Office of the Chief Information Officer
Operational Information Technology Plan

FY 2005 – FY2006

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Chapter 2
Business Area Initiatives

CHAPTER 2

BUSINESS AREA INITIATIVES
OPERATIONAL INFORMATION TECHNOLOGY PLAN

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2.0 Overview

Agency and business area strategic visions, goals, and objectives indicate the direction necessary to successfully perform the USPTO mission. Using the framework of governing strategies and program objectives as guidance, strategic information technology initiatives are the high-level operational action plans that provide more specific details about how information technology will be used to implement this direction.

Shared resource areas provide an information technology product and service foundation or infrastructure for the USPTO (refer to Chapter 1). However, each business area has specific ongoing and planned efforts to develop and build the necessary information technology AISs to perform the business area mission. This chapter provides a detailed description of all ongoing and planned initiatives within both of the USPTO's major business areas – Patents and Trademarks – as well as the USPTO's Information Dissemination, Financial Management, Human Resources, and Intellectual Property Leadership.

2.1 Patent Business

Patent Business Area IT initiatives provide enabling capabilities to the entire patent business – electronic receipt and processing of applications, automated tools for examiners, databases of information, and supporting administrative systems. Some of the key systems implemented for the Patents business unit are the Image File Wrapper (IFW), the Patent Application Information Retrieval system, the Examiner's Automated Search Tool, the Web-based Examiner Search Tool, and the Office Action Capture System. Significant progress has been made in making IT capabilities more available to patent examiners, with a major emphasis in expanding the Patent E-Gov system. The major systems used by the Patent business area will enhance the existing E-Gov technology to provide an improved electronic forum.

2.1.1 Patent E-Government System

The Patent E-Government System supports the USPTO's 21st Century Strategic Plan, which outlines the implementation of an e-Government strategy to handle the workload, associated with the 21st Century economy. The USPTO's 21st Century Strategic Plan supports U.S. economic growth by improving the delivery of intellectual property services that meet the business needs of internal and external customers through the use of increased technological capabilities. To assist in the processing of patent applications, the Office has created a number of automated information systems (AISs) to enable the Patent Corps to receive, examine, and publish patent applications and granted patents.

The Patent Business Area, in coordination with the OCIO, has developed a phased implementation plan that will provide a base document management and work routing system to

electronically manage patent application documents by September 2010. This plan will ensure an operational pipeline to capture and process patent applications electronically to improve the integration and workflow of patent processing applications. The integration efforts of systems will enhance key features, including formulation of reports, information transferring, scanning of documents and images, and technical support for the systems. The workflow tools will also leverage XML technology, facilitate daily workflow tracking of patent applications; provide patent application status reporting, and other functionalities. The major components of the Patent E-Government System consist of Patent Search Systems and Patent Capture and Processing Systems.

Equally important is the collaboration between the USPTO and the global community of intellectual property offices and practitioners. The Patent Office has worked extensively with the Trilateral Partners: European Patent Office (EPO), Japanese Patent Office (JPO), and the World Intellectual Property Organization (WIPO), to achieve common goals. The USPTO and the Trilateral Offices are collaborating in the development of software that will be used to file XML-based applications and follow-on papers. All submissions will be compliant with World Intellectual Property Organization (WIPO) Annex F Document Type Definitions (DTDs) and protocols. The first deployment of these products were in March 2003. Future releases will incorporate eXtensible Markup Language (XML) authoring for follow-on papers and provide the means to electronically receive USPTO generated outgoing applicant correspondence.

The collaboration includes the implementation of the Image File Wrapper (IFW) system at the USPTO. The integration of IFW into the USPTO environment began in phased releases, building functionality incrementally to better manage implementation risk and increase chances of project success. The major functional elements include: electronic filing, image file wrapper management using IFW, workflow capability using the IFW messaging function, and integration of existing major USPTO automated information systems using Enterprise Application Integration (EAI) technology. The first major Patent Automation System milestone was achieved when the USPTO successfully began the phased deployment of IFW and Electronic Desktop Application Navigator (eDAN) to examiners and other staff on June 30, 2003. With these systems in place, examiners can now access an application through their desktop computer. All newly filed patent applications at the USPTO are now being converted to electronic applications and processed electronically. The USPTO captured pending back-files in order to eliminate the need to move paper to the new campus. The IFW system is being integrated with USPTO legacy systems to provide functionality that is unique to the USPTO business process.

During the 15-month period since IFW was implemented, the USPTO scanned over 730,000 pending applications into the electronic system. During the coming years, the USPTO will be scanning over three million pages per week, making this one of the largest scanning operations in the world. An initial 10 terabytes of data storage was necessary to support IFW and manage all the documents related to the electronic processing of patent applications.

The following functionality was available in the first release of the IFW system: The central scanning facility and subsystem was in full operation; All incoming new applications are

scanned into the IFW system; Back-file applications are scanned into IFW according to the planned sequence for the Technology Centers (TCs) moving to the Carlyle Campus; Follow-on papers for both new and back-file Patent applications are scanned into IFW; Applications scanned since 1997 using the Patent Application Capture and Review (PACR) images are available via IFW. An Electronic Desktop Application Navigator (eDAN) tool was provided to Examiners to view and interact with the IFW system. The eDAN