The CACSG project implemented collection features new to Virginia, such as:

- self-service payment plans
- a newly designed automated correspondence system with hundreds of new letters drafted in plain English
- automated generation of liens and lien releases
- laptop functionality for Collectors working in the field
- automatic assignment of collection cases as cases progress through collection states

CACSG works as a centralized collection case management tool that streamlines case workflow from the time an account is received in the system until it has been accurately resolved. While based on the same underlying collection principles and strategies established by TAX (i.e., phone calls, letters, liens, and partial payment plans), CACSG has improved those practices through automation and improved business processes. CACSG is currently online and working with the existing STARS revenue system, and will continue to do so until the implementation of the new revenue accounting system, AR.

CACSG streamlines collections workflow by automatically moving customer accounts through pre-defined work queues or "states" based on account organization, set time frames, and

customer responses to collection letters or telephone contacts. Field, District, Interstate, and Mobile Office personnel now have the ability to download information to laptops in preparation for field visits.

Improved business processes have been developed to complement this improved information technology. A good example of the synergy between the business process and the technology is the way TAX now handles the establishment of partial payment agreements. CACSG issues monthly reminder letters to our customers with a payment coupon, rather than printing annual payment coupon books. The old technology did not allow the inclusion of a payment coupon with the customer correspondence, but doing so reduces the number of duplicate coupon booklets that require printing.

Teleplan is another new initiative supported by CACSG that has allowed TAX to streamline the business process. Teleplan gives qualified TAX customers the opportunity to set up their own payment plans over the telephone without the need to contact a Collector or CSR. This feature is available to customers 24 hours a day. Over 40,000 plans have been established through Teleplan, reducing the volume of inbound customer calls.

Another technical feature of CACSG that enhances collections case workflow is a new automated lien process. TAX and third-party databases are automatically searched for lien sources. Both Third-Party Liens and Memorandums of Lien are then automatically printed and mailed without

manual intervention by internal Collection staff.

In addition to the functionality inherent in the new collections system, the December 2001 release of CACSG dovetailed with the latest release of Customer Relationship Management (CRM).

### **IMAGING - PRODUCTION**

The Virginia high-speed imaging solution is one of the most innovative in the nation. Rather than implementing an out-of-the-box imaging and data capture solution, TAX, CGI-AMS, and software and hardware vendors such as IBML, Inc., and Datacap, Inc. worked together to develop a business solution to meet Virginia's needs. The solution is the first high-speed scanning and data-capture system that supports the use of two-dimensional barcode technologies. The inclusion of the support for 2D barcode has helped significantly reduce the returns processing error rate, which during the first full year of operation was less than 10%, or about half the error rate of the previous year's filing season before the imaging system was in full production. In its first year in full production, the imaging system contributed to what can only be described as the most effective processing season ever at TAX.

Through June 2004, over 6 million paper tax returns had been processed through the imaging system. These images of returns are now available instantly at each Customer Service Representative's desktop to aid in answering taxpayer questions.

## EXPANSION OF INTERNET FUNCTIONALITY

A number of new services were added to TAX's Web site during year four of the Partnership to address the ongoing needs of a constantly increasing user base. In April 2004 alone, the Web site had over 500,000 visitors.

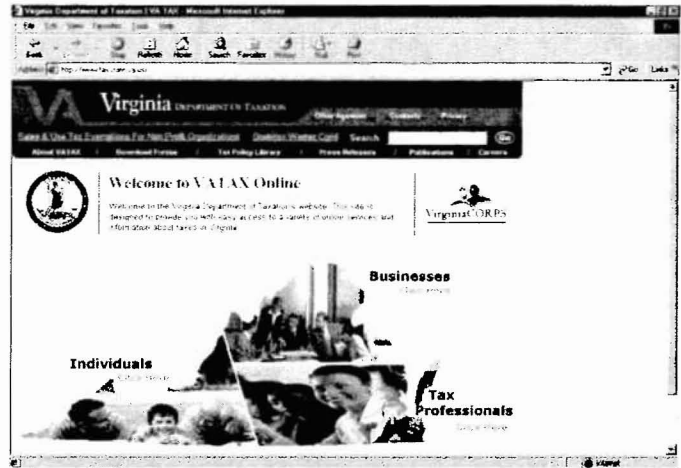
The Agency's Web site was totally redesigned by CGI-AMS and TAX, highlighting the broad spectrum of transactions that can now be performed online using this suite of customer service tools.

### EXTENSIONS ONLINE

Businesses and Individuals can ask for an extension of time to file their taxes online. As with other VATAX Online applications, payments are made via Electronic Funds Transfer (EFT), and Payment Warehousing is available. This new service provides businesses and individuals with the assurance that their request for an extension was received and is valid.

### ESTIMATED PAYMENTS ONLINE

Businesses and Individuals can also make estimated payments online. As with other VATAX Online applications, payments are made via Electronic Funds Transfer (EFT), and Payment Warehousing is available. Businesses and individuals can take advantage of the ability to warehouse payments and make a full year of payment without ever having to write a check.



### SECURE MESSAGE CENTER

Historically, TAX has been unable to utilize conventional e-mail to answer confidential tax account inquiries because traditional e-mail is not secure. A secure and confidential communication channel with TAX is now available at VATAX Online's Secure Message Center.

The January 2002 release of VATAX Online's Secure Messaging Center significantly changed the way customers communicate with TAX. Customers now have the ability to request and receive confidential tax information electronically. This is a significant improvement to the delivery of customer service and a tremendous opportunity to move customers to the Internet for all transactions with TAX.

At the Secure Message Center, the messages to and from customers are encrypted using the highest level of commercially available encryption. Messages are simple to create and can be linked to prior messages or are independent of previous messages.

Customers also have access to a twelve-month history of their communications with TAX.

As of June 2004, taxpayers have sent over 30,000 secure messages and over 95% of these messages receive a secure reply within two business days.

**WEB EFT**

Web EFT is the newest online service added to the VATAX Online suite. After reviewing customer suggestions, TAX realized that many customers interact

with TAX because they have a bill. Customers expressed the desire to be able to pay the bill quickly and easily online, and to print out a confirmation that the payment was received.

The Web EFT functionality allows businesses, individuals, and TAX representatives to make payments through VATAX Online via EFT. Customers log on to their Home Page and simply enter the bill number, payment amount, bank and account information, and transmit the payment in a matter of seconds.

*“Many highly visible new products and services are now available to Virginia citizens as a result of the Partnership Project. . . .”*

## **YEAR FIVE: JULY 2002 – JUNE 2003**

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The fifth year of the project focused on completing development of the new back-end accounting system, ADVANTAGE Revenue, as well as the Auditor’s Toolkit. A new remittance processing system was implemented and the Compliance Repository and Audit Selection systems were implemented ahead of schedule. Budget reductions closed six district offices, but TAX’s Field Auditors and Collectors were able to be home-based as a result of an initiative to provide remote access to all TAX systems. TAX assumed responsibility for most of the new technology infrastructure implemented by the project, including the ongoing upgrade, installation, and maintenance of hardware and third-party software.

A significant change in implementation strategy for the final components of IRMS was necessary to allow TAX to implement a Tax Amnesty program. In addition, significant components of the amnesty program were outsourced to CGI-AMS as a new component of the Partnership Project.

### **REMITTANCE PROCESSING**

A new Remittance system was implemented in the fall of 2002. Through the use of advanced remittance technology, electronic key-from-image workflow, and character recognition software, the process of preparing checks for deposit and capturing voucher data is greatly improved. Manual keying of

checks has been reduced by 20%, and hardware throughput has increased by 100%, contributing to faster deposits for TAX.

### **ADVANTAGE REVENUE (AR) SYSTEM**

This core taxpayer accounting system will replace the old and obsolete State Tax Accounting and Reporting System (STARS) and ensure the ongoing integrity of the Commonwealth’s revenue system. The ADVANTAGE Revenue (AR) system employs state-of-the-art technical architecture and software to integrate all of the front-end revenue systems at TAX. The new AR system will not only provide a secure and stable revenue system, but will also open up new opportunities for providing products and services to the citizens of Virginia in the future.

AR itself supports the areas of taxpayer identification and registration, returns processing, taxpayer accounting, and revenue accounting (including revenue distribution to local governments). Coupled with the recently installed front-end data capture solutions, such as imaging, Telefile, VATAX Online, and electronic filing, AR provides an integrated tax processing solution for all tax types, including Individual Income, Corporate Income, Sales and Use, and Withholding tax.



AR has now been built and is undergoing a rigorous testing process to ensure that it performs up to expectation from both a technical and a usability standpoint. This testing includes a series of comprehensive and repetitive tests ranging from unit testing of program code to integrated user acceptance testing, aimed at ensuring all components of IRMS interact accurately and according to their design. Additional information on the remaining activities associated with AR, as well as the schedule for these activities, is included later in this document.

### **CUSTOMER RELATIONSHIP MANAGEMENT (CRM) – ADDITIONAL PHASES**

The citizens of Virginia are already reaping many benefits from the Customer Relationship Management tools that have been put in place over the previous years. Development to integrate CRM with the new ADVANTAGE Revenue system is complete. This integration will add functionality to allow all areas of TAX to collaborate on customer questions and issues, including more complex routing and workflow rules centered on a case management structure.

### **AUDITOR'S TOOLKIT - A COMPREHENSIVE SOLUTION**

The Auditor's Toolkit is an audit management solution that ensures comprehensive information access and enhanced compliance management through better data administration and robust functional support for tax audit and discovery programs. The Auditor's

Toolkit consists of five state-of-the-art system components and an administrative module:

- 1) Compliance Repository - the foundation of the Auditor's Toolkit, the Compliance Repository is a data mart that contains the necessary internal and external data required to create, administer, and maintain nonfiler and under-reporter audit selection programs.
- 2) Candidate Selection - a business-oriented decision support application that will provide the capability to create, administer, and track nonfiler programs and under-reporter programs.
- 3) Case Assignment - the bridge to Case Management, Case Assignment is a workflow application that enables TAX to prioritize and create cases for candidates identified by Candidate Selection. Additionally, Case Assignment provides the capability to create cases manually, a function typically required for field audit operations.
- 4) Case Management - the centralized electronic inventory case tracking system. In addition to case tracking, Case Management provides enhanced automated and manual case workflow, enhanced audit support tools, and mobile computing, all of which are required to support field and office audit operations.
- 5) Audit Administration - gives TAX Audit Managers the capability to configure and maintain the relational

database tables that comprise the system and the capability to analyze and identify reports regarding the effectiveness and efficiency of the application.

The implementation of the Auditor's Toolkit ensures fair tax treatment and improve administrative efficiency of compliance activities affecting all Virginia taxpayers.

All components of the Auditor's Toolkit were originally scheduled to be implemented in conjunction with the ADVANTAGE Revenue system. TAX and CGI-AMS agreed to implement the Compliance Repository and Audit Selection components of the Toolkit ahead of schedule to take advantage of opportunities to increase compliance revenue. The Compliance Repository and Audit Selection components were implemented on August 1, 2003, well ahead of IRMS.

## **ORGANIZATIONAL DEVELOPMENT AND CHANGE MANAGEMENT**

As the Agency implements new technologies and new business processes, a substantial effort is ongoing to manage the transition from the old environment to the new, including employee training and education, job redesign, and strategies for staff development.

An end-user training plan and a technical training plan are in place. Over 230 "learning object" topics have been identified to train agency staff. The training curriculum includes a variety of training delivery methods, including

instructor-led classroom activities, Technology-Based Training (TBT), self-study lessons, and self-guided lab practice activities. A significant portion of the training required to re-skill agency IT staff has already been completed.

Drafts of the appropriate user's guides, system administrator's guides, and operations guides have also been developed. Over 750 integrated IRMS operating procedures have been developed and placed in an online repository for easy access by all TAX staff.

## **TAX AMNESTY AND QUICKPAY**

The 2003 Virginia General Assembly enacted a Tax Amnesty program in 58.1-1840.1, *Code of Virginia*. The Amnesty program was to run for a period of between 60 and 75 days and be completed no later than June 30, 2004. TAX needed a window of time to conduct the Amnesty campaign that would not interfere with the upcoming Individual Income filing season. The window chosen was September 2 through November 3, 2003. Unfortunately, this was also the previously scheduled time for conversion from STARS to ADVANTAGE Revenue. As Amnesty campaigns are always an all-hands-on-deck affair, and many systems had to be readied for Amnesty, the conversion was postponed.

To implement all of this functionality by September, system design work for STARS modifications and the Web applications began in April 2003, immediately upon passage of the Amnesty legislation. These activities created a significant diversion of management attention and systems resources from the

ADVANTAGE Revenue conversion. The Amnesty campaign was an unqualified success and another important accomplishment of the Public/Private Partnership. For details on the Amnesty program please see "Year Six".

### **QUICKPAY**

Essential to the success of Tax Amnesty was the capability for customers to identify quickly and easily their outstanding liabilities and make payment. QuickPay provides TAX with a high visibility, high impact self-service bill payment channel for both the business and individual community. QuickPay permits individuals and businesses to initiate bill payments using the Internet without requiring the iFile authentication process. In other words, a taxpayer can access a statement of liabilities and make payment electronically using only an account number and the five-digit bill number from any outstanding TAX bill.

QuickPay was implemented to ease the process of bill collection and payment processing during Tax Amnesty by providing an easy, error-free Internet option for customers. During the sixty-three day amnesty period alone, nearly 5,200 payments were made through QuickPay for a total of \$4.1 million. Although developed for Tax Amnesty, QuickPay will continue to provide a valuable convenience to our customers as an ongoing part of the VATAX Online suite of customer service tools.

### **REMOTE ACCESS**

Our new technology infrastructure, combined with new laptop computers,

allows employees to access agency systems from any location, including a taxpayer's place of business or an employee's home. In addition, imaging technology has made much of our work "portable," allowing TAX to assign cases to home-based staff electronically.

TAX leveraged these new capabilities to enable the closing of all but one of our district offices. The commute time to a district office in the past was as much as several hours in each direction. Traveling to a district office to access agency systems meant less time spent actively attempting to collect delinquent liabilities or conducting audits. Now over 200 Field Collectors and Auditors can access all TAX systems from offices established within their homes, improving productivity and reducing costs for leased space.

### **TECHNOLOGY INFRASTRUCTURE**

Under the Partnership contract, CGI-AMS was initially responsible for the deployment and support of all technology hardware and third-party software. Hardware is procured under a lease program, minimizing maintenance and repair issues and ensuring that employees will continue to have current technology tools.

These responsibilities are now managed exclusively by TAX. During the past twelve months, TAX's technology infrastructure staff deployed over 300 personal computers and two servers, all as a part of our technology hardware refresh program. In addition, all existing equipment was upgraded to Windows 2000. Significant focus was placed on

REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY

TAX

CGI-AMS

protecting and managing our technology environment resulting in the development of a number of new policy and procedure documents covering areas like IT Change Control, IT Configuration Management, and IT Security.

*“Tax Amnesty was a complete success, resulting in additional revenue that significantly exceeded our expectations.”*

## **YEAR SIX: JULY 2003 – JUNE 2004**

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The sixth year of the project focused on conducting Tax Amnesty, testing Advantage Revenue (AR), preparing employees to use the new system, and maintaining systems already implemented by the Partnership. Tax Amnesty was a complete success, generating additional revenue well beyond expectations.

Testing focused on both the new AR software and the conversion software/processes for moving historical taxpayer information from the legacy system to the new system.

Finally, TAX was able to maintain and master new technologies and systems previously implemented by the project. At the same time, focus was maintained and resources dedicated toward completion of the project’s final stages.

### **TAX AMNESTY PROGRAM**

In 2003, Governor Mark Warner and the Virginia General Assembly enacted § 58.1-1840.1 establishing the Virginia Tax Amnesty Program for the purpose of improving voluntary taxpayer compliance and increasing and accelerating collections of certain taxes owed to the Commonwealth. Amnesty was expected to produce \$48.5 million in additional tax revenue.

The statute took a “carrot and stick” approach to Amnesty. During a period of 60 to 75 days, to be established by the Tax Commissioner, all eligible taxpayers could

satisfy tax debts by paying the entire tax and half of the accrued interest. Eligible taxpayers could be forgiven payment on the “other half” of the accrued interest and all penalties assessed to date. At the same time, however, an additional penalty of 20% on the original principal would be imposed upon any Amnesty-eligible debts not satisfied during the limited Amnesty window.

Due to an extremely short lead time, and the other competing priorities for TAX’s staff, the Amnesty statute authorized the Tax Commissioner to extend the existing Partnership contract with CGI-AMS to co-manage the effort with TAX. An Amnesty contract change was authorized at \$7 million to include payments for CGI-AMS staff, subcontracts administered through CGI-AMS, systems modifications and enhancements delivered by CGI-AMS, and Amnesty related expenses incurred by CGI-AMS.

An Amnesty core team of CGI-AMS and TAX staff was formed in February 2003. The formal contract change order was executed in July 2003. The Amnesty program was made available to the public for a 63 day window running from September 2, 2003 through November 3, 2003. Participants electing to make Amnesty payments on an installment payment plan were given until May 4, 2004 to make final Amnesty payments.

The campaign focused on two themes: user-friendly filing and payment options for taxpayers, and extensive

## REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY

TAX

CGI-AMS

taxpayer education and public awareness of Amnesty's benefits.

User-friendly filing and payment options included the following:

- No Amnesty application form required from taxpayers
- "Bill by Bill" participation by taxpayers in Amnesty
- Interest rates on omitted taxes simplified to a single annual rate of nine percent
- Interest accruals frozen on day 1 of the Amnesty window to keep bill amounts from being "moving targets"
- Payment Plans available to make 6 monthly installments (through May 4)
- A new Amnesty web site featuring "QuickPay"
- Web access to an interest calculator to remove the guesswork from interest calculations on omitted taxes
- Web access to all Amnesty Rules, Guidelines, Forms, and FAQ's

Taxpayer education and public awareness initiatives included the following:

### PR/Advertising:

- TV ads featuring "Tax Letterman"
- Newspaper inserts in all major newspapers
- Radio traffic sponsorships in Richmond, Hampton Roads, and Northern Virginia
- Public appearances with "Tax Letterman" and TAX staff to gain TV and newspaper coverage
- Press releases
- Internet advertising
- Employee newsletters
- Commercial replays on local access cable channels

### Outbound Mailings to Amnesty Eligible

#### Taxpayers:

- Legal notices to known Amnesty prospects
- Mailers to good Amnesty prospects who had not yet responded to the legal notice
- Legal notices to candidates of the Treasury Offset Program (TOP)
- Last chance postcards near the end of the campaign

#### Inbound Telephone Calls:

- Toll-Free Amnesty Hotline established: 1-877-VATAX-77
- Five outside collection agencies and a call center contractor staffed call centers (Level 1 Support) to supplement TAX's call centers (Level 2 Support)
- Telephony systems deployed to provide sophisticated call routing of inbound calls

#### Outbound Telephone Calls:

- Outbound calls to Amnesty candidates supplemented mailings and encouraged taxpayers to avoid last minute Amnesty activity

#### Walk-In Service:

- Walk-in return preparation service available throughout the Amnesty campaign in Richmond and Norfolk TAX offices
- Seven local offices available for Amnesty walk-in service in last two weeks of the campaign

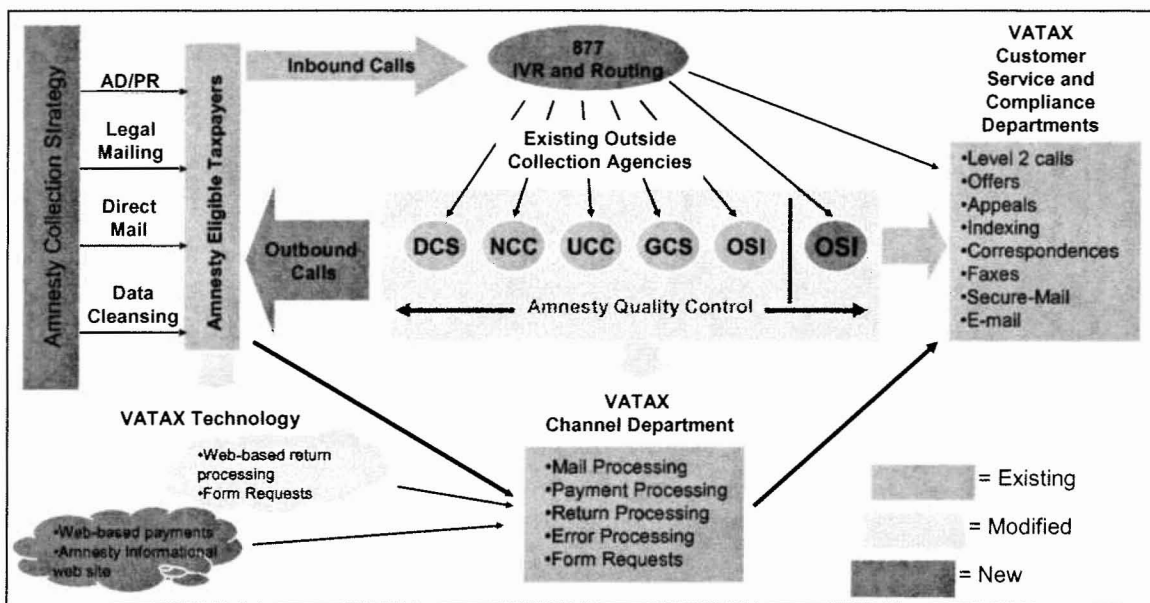
### **AMNESTY FUNCTIONAL ARCHITECTURE**

To deliver this high level of Amnesty functionality a sophisticated Functional Architecture was needed. The following

high-level diagram of the Amnesty Functional Architecture depicts the functions and organizational units involved in executing the Amnesty program. The diagram is color-coded to separately distinguish existing processes (orange), modified processes (tan), and new processes (green) created expressly for the Amnesty program.

The diagram uses three primary colors to distinguish:

- **Orange:** Existing – designates existing Agency organizations and processes utilized “as is” during the Amnesty period
- **Tan:** Modified – indicates an existing Agency organization or process that was modified to meet Amnesty processing needs
- **Green:** New – representing organizations and processes newly created for the Amnesty program



**EXISTING PROCESSES**

Several Amnesty functions were best left to existing operations, especially those normally performed by TAX’s three main operational units:

- 1) Channel Operations – the Channel organization is responsible for most transactional processing for the Agency, including inbound mail opening and sorting, payment and return processing,

data capture, error handling and exception processing, forms design, and fulfillment of forms requests. Considering the high processing volumes expected during the Amnesty period and the high level of expertise possessed by the Channel organization, the project did not attempt to create a separate function for Amnesty transaction processing. As such, all Amnesty inbound and outbound paper-based processing was jointly planned

and executed with the Channel organization.

- 2) Customer Service – the Customer Service organization is responsible for most inbound information requests from taxpayers to the Agency. Inbound Amnesty calls and correspondence would easily overwhelm existing staff in Customer Service. As such, the Amnesty program devised a method for distinguishing “easy calls,” including requests for basic account and program information, from “harder” calls that require a detailed, working knowledge of Agency procedures, including complex account adjustments. These harder calls requiring subject matter expertise were labeled “Level 2” support to be provided by existing Customer Service staff. Easier “Level 1” calls were routed to contractors.
  
- 3) Compliance – the Compliance organization is responsible for most audit and collections activity. Collections staff make outbound calls, on-site visits, issue liens against wages and property, and perform other enforcement actions to collect delinquent accounts. Audit staff discover nonfilers and under-reporters, conduct tax audits, and issue audit assessments. To minimize an expected dip in non-Amnesty compliance revenue, the Compliance organization continued “normal” compliance activities as much as possible during the Amnesty period. At the same time, however, staff from the Compliance organization were needed to assist Customer Service handle “Level 2” inbound calls.

### **MODIFIED PROCESSES**

High volumes of taxpayer participation dictated the continued use of the following organizations and processes modified to meet Amnesty conditions: *Outside Collection Agencies (OCAs)* – TAX makes extensive use of five outside collection agencies to supplement internal collections resources. Continued use of OCAs was deemed critical to Amnesty’s success, particularly in handling previously assigned delinquent accounts with established taxpayer relationships. Inbound calls to the toll-free Amnesty line were routed to OCA’s in accordance with pre-existing account assignments. During Amnesty, OCA operational and compensation models were modified and additional oversight and guidance from TAX was exercised to insure that OCA activities adhered to the overall Amnesty collection strategy.

*iFile Web-Based Systems* – TAX had in place a suite of WEB applications (iFile) offering online return preparation, filing, and payment of business and individual taxes, including online user access to account balances and previously filed returns. The iFile system was modified for Amnesty to provide online user review of Amnesty eligible bills and online Amnesty payments. Called QuickPay, this system was adapted post-Amnesty to provide the same online services for all delinquent bills.

### **NEW PROCESSES**

The most significant operational elements of the Amnesty effort were time-limited activities outsourced to a wide variety of specialty firms. Because the General Assembly authorized the Amnesty



project as an adjunct to the existing Partnership, many activities could be rapidly outsourced to firms procured as subcontractors to CGI-AMS. Some examples include:

*Amnesty Call Center* – An Amnesty Call Center was designed and implemented to handle “Level 1” inbound calls during the Amnesty window. This call center was built and staffed by Outsourcing Solutions, Inc. (OSI) in less than two months and was critical to providing high volume front-line customer support for basic information on Amnesty terms, alternative payment options, and limited account-specific information to Amnesty candidates (i.e., current account balances and the interest and penalty savings offered by Amnesty). As the “front-line” of customer support during Amnesty, most calls were routed first to the Amnesty Call Center (or to one of the 5 OCA’s if the caller’s account had been previously assigned). In instances where the Amnesty Call Center staff lacked the knowledge required, callers were transferred to subject matter experts in TAX’s Customer Service and Compliance units. OSI hired and TAX trained about 70 telephone representatives for peak staffing . TAX furnished 7 experienced supervisors and team leaders for on-site assistance to OSI phone reps.

*Toll-Free Voice Response and Call Routing* – A major objective of the campaign was to provide immediate customer service to any taxpayer with an interest in the Amnesty program and to avoid discouragement that results from customers entering the “wrong door” or waiting too long in a telephone queue. To meet this challenge, a single point of entry was created for Amnesty candidates with the creation of a toll-free call routing structure customized specifically

for Amnesty candidates. A consolidated call routing structure was designed using an Intelligent Voice Response (IVR) system with a new toll-free number made operational only during the Amnesty period (1-877-VATAX-77). This toll-free number was promoted extensively in all outreach and advertising activities. It offered services in both English and Spanish, including automated handling of inbound calls, account-sensitive forward and backward routing between the IVR, the Amnesty Call Center, the five OCA’s, and TAX’s Customer Service and Compliance units, for both Level 1 and Level 2 calls.

When an Amnesty candidate called the toll-free Amnesty number, the IVR welcomed the caller, presented menu choices, accepted the caller’s Social Security Number or TAX account number, and routed the call to representatives at one of the five OCA’s (if the caller’s account had previously been assigned to an OCA) or to the Amnesty Call Center operated by OSI, Inc. In this way, Amnesty callers received prompt attention and TAX’s normal call center operations avoided disruption from high volumes of Amnesty calls, except those requiring TAX’s subject matter experts (i.e., Level 2 calls). The IVR, call routing, and toll-free services were outsourced by AMS-CGI to MCI, Inc.

*Outbound Call Campaign* – Most states conducting recent Amnesty campaigns did not incorporate outbound call campaigns to segments of the Amnesty-eligible population. However, our project team decided to utilize targeted outbound calls to supplement other public awareness and outreach activities, especially during lulls in inbound call volume. The outbound call campaign was targeted at Amnesty direct

mail recipients who declined to make contact with the department. Taxpayers were selected for calls during off-peak hours and on days when inbound call volumes were expected to be low. Outbound calls were made primarily by staff of the five OCA's and the Amnesty Call Center.

*Advertising and Public Relations* – the Agency traditionally conducts media relations and public relations “in-house” and does not utilize mass media advertising for ongoing operations. However, to promote the Amnesty campaign, a public relations firm (The Hodges Partnership) and an advertising firm (Barber Martin Advertising) were procured as subcontractors to CGI-AMS. Together these firms helped TAX design and implement an extensive public awareness campaign that included multiple mass mailings, highway billboards, newspaper inserts, television and radio advertising, internet advertising, employee newsletters, commercial replays on cable public access channels, media interviews, and public appearances by TAX officials, all featuring the campaign's slogan “Pay Now or Pay More Later” and a friendly icon called Tax Letterman (played by a live actor).

*Direct Mail* – TAX routinely issues extensive outbound notices for ongoing operations, usually direct from the legacy taxpayer accounting system or from the collections system. However, Amnesty-related communications needed a look and feel distinct from normal department mailings with a special marketing orientation. The Amnesty project team retained two firms to assist in direct mail design, generation, and mailing.

*Data Cleansing* – TAX maintains data cleansing efforts as part of ongoing mail center operations, including use of the United States Postal Service (USPS) database of addresses. However, taxpayers seeking to dodge tax compliance efforts also avoid updating their contact information in the USPS database. At the same time, Tax wanted a diligent effort to reach Amnesty candidates and inform them of both the incentives and penalties associated with Amnesty. As a result, the Amnesty project team conducted data cleansing efforts on both individual and business accounts that did not have known addresses or whose early mailings were returned due to bad addresses.

*VATAXAmnesty.com* – To promote the Amnesty campaign further, TAX built a general informational Web site to provide “one-stop” information about the Amnesty program, including Amnesty's legal terms and conditions, as well as links to QuickPay, iFile, Amnesty press releases, and media materials. Other online services including an online interest calculator were built to assist taxpayers in computing interest due on Amnesty eligible obligations.

*Amnesty Collection Strategy* – TAX maintains significant data on its portfolio of delinquent accounts for the purpose of designing collection strategies and tactics to maximize return on its collections resources. For the Amnesty campaign, CGI-AMS subcontracted with Labrynth, Inc. for advice on collection strategies and tactics designed to take maximum advantage of Amnesty's unique “carrots and sticks.” To derive an Amnesty collection strategy, the portfolio of delinquent taxpayer accounts was segmented by geography, demography, risk of nonpayment, outstanding balance, and other

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attributes to identify target groups of delinquent taxpayers to whom Amnesty outreach efforts would likely yield the best results. In this way, a limited budget for mass mailings and advertising could be directed in a manner most likely to maximize Amnesty revenue. The collections strategy informed other strategies such as where and when to place media advertising, the message content for mass mailings, the timing and frequency of targeted mailings to segments of the Amnesty-eligible population, outbound calling strategies, and predicting inbound contact volume for properly staffing the call centers.

**CAMPAIGN RESULTS**

By any measure, the Amnesty campaign exceeded expectations. The final tally on Amnesty revenue was \$94.9 million above baseline, well above the target of \$48.5 million. Nearly 55% (\$51.7 million) of Amnesty collections came from businesses and about 45% (\$43.2 million) came from individuals.

**Amnesty Collections Above Baseline**  
(in millions)

<b>Revenue Goal:</b>	\$48.5
<b>Final Amnesty Collections:</b>	\$94.9
(with installment pay plans that ran thru May)	
- From Businesses (54.5%)	\$51.7
- From Individuals (45.5%)	\$43.2

Participation among Amnesty eligible taxpayers was also significant. Over 95,000 individuals and businesses took advantage of the Amnesty program. About 74% of Amnesty participants were individuals and 26% were businesses.

**Number of Amnesty Participants**

<b>Individuals:</b>	<b>Payments</b>	<b>Pay Plans</b>
With Bill Payments	67,818	6,406
With Return Payments	<u>4,064</u>	-----
Total (unduplicated)	70,502 (74%)	6,406
<b>Businesses:</b>		
With Bill Payments	13,722	545
With Return Payments	<u>12,982</u>	-----
Total (unduplicated)	24,758 (26%)	545
<b>Total Participation:</b>		
Business & Individual	95,260	6,951

Four major outbound mailings were issued to targeted segments of Amnesty eligible taxpayers. A total of 729,000 pieces were mailed. The first mailing was designed as a legal notice to inform all known Amnesty eligible participants of the legal terms and conditions of the program. Later, another mailing of 60,000 pieces was sent to candidates whose claims were to be listed with the U.S. Treasury as subject to offset against federal tax refunds (the TOP program). The third and fourth mailings were issued to segments of the population who had not responded to prior mailings by calling or writing the department before the end of the Amnesty window.

**Amnesty Outbound Mailings**

386,000	Legal Notices
60,000	Mailers to TOP (Federal Set-off) Candidates
167,000	Mailers Sent to Priority Prospects
<u>116,000</u>	Last Chance Postcards
<b>729,000</b>	

Outbound call campaigns were also deployed to encourage Amnesty participation. About 267,000 outbound calls were made to targeted groups of the Amnesty eligible population.

The combined public awareness efforts, including advertising/media relations, outbound mailings, outbound calls, and WEB functionality generated an overwhelming response from the public. TAX received 103,000 inbound pieces of mail from Amnesty participants. (Another 143,000 pieces of outbound mail were returned by the Postal Service as undelivered due to bad addresses.) Over 217,000 inbound calls were received during the Amnesty campaign, including 126,000 calls to the toll-free line routed on the Amnesty IVR. Twenty-nine thousand calls were received on the last day of the campaign.

The Amnesty home page received 112,000 visits during the 63-day Amnesty window. About 5,100 Web users made online Amnesty payments using the QuickPay application.

Among the most outstanding results achieved by the project was the processing of a huge flood of tax returns and payments mailed on the final day of Amnesty in just two weeks. This rapid clean-up of Amnesty cases allowed audit and collections programs to resume normal activity two weeks after the campaign closed. Timely commencement of normal compliance programs was critical in avoiding a counterproductive post-Amnesty dip in compliance revenue. The successful conduct of the campaign together with the quick resumption of normal operations are a point of pride with TAX and CGI-AMS, making the Amnesty program a truly satisfying accomplishment of the Partnership.

## **ADVANTAGE REVENUE (AR) SYSTEM**

The final initiative of the Partnership Project will replace the old and obsolete State Tax Accounting and Reporting System (STARS) with the new ADVANTAGE Revenue (AR) system. The new accounting system employs state-of-the-art technical architecture and software and integrates all of the front-end revenue systems already developed and operating at TAX.

Much of this past year focused on extensive testing to ensure that AR performs up to expectation from both a technical and a usability standpoint, and that the data conversion software will move historical taxpayer information to the new system as intended. This testing includes a series of comprehensive and repetitive tests ranging from unit testing of program code to integrated user acceptance testing, aimed at ensuring all components of the Integrated Revenue Management System (IRMS) interact accurately and according to their design.

In addition to testing, the Partnership conducted a number of training and readiness activities to ensure employees are proficient with the new system, and excited about the operational improvements to come.

### **AR SOFTWARE TESTING**

In 2004, TAX began validating the AR software that will eventually replace STARS (State Tax Accounting and Reporting System). TAX developed and began executing process-based testing scenarios to ensure that the requirements

that were established as part of the Partnership Project are met in AR, as well as the other already implemented components of IRMS. During this test, TAX involved more than fifty Subject Matter Experts to develop, execute, and validate results from these testing scenarios. Actual converted STARS data is used to conduct these tests in order to validate the quality of data conversion programs.

Testing to date has identified a reasonable number of defects in the AR software, which are in the process of being corrected. These testing activities are scheduled to continue through May 2005.

### **DATA CONVERSION TESTING**

The current STARS system contains over 55 million source data records representing returns, payments, refunds, and correspondence. All of this taxpayer information must be carefully moved from obsolete hierarchical databases in STARS to new relational databases in AR. The result will be over 200 million rows of taxpayer information available online in the new system.

The effort to move taxpayer information from STARS is significant and complicated. Not only must data be "mapped" correctly between two systems, but in many cases data must be translated to meet the exacting standards of the new system. CGI-AMS developed customized software specifically for TAX's data conversion. This complex and unique conversion software alone accounts for 25% of the custom developed software created during the entire project. This software will only be used once, at the time we convert

from STARS to AR, after which time it will serve no further purpose.

In Summer 2004, our testing of the data conversion process revealed a higher than expected error rate that compromised our ability to begin production operations with a complete and accurate database of historical data. The new accounting system and its database are more automated, more structured, and more rigorous than the legacy system it replaces and requires a higher degree of data integrity and consistency. While good for tax administration, the demanding nature of the new system has little tolerance for data anomalies and inconsistencies, requiring a careful and thorough examination of all data results flowing from several test conversions prior to permitting the final, actual conversion to proceed.

In consideration of these circumstances, we determined that the original go-live date of September 14, 2004 was no longer feasible. While a December 2004 go-live date remained a remote possibility, the Partnership decided that a major system conversion just prior to the 2005 income tax filing season would present substantial risk for the Commonwealth and its taxpayers. Hence, we chose a more prudent go-live timeframe in the summer of 2005. This significant change in implementation strategy for the final component of IRMS was necessary to allow CGI-AMS and TAX to correct the higher than expected number of conversion software related incidents, and to ensure a successful implementation.

## **EMPLOYEE TRAINING**

As IRMS systems were being tested, important activities were completed to prepare end users for the final Partnership implementation. Training materials were designed and developed, and several curriculums were piloted, along with detailed planning for the rollout of the IRMS training program and the logistics that support training delivery.

The IRMS training program is based on a business process approach instead of a system-based approach, requires students to take an active role in their learning, and reinforces the use of online support tools that will be available to end users on the job. Training materials have been developed in a modular "learning object" format, which provides flexibility for customized curriculums suited to each employee's role in the agency. This design strategy also supports re-use of materials after "Go Live" training, making them available for on-going training needs such as new hire employee training, cross training of existing employees, and re-fresher training. In addition, special training lessons have been developed to ease the transition from STARS to IRMS by highlighting new processes, new terminology, and the differences between "new" and "old".

A total of 377 lessons have been developed utilizing a blend of training delivery methods, including Technology-Based Training (TBT), hands-on Instructor-Led classroom Training (ILT), independent self-study lessons, information tools providing access to operational business procedures, self-guided lab practice activities, and comprehensive hands-on

exercises at the conclusion of the training curriculum.

A total of 92 operational roles, each representing a specific training audience, comprise the IRMS training program – 83 roles address the learning needs of agency staff and 9 roles are specific to external IRMS users in localities and set-off agencies. Employees will complete between 6 and 80 hours of training, out of the 153 hours offered, depending on their operational role in the agency. A dedicated training environment, which simulates the IRMS production environment, has also been created to provide hands-on training activities for TAX staff.

Three TAX operational roles and two external user role curriculums were piloted in the spring of 2004. The purpose of the pilot training activities was to validate the following:

- Learning object lessons are correctly designated for training roles
- Curriculum path flow is in the appropriate order and prerequisite lessons are correctly sequenced
- Planned training time for each lesson is appropriate
- Processes to refresh the training environment database and the IT Infrastructure resource support needed for the training environment are in place
- The agency Learning Management System (LMS) for course delivery and tracking of student progress functions as planned

Results of the overall pilot training program and feedback from pilot participants have been used to revise training materials and practice exercise

scenarios. Lessons learned related to access and connectivity to the training environment and LMS use and administration have been applied to the training program moving forward.

Preparations also included an extensive Train-the-Trainer program for fifteen agency employees. The trainers began their preparation by completing courses in the IRMS training curriculum to build their personal knowledge of IRMS. This was followed by training on adult learning theory and classroom facilitation techniques, along with structured classroom practice and feedback sessions.

Planning and logistics to support the first phase of the IRMS training program have been completed and training is underway. Employees participating in Mock Production activities and employees designated to serve as “coaches” when IRMS is implemented are the target audience for the Phase 1 training.

In addition to a comprehensive training program, an extensive online performance support tool was designed and developed for IRMS users. This online help application provides quick, on-the-job access to approximately 1,000 topics related to IRMS. In addition to providing information that answers “How do I,” “Where do I,” and “What does this mean?” type of user questions, the performance support system also includes approximately 150 links to “Show Me” nuggets which visually demonstrate to the user where and how to perform a task in IRMS.

## **TRANSITION READINESS ACTIVITIES**

Over the past year, a number of Transition Readiness Activities were undertaken and are making significant progress in preparing employees for the final implementation of IRMS. Communications, Operational Readiness, Mock Production, and Controlled Production planning activities are all underway. In addition, a data cleanup effort is ensuring that any missing taxpayer account data in STARS will be obtained prior to AR go-live.

### **COMMUNICATIONS PLANNING**

Communications planning involves identifying stakeholder information needs and meeting them. The Communication Plan identifies “who” needs what information, “when” this information will be available, “how” this information will be gathered, and the strategy by which it is communicated. The current plan includes between 30 and 40 stakeholders, the information to be communicated to each stakeholder group, and the approach to disseminate this information.

### **OPERATIONAL READINESS PLANNING**

Operational Readiness planning includes identifying the tasks necessary to ensure agency staff are prepared for the new IRMS system. These tasks include work that must be completed in the current legacy system prior to the system shutdown, as well as any other casework that can be completed prior to go-live to reduce the potential conversion risks of moving incomplete data.

## **MOCK PRODUCTION PLANNING**

Mock Production planning involves ensuring that TAX end users are prepared for the new IRMS system. It will serve as a dress rehearsal for processes and procedures that will be implemented with the IRMS system. The focus of this initiative is on people and processes, not the system. Approximately 50 employees will exercise a “dress rehearsal” of the critical work processes that have been re-engineered. Scenarios will be run to simulate normal working conditions, as well as disaster recovery trials and crisis activities.

### **CONTROLLED PRODUCTION PLANNING**

Controlled Production planning involves the process of determining what types and volumes of work will have priority during the weeks immediately following go-live. Controlled production is based on a “crawl-walk-run” ramp up process. Instead of opening the entire system for all users to process transactions, the crawl stage will only allow a small group of pre-identified users to do specific controlled tasks. This will enable TAX to closely monitor the system by validating every transaction for accuracy. The results of the crawl stage will determine how fast we can progress to the walk phase. The walk stage will open the tasks up to more people and the results will be reviewed based on a predetermined sample size instead of a detailed review. Again, once a set criterion is successfully completed, we will proceed to “normal” operations in the run stage.

### **DATA CLEANUP**

AR has been designed with very exacting standards for data quality. Because



of the complexity of moving historical taxpayer information from the legacy system to the new AR system, significant data cleansing activities were undertaken to ensure that STARS data was in a consistent and correct format prior to its conversion to IRMS. For example, TAX undertook an initiative to acquire FEINs and SSNs for STARS accounts where these key fields were missing, to ensure taxpayer accounts in the new system are properly merged. To date, TAX has been able to acquire nearly 4,600 FEINs or SSNs that were missing in STARS, ensuring that taxpayer information for these accounts will be properly posted in AR.

### **COMPLIANCE REPOSITORY – EARLY IMPLEMENTATION**

The Compliance Repository is an important compliance initiative that was successfully implemented during the past year. The Compliance Repository is a data warehouse that stores aggregate taxpayer information gathered from internal sources such as Virginia tax returns, and a variety of external sources such as federal return data from the Internal Revenue Service and employment information from the Virginia Employment Commission. This repository is linked to another tool implemented by the project – PASS (Professional Audit Support System). PASS is a modeling tool used to select information about potential compliance cases from the repository using defined criteria. The tool allows auditors to enter search arguments designed to select businesses and individuals likely to be under-reporting their tax liabilities or not filing tax returns to report their liabilities. These tools were implemented a year ahead of schedule in the fall of 2003.

PASS and the Compliance Repository empower audit staff to modify audit selection criteria without the assistance of programmers. Auditors have complete flexibility to try new criteria and improve the selection of audit candidates. It used to take months to run the many iterations required to select audit candidates. By shifting this ability to end-users and furnishing a user friendly, online interface for entering search criteria, audit staff can manipulate search models and perfect selection criteria in as little time as one week. This improves productivity in the Audit area and frees programming staff to focus on other activities.

### **REPORT MANAGER**

The FileNet Report Manager product was successfully implemented during 2004, eliminating the cost of producing microfiche and making STARS purged data readily available to TAX staff at their desktop.

In the past, taxpayer information was “purged” from STARS once it reached a certain age (generally three years). Taxpayer information purged from STARS was stored on microfiche where employees could access the information when needed. Access to this purge information was inconvenient and slow, since the only way to view it was to use a limited number of shared microfiche film readers. This was very time consuming and inefficient. Even more problematic, home-based Auditors and Collectors were not able to directly access customer information once it was purged to microfiche.

Report Manager is a Windows-based desktop application capable of

displaying large volumes of data with multiple reports and hundreds of thousands of pages, and to query on key fields. Breaking down these large reports into smaller versions allows the user to quickly locate specific accounts and information. The information sought can also be quickly retrieved and viewed using Microsoft Excel within the application.

Since Report Manager is a desktop application, employees with a need to view archived information can get it immediately from their workstation. Report Manager is significantly reducing the burden and cost associated with accessing important taxpayer information, and eliminating the cost of producing and storing obsolete microfiche records.

### **KNOWLEDGE TRANSFER TO MAINTAIN NEW SYSTEMS**

The Partnership Project has implemented a number of large computer applications over the last several years, as discussed earlier in this report.

The ability to maintain new systems after project completion has always been an important success criterion for TAX. While CGI-AMS has the primary role for designing, developing, and implementing these applications, TAX personnel have participated with each phase of the project. This participation and the knowledge transfer sessions, documentation, and training provided by CGI-AMS, have made it possible for TAX to assume sole responsibility for maintaining and updating each system.

With each implementation, TAX personnel receive technical training on new technologies introduced. New technologies for infrastructure personnel include: UNIX, Oracle, Ethernet Networking, Trillium, and a host of other new technologies. New technologies for applications personnel include: PowerBuilder, SQL, JAVA, Business Objects, and many others. In addition to classroom training, CGI-AMS provides detail technology and functional knowledge transfer sessions for each new application.

Vital for continued operation of new systems, training provided through the Partnership ensures technical personnel are current in the technologies needed to provide services business users have come to expect. TAX's ability to maintain these applications prior to project completion, helps guarantee their continued operation after project completion.

### **LEGISLATIVE CHANGES**

Each year the Virginia General Assembly passes legislation that changes tax laws and regulations. These modifications must be incorporated into TAX's computer systems no later than the effective date of that legislation. Legislation ranges from simple modifications like filing requirements to complex changes like Tax Amnesty and the 2004 Tax Reform legislation, HB 5018, which included two new tax types and extensive modifications to several existing taxes.

During the Partnership, legislative changes imposed a double impact on TAX since each legislated change affected two systems concurrently – the current

production taxpayer accounting system, STARS, and the taxpayer accounting system under development, AR. To manage the double workload, TAX relies on CGI-AMS to coordinate changes to IRMS. CGI-AMS assists with analyzing new legislation, developing impact statements for partnership applications, and completing most development work on the non-production applications.

With the exception of Tax Amnesty, TAX and CGI-AMS have been able to incorporate successfully additional functionality required because of legislated changes with minimal impact to the Partnership schedule. This was true again this year with the significant changes introduced by the passage of Tax Reform.

### **NEW LOTUS NOTES APPLICATIONS**

With the implementation of Lotus Notes as the Agency's e-mail system and collaborative work environment, TAX has been able to expand its service delivery to its own employees by offering Lotus Notes applications, which simplify administrative and business activities. Several new Lotus Notes applications were implemented during this reporting period, and are providing significant operational benefits.

The Legislative Impacting Database (LID) manages TAX's review of proposed legislation. The on-line repository not only stores the text of proposed legislation, it also notifies agency personnel when new legislation is available that requires an Agency Impact Statement. TAX employees responsible for impacting legislation access LID to review the legislation and enter their impact statements directly into the

repository. The application automatically creates cost impacts for each office, as well as an Agency Impact Statement by combining each office's information. LID links directly to the Virginia General Assembly Web site and includes functionality for finalizing impact statements, approvals, and automatic notifications when each area has completed their impact.

The TAX Agency Rules and Procedures (TARP) application houses agency operating rules and procedures. Prior to its implementation procedures were stored in binder books. Approximately twenty copies of these twelve books were kept in various locations throughout the agency. With each update introduced, the binders were manually revised. TARP not only allows immediate access to procedures from employees' desktops, but it also simplifies and manages the update and approval process. In addition, TARP is also the repository for internal forms, job aids, glossary terms, and user guides used by agency personnel. This has virtually eliminated the movement of paper knowledge-support documents throughout the Agency.

### **QUICKPAY**

QuickPay was initially implemented as a part of the Tax Amnesty program, where several hundred thousand taxpayers were given incentives to make payment against delinquent liabilities during a very short window. QuickPay provided a secure self-service bill payment option for both the businesses and individuals that was critical to the success of the Tax Amnesty program. At the conclusion of Amnesty, and after

demonstrated success and customer value, QuickPay was implemented as a permanent component of the VATAX Online suite of online, self-service tools. Since the end of the Amnesty program, over 5,000 payments have been made utilizing QuickPay for a total of \$2.6 million dollars.

QuickPay uses cutting-edge Internet technology to support a traditionally paper-based process and simplifies bill collection and payment processing by providing an easy, error-free option for customers. In the past, when customers received a bill, they mail a check for payment. TAX would process the check by submitting it and an accompanying voucher through a check remittance processing system. The remittance processing system would prepare the check for bank processing, and update payment-related information on the taxpayer's system record.

QuickPay was designed to give taxpayers a convenient, secure option for making online payments 24 hours a day. There is no requirement to sign up or register to use QuickPay. Businesses and individuals can login to this application using their State Tax ID/SSN and a five-digit bill number. All online payments are made by Direct Payment, which is the electronic withdrawal of an authorized payment from a Checking or Savings account on a specified payment date.

## **REMOTE ACCESS BY BROADBAND**

TAX leveraged remote system access capabilities to enable the closing of all but one of our district offices during the previous year. The commute time to a district office in the past was as much as

several hours in each direction. Traveling to a district office to access agency systems meant less time spent actively attempting to collect delinquent liabilities or conducting audits. Now over two hundred field Collectors and Auditors can access all TAX systems from offices established within their homes, improving productivity and reducing costs for leased space.

Our remote access technology infrastructure was upgraded this past year to include Broadband technology/services (cable and DSL). By providing Broadband services to home-based staff, employees can remotely access agency systems from almost any location (taxpayer's place of business, travel lodging, or an employee's home). The use of Broadband technology has provided a major increase in remote access performance and productivity over traditional dial-up modem technology. Our home-based users can now utilize Broadband technology remotely to access and run agency network applications, securely transfer large volumes of data from the agency systems to their laptops, and browse the Internet for information research.

*“..implementation of AR replaced all of the functionality included in STARS for all tax types, as well as introducing numerous improvements.”*

## **YEAR SEVEN: JULY 2004 –JUNE 2005**

The final initiative of the Partnership was the implementation of ADVANTAGE Revenue (AR) integrated with all of the systems previously developed by the project to form the Integrated Revenue Management System (IRMS). With software development complete, the focus of the project was software and process testing to ensure quality, preparing employees to use the new tools, converting a massive amount of historical data to the new system, implementing the new system, and finally ramping up agency operations with the new system in a manner that ensured the accuracy and quality of all system and process outputs.

### **Testing**

Each of the Partnership systems was initially implemented by integrating the system or application with TAX's State Tax Accounting and Reporting System (STARS), the legacy system implemented in the early 1980s. Although each system and application implemented during the Partnership Project was extensively tested prior to acceptance, the implementation of AR required not just the testing of AR but rigorous testing to ensure that AR worked appropriately with all of the other systems and applications. IRMS as a whole required extensive and rigorous testing prior to acceptance and implementation.

The Partnership Project developed and adhered to stringent testing standards to ensure the quality of the software implemented during the project. These standards were published in a Test Strategy

and Methodology, a User Acceptance Testing Plan and an Acceptance Testing Guide, and were reviewed by our Independent Validation and Verification contractor, Northrup Grumman.

Because of the complexity of IRMS, it would not have been possible to conduct an exhaustive test of all components during the final Integrated User Acceptance Testing (IUAT) phase of the project. Therefore, numerous testing efforts were conducted throughout the life cycle of the project to ensure that each component of IRMS was thoroughly tested. Some of the significant testing phases are described briefly below.

- *Criteria Validation:* A test conducted on each business rule in the IRMS General System Design (GSD) using test scenarios were developed that defined each action to be taken to execute the test, and the expected outcome.
- *Manual Procedure Testing:* Testing conducted to ensure manual procedures were clearly documented for users to follow to achieve the desired results.
- *User and Administrative Guide Testing* All documentation used to train system users on IRMS applications as well as the System User Guides were tested to verify that proper instructions were available for all processes.
- *User and Administrative Guide Testing:* All documentation used to train system users on IRMS applications as well as the System User Guides were tested to verify that proper instructions were available for all processes.

- *Security Testing:* Testing of IRMS security to ensure that each user had the appropriate system privileges as well as the mechanics of password and access administration.
- *Channel Testing:* Testing conducted to ensure that all AR supported forms could be accurately processed through the various channels (i.e., data entry, automated data capture, Internet, etc.) and into IRMS in accordance with system specifications.
- *External Entity Testing:* A core group of external entities tested the various processes developed by the Partnership Project for submitting and receiving data and for accessing IRMS remotely. At the successful completion of this testing phase, TAX then tested each external entity in order to ensure that each external entity was prepared for IRMS implementation.
- *Correspondence Testing:* Testing was conducted for all correspondence generated through IRMS to ensure that the correspondence was accurate and professional in appearance.
- *Batch and Interface Testing:* Testing to ensure the system batch jobs appropriately move data through the system and that files received from outside sources are accurately processed through interface programs developed by TAX and CGI-AMS.
- *Torture Testing:* Throughout the testing process, functional subject matter experts executed ad hoc tests. These tests, although unscripted, included unusual and complicated scenarios meant to 'break' the system. The primary reason for torture testing was to uncover defects that structured scripted tests might not have uncovered.
- *Regression Testing:* Testing was performed throughout the testing process to verify that new software components and defect fixes did not adversely affect areas of the system that were functioning properly before the new or fixed components were implemented.
- *Performance Testing:* Testing was conducted to measure online task-level response times, to assess performance relative to established performance criteria, and to measure throughput of critical background processes. Our Independent Validation and Verification contractor, Northrup Grumman, reviewed performance test results.
- *Integrated User Acceptance:* Testing conducted to demonstrate that IRMS met requirements when tested in a full-size "production" environment, and that all of the components comprising IRMS could be integrated and function as a single system.

### **Mock Production**

In addition to the above test phases, TAX staff readiness was tested in advance of actual implementation via "Mock Production", which was basically a dress rehearsal. During mock production, a small group of users underwent the IRMS training program and attempted to use the new systems to conduct their normal daily activities. Mock production was not intended to test the system, but was intended to validate the employee's readiness to use the new tools to effectively perform daily tasks. Mock production proved very effective at identifying areas where we could improve both the system and our readiness to use the new system prior to Go-live.

## OPERATIONAL READINESS

While the Partnership has successfully introduced a variety of new systems since it began in 1998, the implementation of AR was unique in two respects – it was more complex than any other single system, and it was the first major system that would be used by nearly every TAX employee. A wide variety of initiatives were undertaken to prepare employees to use the new system, including an extensive training program, use a variety of support resources, and to conduct a simulation of the first week of operating with IRMS

### Training

As software and process testing continued for the IRMS system implementation, activities to prepare end users intensified. The first phase of the IRMS training program was targeted at those who would use the system early and ultimately develop into champions of the new automated and manual operating processes. These early adopters included “coaches” who would guide others through the learning process, “rovers” that would be present in the operating areas to assist users when they needed help, and the participants of the dress rehearsal called “Mock Production”. The first phase of the training program was completed in the fall of 2004.

Feedback from the participants and “lessons learned” from this initial rollout of training were incorporated into plans for the final phase of training to the broader base of agency and non-agency IRMS users. A review of the phase one training program highlighted the need to have a robust IRMS training environment for hands-on practice

exercises, the need for students to complete prerequisite self-study lessons prior to participating in. A comprehensive training schedule for the final phase of training was developed to best meet the needs of operational activities throughout the agency, to provide sufficient time for completion of self-study training topics, and to best utilize available training facilities.

Over 850 agency employees participated in the final phase of the IRMS training program. While a significant portion of the IRMS training program relied on independent self-study courses, 305 classroom-training events were held between April 4, 2005 and September 1, 2005. Classroom sessions were held to kick off the training program and to provide “touch points” to review and reinforce training concepts as staff progressed through their training curriculum. Locations in Fairfax, Harrisonburg, Roanoke, Danville, Bristol, Norfolk and Richmond were utilized for the various classroom sessions to limit the travel burden on employees.

Administration and management of student progress through the training program was accomplished through the agency Learning Management System (LMS). Using the LMS, all course material was available instantly at every student’s desktop, regardless of where they were located.

In addition to preparing agency staff for IRMS, we provided training to IRMS users outside of TAX, including localities, courts, and other state agencies. The external user training initiative introduced an innovative self-study training program delivered over the Internet via our LMS. This training delivery method provides just-

in-time, self-paced training to the user's desktop, eliminating the need for external users to travel to Richmond to attend classroom training. TAX recognizes the value of training and requires each locality and set-off agency user to complete the self-study training program before we activate their IRMS access. The IRMS training program was launched in July 2005 to over 2,800 external users.

**Support Resources**

Extensive support resources were available to ensure that each student's learning goals were met. By providing a broad array of support, TAX attempted to anticipate the questions and problems that students might encounter, and ensure that help was always readily available.

- Coaches – staff previously involved in developing and testing the new system went through the IRMS training ahead of most employees, and were then designated as Coaches to guide other students through the learning process
- Rovers – knowledgeable TAX and CGI-AMS were designated as Rovers and were available in each operational area to assist employees as questions or issues arose
- Technology-based Training – training was developed and presented in a manner that was readily accessible at the employee's desktop and repeatable whenever the employee wanted to refresh their knowledge
- TARP – a robust documentation repository provides easy access and search capabilities for all agency operating rules and procedures.

Users now have up-to-date information supporting use of IRMS literally at their fingertips. IRMS Support Mailbox – an electronic mailbox where users could get quick answers to questions or assistance with problems  
 Transition Managers- agency operational managers were given responsibility for ensuring that their staff were prepared and moved quickly to adopt the new processes and tools. The managers met as a group frequently throughout the months leading up to Go-Live.  
 Daily IRMS Bulletin – an electronic communication was sent to every system user daily letting them know our progress against the controlled production plan, any outstanding system issues, and tips for using the new system.

**CONVERSION TESTING AND MOCK CONVERSION**

The conversion of taxpayer information from STARS to AR was significant and complicated. All taxpayer data had to be "mapped" correctly between two systems, and the data had to be translated to meet the exacting standards of the new system. The customized software developed by CGI-AMS to perform the data conversion represented 25% of the custom developed software created during the entire project.

In Summer 2004, our testing of the data conversion process revealed a higher than expected error rate that compromised our ability to begin production operations with a complete and accurate database of



historical data. Once all problems were identified and software corrections made, an extensive testing effort was undertaken to ensure that the historical data was properly translated and loaded in AR.

Because of the complexity of the conversion software, CGI-AMS and TAX spent months testing the software to ensure accurate results. The conversion software underwent extensive testing both at the software level (unit testing) and at the system level (system testing). In addition to testing, TAX and CGI-AMS executed a number of “mock” conversions, where we practiced the conversion execution and the data validation exactly as it would occur in production. not only to exercise the software but also to practice the manual processes that would need to occur during the actual conversion. In addition to testing, TAX and CGI-AMS executed ten “mock” conversions, where we practiced the conversion execution and data validation exactly as it would occur in production. With each execution of mock production, the results became more and more positive, especially with respect to our ability to run and validate the entire conversion in the available 17-day window, and to achieve the necessary high quality results.

### **STARS Shutdown**

The legacy taxpayer accounting system, STARS, was a complex system that managed all of our taxpayer return and accounting data. An orderly shutdown of STARS was the critical first step in our implementation process, and planning for the shutdown started a full year ahead of Go-Live. In addition, the STARS on-line screens would remain available for inquiry only purposes for the first twelve months

following system shutdown. The planning and shutdown process involve five key initiatives:

- Running all final daily, weekly and monthly taxpayer account updates for a final time
- Generating the final management reports needed from the system
- Ensuring all necessary information was available to outside Agencies and entities
- Modifying all on-line screens to allow read access only to historical taxpayer data stored in the STARS system
- Establishing retention plans and processes for the STARS databases that supported on-line inquiry

A detailed plan was developed and tested for the shutdown process that would begin on July 29, 2005. It was estimated that the shutdown process would take 48 hours, but the extensive testing and close monitoring of the shutdown execution allowed us to finish well ahead of schedule, and allowed the conversion process to begin ahead of schedule.

### **Data Conversion**

Between July 29, 2005 and August 14, 2005, TAX successfully converted over 55 million source data records, representing returns, payments, refunds, and correspondence, from the STARS system to the new AR system. Over 200 million rows of taxpayer information were available online in the new system at the time of implementation.

The data conversion process was very successful. The conversion process, targeted for seventeen days, finished two

days early, allowing for other implementation activities to begin ahead of schedule. In addition, the automated and manual data quality reconciliations produced results that exceeded our expectations, and showed that over 99% of the data converted accurately.

**Go-Live**

Go-live of the IRMS system occurred on August 16, 2005. AR was implemented, integrated with all of the software systems previously implemented by the Partnership. While TAX’s legacy system, STARS, was implemented through a series of releases that occurred over a ten-year period, this single implementation of AR replaced all of the functionality included in STARS, as well as numerous improvements.

**Controlled Production**

TAX and CGI-AMS used a strategy called controlled production for each of the major system rollouts included in the Partnership. In controlled production, system functionality is brought on-line in an incremental manner that allows us to ensure the transactions are operating correctly before processing large volumes. Initially processing limited volumes of each transaction allows time for a detailed review of the results, including a review of any correspondence, bills, or refunds sent to taxpayers.

For each system process identified, TAX and CGI-AMS executed a series of review stages, known as “crawl, walk, run.” In the crawl state, a very limited number of transactions were executed for a given system process, and 100% of the outcomes

were reviewed in detail. If no defects were identified, a larger set of transactions was executed for the same process, and portions of the outcomes were analyzed. If no defects were identified in the walk stage, the transaction moved to run, and became available for unrestricted use by all agency staff.

Because there are hundreds of system processes, it was necessary to organize the processes into groups, or “waves”, that closely reflected agency operating priorities. TAX and CGI-AMS organized the system processes into the following groupings.

Wave 1 -- Ensure the system was up and stable

Validate the quality of the converted data and the availability of all inquiry windows and the telephony system.

Wave 2 -- Enable customer service.

Conduct controlled production activities on those system processes required to provide customer service to taxpayers, including on-line updates, refund generation, and correspondence.

Wave 3 -- Eliminate backlogs.

Since backlogs were created in several areas during the conversion blackout process, it was important to eliminate those backlogs quickly, including backlogs of incoming correspondence, registration requests, and refund requests.

Wave 4 – Collect.

Bring all delinquent account collection activities on-line

Wave 5 – Audit.

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While filed audits continued without disruption, office audits were suspended and would now be brought back on-line

Wave 6 -- Other annual system processes.

At the time of this report, TAX has concluded Waves 1, 2 and 3. Waves 4 and 5 are underway, and are progressing according to plan.

*“..implementation of AR replaced all of the functionality included in STARS, as well as introducing numerous improvements.”*

## **YEAR EIGHT: JULY 2005 – JUNE 2006**

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The final initiative of the Partnership Project was the implementation of ADVANTAGE Revenue (AR) integrated with all of the systems previously developed by the project to form the Integrated Revenue Management System (IRMS). With pre-go live software testing complete and all known “Production” software defects corrected and tested, the Partnership “froze” the software in July 2005 and focused on preparing for implementation (Go-Live) of AR on August 16, 2005.

### **Testing**

Prior to implementation and using the actual software to be implemented at go-live, a test production environment was established and the process of loading the software, connecting all integrated systems, and executing conversion was successfully tested.

Prior to implementation and following go-live, the Partnership continued to fix and test ‘Non-Production’ defects. A schedule was established whereby software fixes were routinely moved into production once testing was completed successfully. Also, following go-live, the Partnership immediately began development of a new version of the software in order to enhance the software to include all legislative changes required for January 2006 and forward. The new version of the software also included additional enhancements considered high priority by the agency. The new version of the software was thoroughly tested before implementation in early January 2006.

The agency has continued to correct and test defects reported by the operational areas and to develop, test, and implement software enhancements and legislative changes for taxable year 2007.

### **TRAINING**

The close of the previous fiscal year brought an end to Partnership-driven training for IRMS system users, but not an end to the agency’s IRMS training program and user support initiatives. Throughout fiscal year 2006, the End User Support Training Team was transitioned from a project initiative to an agency function. The Training Team was moved organizationally to TAX’s Human Resource Office and renamed to Learning Support.

To bring further closure to the Partnership user support function, the maintenance of the agency’s 800+ operating procedures were transitioned from the Partnership End User Support Procedures Team to the actual business owners of the procedures. Significant training was conducted to ensure the business areas understood how to maintain procedures within the agency’s on-line procedure repository environment – TARP, and to ensure a thorough understanding of the standards used to create these documents.

The agency implemented the Commonwealth’s Meridian Learning Management System (LMS) centrally managed by DHRM. As a result, over 250 IRMS courses were converted, repackaged

and loaded from the previous LMS to the Meridian application. The Learning Support team has continued to maintain the IRMS training database environment, from both a content and release management perspective, to ensure hands-on practice exercises are up-to-date with the current state of the agency's IRMS applications. Additional user support and training accomplishments included: developing and implementing New Hire Curricula to ensure appropriate IRMS training for incoming employees; development of "Red Hot Topics" that communicate tips and hints on using IRMS; establishing an "Ask The Expert" forum that allowed IRMS experts to respond to system usage and functionality questions; and incorporating the 2005 Legislative as appropriate.

The IRMS training program has been used by over 3,500 users of Tax's automated system and has provided a consistent content, look and feel, as well as a reusable training curriculum and methodology that the agency will continue to benefit from for many years to come.

## CONVERSION

The implementation of IRMS required a significant data conversion effort. In addition to converting the data housed in STARS to Advantage Revenue (AR), conversions were required for all applications that interfaced with STARS that would now interface with AR. All conversion code was custom developed by TAX and CGI-AMS staff and represented approximately 25% of the entire development effort. There were six applications that required conversion code

development and execution and the volume of data converted was approximately 500 million records.

Several mechanisms were put into place to ensure the conversion properly handled STARS data and successfully reformatted the information into the required IRMS formats. These included;

- Data Validation – compared the data as presented in STARS to its presentation in IRMS;
- Data Usability – performed IRMS transactions against converted data to ensure IRMS could properly use the converted information;
- Reconciliation – an automated and/or manual compare of detailed and summary information extracted from STARS and from IRMS to ensure data was mapped appropriately;
- Mock Conversions – designed to help ensure the conversion process functioned properly and would fit within our conversion window. These mock conversions included numerous executions of the conversion process, most executed in a 24 X 7 mode. This process helped to isolate performance issues and helped to identify unusual data situations.

Given the volume of data to convert, the project estimated the conversion would take approximately 17 days running 24 hours a day, to complete. During these 17 days all TAX applications would be in a "black out" period, which meant no updates could be made within any system. To compensate for the agency's inability to update taxpayers' accounts during the blackout, a custom application was developed to track customer updates that were identified during the blackout period.

This application then fed the information into IRMS to place a hold on taxpayer's accounts until a TAX employee could review the account and update it accordingly following the conversion process.

The actual conversion for IRMS occurred from July 29<sup>th</sup> 2005 through August 10<sup>th</sup> 2005. The extensive testing, automated reconciliation and the numerous mock conversions, allowed the conversion process to complete in only 13 days. The remaining 4 days of blackout were then used to enhance the controlled production process by doing some initial executions prior to allowing TAX employees to access IRMS.

### **STARS Shutdown**

The legacy taxpayer accounting system, STARS, was a complex system that managed all of our taxpayer return and accounting data. An orderly shutdown of STARS was the critical first step in our implementation process, and planning for the shutdown started a full year ahead of Go-Live. In addition, the STARS on-line screens would remain available for inquiry only purposes for the first twelve months following system shutdown. The planning and shutdown process involved five key initiatives:

- Running all final daily, weekly and monthly taxpayer account updates for a final time
- Generating the final management reports needed from the system
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### **Go-Live**

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### **Controlled Production**

Tax and CGI-AMS used a strategy called Controlled Production for the final implementation and the first major release of IRMS. In Controlled Production, functionality was brought on-line in an incremental manner which allowed the agency to ensure the automated system and the manual processes were functioning appropriately, before allowing large volumes of transactions to process.

TAX functionality was divided into major categories, such as form type, online transaction type, and the operational area primarily responsible for the function. Each

category was then brought into an fully-operational state by initially limiting the quantity of transactions allowed, conducting a full review of the transaction results until the agency was satisfied the system was functioning properly, and then incrementally increasing the volume of transactions allowed, conducting a full review of a random sampling of the transactions, and upon a satisfactory review, releasing the category to full production volume.

Due to the volume of transaction types processed by TAX, and the scope of the initial IRMS implementation, Controlled Production was divided into “Waves” that were aligned with the Agency’s operative priorities:

Wave 1: Ensure System Stability. This Wave focused on validating data converted from our legacy application, ensuring online GUI’s were stable and functioned properly, and that TAX’s telephony system was available and operational.

Wave 2: Enable Customer Service. This Wave ensured functions required to meet customer demands and needs were fully functional. This included responding to inquiries, generating refunds, sending and responding to correspondence, and updating taxpayers’ accounts.

Wave 3: Eliminate Backlogs. This wave focused on reducing the backlog of work that occurred while the agency was implementing IRMS, and over the course of the first 2 waves of Controlled Productions.

Wave 4: Collect. This wave ensured all agency operations associated with the collection of delinquent accounts were fully functional.

Wave 5: Audit. Wave 5 focused on ensuring Office Audit functionality was stable and documenting the results of Field Audits, which occurred over the course of implementation and waves 1-4.

With the completion of Wave 5, the Controlled production period for IRMS implementation was complete with the exception of processes that occur infrequently or annually. These processes, which are referred to as Wave 6, were tested at full production volume with a replica of production data, prior to their actual production execution.

The IRMS Implementation Controlled Production was quickly followed by a smaller version of Controlled Production for IRMS’ first major release for 2005 Legislated changes.

The 2005 Release Controlled Production was much smaller in scope and was focused on ensuring 2005 tax year returns functioned properly. This controlled production revolved around form type and filing mechanism to ensure that each tax law modified by the 2005 General Assembly was accurately reflected in IRMS.

“... AN ESTIMATE OF ADDITIONAL REVENUE ATTRIBUTABLE TO THE PARTNERSHIP PROJECT OVER THE ENTIRE CONTRACT PERIOD IS APPROXIMATELY \$300 MILLION..”

**PROJECT FINANCES**

On July 28, 1998, TAX signed the contract with CGI-AMS in the amount of \$122.9 million plus interest. The basic contract provided for several additional options, some of which were exercised and detailed in the October 2001 and the October 2003 versions of the “Report to the Governor and the General Assembly.” As the contract is benefits-funded, payment for goods and services provided by CGI-AMS is contingent upon revenue from improved audit and collection programs being earned and deposited into the Technology Partnership Fund (the Fund). No general fund appropriation is available for payments under the contract. CGI-AMS bears the risk of nonpayment should revenues in the Fund be insufficient to meet all CGI-AMS invoices.

Initially, revenues earned under the project were split 90% for payment of CGI-AMS goods and services and 10% for TAX to cover any additional project-related expenses not covered in the contract. At the beginning of fiscal year 2004, this ratio was changed to 70/30, increasing TAX’s portion to 30% to cover hardware, software, and maintenance contract costs previously covered by the Partnership contract. A breakdown of the revenues that have been earned and deposited into the Fund is shown below.

Because the Partnership was able to accumulate sufficient revenues to cover the total expected contract costs as of June 30, 2004, no additional revenue was deposited into the Fund after that date. In addition, since revenue benefits realized through fiscal year 2004 exceeded TAX’s total expected obligations under the contract, \$21.1 million in excess fund balance was transferred to the Commonwealth’s general fund at the end of the 2004 fiscal year. Subsequently, at the end of fiscal years 2005 and 2006, additional transfers were made to the General and non-general Funds. A total of \$1.6 million was transferred in fiscal year 2005 and \$11.9 million was transferred in fiscal year 2006.

**INTEREST EXPENSES**

When balances in the Fund are insufficient to meet current obligations, unpaid invoices accrue interest in CGI-AMS’ favor. While the initial interest rate was 10%, effective July 1, 2004 the rate was reduced to 8% for payments held back to ensure all significant system issues are resolved.

In 1998, accrued interest was projected at \$17 million over the life of the project. The Fast Track initiatives, the primary revenue generating projects were implemented ahead of schedule and began generating revenue sooner than planned. At the same time, project expenses have been incurred at a rate slower than originally anticipated. Because of these factors, the actual total interest paid to

**Technology Partnership Fund Revenue  
Through June 30, 2004**

Total Revenue Deposited:	\$231,501,882
For AMS Deliverables (90%/70%)	\$193,896,577
For Project Related Expenses (10%/30%)	\$ 37,605,305



CGI-AMS was \$1,101,556, dramatically less than originally projected.

### **CONTRACT PAYMENTS TO CGI-AMS**

In November 2006, TAX made its final contractual payment to CGI-AMS. In total, TAX paid CGI-AMS \$170.6 million, \$169.5 million of which was for deliverables provided under the Contract and \$1.1 in interest costs. The balance remaining in the Fund is less than \$1 million.

### **SUMMARY**

Because the Partnership Project generated over \$231 million through June 30, 2004, the balance in the Technology Fund was more than sufficient to cover all expected contractual obligations to CGI-AMS. This achievement allowed TAX to cease depositing revenue into the Fund, making all future tax benefits available to the Commonwealth. While the Commonwealth continues to realize revenue benefits from the Partnership's initiatives, other factors, such as staff changes, legislation, reporting difficulties, and additional revenue programs, make it difficult to estimate the actual on-going revenue benefits derived from the Partnership. However, an estimate of additional revenue attributable to the Partnership Project over the entire contract period is approximately \$300 million.

The following table shows the progression of Partnership budget and payments, culminating with the final payment in November 2006:

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**Contract Invoices and Payments Through June 30, 2003 (From 90%/70% Technology Fund)**

Cumulative Payments To CGI-AMS for Deliverables	\$130,195,403
Cumulative Interest Charges	\$ <u>1,075,586</u>
Total Payments To CGI-AMS	\$131,270,989
Amount Owed to AMS from the Fund	\$0

**Original Contract Budget as of 7/98**

At project inception on July 28, 1998, the contract budget was as follows:

Contract for Goods and Services Delivered by AMS	\$122,857,084
Estimated Cumulative Interest Charges (5 Years)	\$ <u>17,638,830</u>
Total Goods, Services, and Interest	\$140,495,914

**Contract Budget as of 11/2001**

Contract for Goods and Services Delivered by AMS	\$153,210,690
Estimated Cumulative Interest Charges	\$ <u>2,689,074</u>
Total Goods, Services, and Interest	\$155,899,764

The changes to the contract and options that were exercised are detailed in the October 2001 Report to the Governor and General Assembly. These changes include:

- Collections Systems Replacement
- Internet Tools
- Oracle/DB2 Platform Change
- Audit Repository and Selection System

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**Contract Budget as of 1/2003**

Contract for Goods and Services Delivered by AMS	\$166,210,690
Estimated Cumulative Interest Charges	<u>\$ 2,075,586</u>
Total Goods, Services and Interest	\$168,286,276

The changes to the contract and options that were exercised are detailed in the October 2003 Report to the Governor and General Assembly. These changes include:

- Tax Amnesty Program and its associated delay in final implementation
- Support through initial tax filing season

**Contract Budget as of 12/2004**

Contract for Goods and Services Delivered by AMS	\$169,529,928
Estimated Cumulative Interest Charges	<u>\$ 2,075,586</u>
Total Goods, Services and Interest	\$171,605,514

The changes to the contract involve modifications to IRMS due to legislative changes passed in the 2004 Legislative Session.

**Final Contract Payment as of 11/2006**

Contract for Goods and Services Delivered by AMS	\$169,529,928
Actual Cumulative Interest Charges	<u>\$ 1,101,556</u>
Total Goods, Services and Interest	\$170,631,484

TAX is in the process of transferring the remaining monies into the appropriate fund and revenue source code. This transfer is pursuant to Chapter 3 of the Appropriations Act, Item 267 paragraph 1.

*“It is clear that the tools, processes, and cultural changes brought about by the Partnership Project have enabled TAX as an agency to perform at an unprecedented level.”*

## OPERATIONAL SUCCESS

The Partnership Project has made a profound impact on agency operations. Customers now have access to a wide range of services that were previously unavailable. Employees have access to new, easy to use tools that allow them to provide excellent customer service. TAX is processing more transactions at a faster pace than has ever been possible before. It is clear that the tools, processes, and cultural changes brought about by the Partnership Project have enabled TAX as an agency to perform at an unprecedented level.

### e-GOVERNMENT

Nowhere has the impact of the Partnership Project been more recognizable than in the area of e-Government. A new business in Virginia can now register, file, pay, and even request assistance in resolving an account-related problem without ever submitting a piece of paper or calling TAX. E-Government is not only transforming the way citizens interact with us, but also improving the efficiency of agency operations allowing us to manage continual growth in request for services.

### e-Government Operational Metrics

#### iFile for Individuals - Usage up **29%** since inception

- Since inception, 735,794 citizens filed their tax return online, eliminating the need to process 735,794 paper returns
- 97% found iFile easy to use
- 99% would use iFile again
- Error rates 30% lower than paper returns

#### iFile for Businesses – Usage up **36%** since inception

- 139,668 registered users
- Since inception, eliminated the need to process 844,208 paper returns
- \$4.4 billion in payments received
- 99% will use iFile for some or all future filings

#### iReg – Over **54%** of all new businesses now register online

- 100,579 new businesses registered online
- Eliminated need to process six-page registration forms
- 94% found iReg easy to use
- 97% would recommend iReg to other businesses

#### Secure Messaging – Over **139,540** secure messages received online

- 95% receive online reply within two days

#### Policy Library – Over **851,000** policy documents reviewed online

#### Teleplan – Nearly 71,000 self-service pay plans established since inception

- For fiscal year 06, 6,724 pay plans were established for a total of \$7.5 million
- Default rate for Teleplan is 15%, 2% below the default rate for traditional pay plans
- For fiscal year 06, 785 man-hours were saved due to the Teleplan program

## CHANNEL

The Partnership has effectively implemented a wide-range of new tools for handling the millions of paper returns, payments, and correspondence received and processed by TAX each year. New mail opening equipment allows TAX to open and extract the contents of incoming mail quickly. High-speed imaging technology allows TAX to convert paper returns to electronic images that can be processed without manual data entry and can be retrieved by anyone in the agency to assist a customer. Paper correspondence is quickly converted to an electronic image that can then be routed to any employee in the agency to prepare a response. New remittance processing equipment not only enables faster deposit of payments with less manual intervention, but also results in an electronic image of the check that can be retrieved by any TAX employee to assist a customer.

## CUSTOMER RELATIONSHIP MANAGEMENT

The new Customer Relationship Management (CRM) tools have enabled TAX employees to provide excellent customer service. Every letter, fax, and Individual Income tax return is imaged upon receipt. Imaging enables Customer Service Representatives to operate in a near-paperless environment, in which everything needed to assist a customer is available electronically and instantly at their desktop. Instead of asking a taxpayer to wait patiently for weeks until a paper return can be retrieved from a warehouse, any TAX employee can now often answer

### Channel Operational Metrics

**Refunds** – 96% issued in 12 days or less

- 99% of refunds from electronic returns issued in less than 12 days

**Electronic Filing** – Usage increased by 54% over last 5 years

- Over 1.6 million individuals filed electronically this year

**Imaging** – Over 10.5 million documents imaged to date, 40% increase over last year

- Return information collected automatically using Optical Character Recognition/Intelligent Character Recognition and Two-Dimensional Barcodes
- Peak period staffing down 30%
- Warehouse space for paper returns reduced by 50%
- Correspondence, registration, and Court Debt documents now imaged for archival
- Documents processed through traditional data entry now imaged for archival

**Traditional Data Entry** – Reduced traditional data entry by 50%

**Remittance Processing** – Peak period deposit time down 25% (due to faster processing and increase in the number of electronic deposits)

- 3.5 million checks processed
- Manual keying in remittance reduced 20%
- Hardware throughput 100% faster

the taxpayer's question immediately using an electronic image of the return or correspondence retrieved at their desktop.

For the first time, TAX has relevant, real-time information about why taxpayers contact us for assistance. Every phone call, letter, fax, and e-mail is categorized by subject at the time of receipt. Categorizing the contact according to the reason for the contact allows TAX to improve outbound notices to reduce taxpayer questions, to

understand and anticipate the impact of planned compliance campaigns on incoming requests for service, and to allocate our staff in a manner that minimizes customer wait time and frustration.

**COMPLIANCE**

During the course of the Partnership Project, new collection and auditing tools have allowed the agency to generate new compliance revenue to fund all Partnership initiatives. The auditing tools have improved audit selection, reducing the burden on compliant taxpayers. Collection tools have allowed TAX employees to focus limited resources where they will yield the most compliance revenue. Several of the Partnership Compliance initiatives were implemented at the end of the Partnership Project; therefore the full benefit of these initiatives has not yet been realized.

**CRM Operational Metrics**

**Correspondence Response Time – Reduced 10%**

- Correspondence answered in 30 Business Days
- Emails answered in less than two days
- Correspondence images available agency-wide

**Secure Messages – Usage up 15.62%**

**Telephone response time – Maintained an 88% service level while inbound phone calls increased 4%**

**Compliance Operational Metrics**

**Compliance Revenue**

Major portions of the Partnership compliance initiatives were focused on collection actions and on office examination programs. The implementation of these initiatives took place at the end of the Partnership Project schedule. The collection operation was able to resume activity in January 2006, but did not reach full functionality until summer 2006. Similarly, the office examination program, which generates a large segment of compliance revenue, did not begin implementation until January 2006. Also, TAX has encountered some design issues with the office examination program and continues to work to resolve these design issues. The design issues have limited the productivity of the exam programs. Even though the factors described above exist, TAX estimates that approximately \$300 million can be attributed to revenue generated from the Partnership Project during the entire contract period.

**Auditor Productivity - Up 10%**

**Automated Lien Processing**

- Over 9,000 3<sup>rd</sup> party tax liens issued per month, a 160% increase over the old system

**Collections System**

- Over 1.3 million collection letters issued
- Over 626,000 active collection cases managed

**Collections System for Court Debt**

- Improved integration with Supreme Court’s host system
- New court tracking and collections performance reporting capabilities
- Over 4,000 3<sup>rd</sup> party liens issued per week

*"Today, TAX's automated systems run the gamut: state-of-the-art imaging and character recognition, internet applications for registering businesses and filing tax returns, a completely integrated tax processing and accounting application, and robust customer service systems which allow the agency to respond quickly and accurately to customer inquiries".*

## CONCLUSION

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The Partnership Project successfully concluded its tenure with its final and most significant milestone, the implementation of Advantage Revenue (AR) and AR's integration with all other applications to form TAX's Integrated Revenue Management System (IRMS). The 2006 filing season was the first with IRMS, and the system was able to handle peak processing volumes. Refund turnaround times and monetary deposits met or surpassed our agency goals the very first year.

In 1998, prior to the initiation of the Partnership, TAX had limited automated functionality, and the applications that existed, such as capturing and editing return data, and depositing and accounting for checks, were obsolete. Today, TAX's automated systems run the gamut: state-of-the-art imaging and character recognition, internet applications for registering businesses and filing tax returns, a completely integrated tax processing and accounting application, and robust customer service systems which allow the agency to respond quickly and accurately to customer inquiries.

The Partnership Project has successfully implemented over twenty projects that independently qualify as major IT projects. These systems are all operating in our production environment and are "mission critical" for TAX's daily business and have significantly improved the agency's day-to-day operation. All of

these improvements were accomplished with no additional general fund monies being allocated to the agency. CGI-AMS has been paid-in-full through the revenue benefits directly derived from this project.

While fiscal year 2006 started with the final Partnership implementation, the remainder of the year was focused on shifting the agency back to an operational mode and ensuring TAX could maintain and continue the technological growth brought about through the Partnership Project. The close of fiscal year 2006 brought an end to the official Partnership with CGI-AMS, but not an end to our working relationship as we move TAX towards sole responsibility for IRMS. Over this past year we have seen a major shift in our ability to maintain IRMS independent of CGI-AMS. The number of CGI-AMS support staff decreased from 48 at implementation, to 15 at the close of the fiscal year, and this number continues to decline.

In addition, the stability and usability of IRMS has increased as the infrastructure and the application code has been massaged to improve performance and functionality. Further stability is indicated through the decrease in incoming questions and application incidents reported through our support systems. In January 2006, the agency successfully implemented its first major release of IRMS with the implementation of the 2005 legislated changes, and has implemented

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over 30 major revisions to IRMS to further enhance its functionality. These factors clearly show that TAX has positioned itself to fully support IRMS and to continue the improvements the Partnership began.

The Partnership with CGI-AMS has allowed the agency to implement automated applications that are not only some of the most robust systems used by state revenue agencies, but also within government itself. The unique structure of the Partnership Project allowed for inventive solutions to TAX's business problems and has set a foundation from which the agency can continue to grow and improve its service to the Commonwealth of Virginia and its citizens.



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### NATIONAL AWARDS

- 2001 Federation of Tax Administrators (FTA) award for Management and Organizational Initiative in State Tax Administration
- National Association of State Chief Information Officers (NASCIO) 2001 Recognition Award for Outstanding Achievement in the Field of Information Technology
- Semifinalist - Innovations in Government Award from the John F. Kennedy School of Government at Harvard University
- The Council of State Governments Eagle e-Government Award of Excellence, recognizing the VATAX Online as one of the best Executive Branch Web sites in all of state government across the nation
- 2002 Governor's Technology Award for Public-Private Partnerships
- 2003 Cost Effectiveness Through Government Award, sponsored by the National Electronic Commerce Coordinating Council
- 2003 4<sup>th</sup> place award from the Center for Digital Government in the category of Best Government Applications for State General Government
- 2004 Honorable mention winner for Excellence in E-payments, sponsored by the National Electronic Commerce Coordinating Council
- 2004 First place Gold Quill Award in both Marketing Communications and the Economic, Social & Environmental Development categories; Merit award for Multi-Audience Communications, sponsored by the International Association of Business Communicators (IABC) for the Virginia Tax Amnesty public awareness media campaign
- 2004 Honorable mention winner for Excellence in E-payments, sponsored by the National Electronic Commerce Coordinating Council
- 2004 First place Gold Quill Award in both Marketing Communications and the Economic, Social & Environmental Development categories; Merit award for Multi-Audience Communications, sponsored by the International Association of Business Communicators (IABC) for the Virginia Tax Amnesty public awareness media campaign
- 2004 DC Chapter of International Association of Business Communicators: two Silver Inkwell Awards as follows: Communication plans and campaigns in the advertising or marketing category, and Communications plans and campaigns: in the fund-raising category
- 2004 Direct Marketing Association: a silver award in the Not-for-profit/multimedia/Integrated Media category
- 2004 Telly Awards: Three awards - one silver statuette, the Tellys' highest distinction, and two bronze statuettes
- 
- 2005 Governor's Technology Award for Public-Private Partnership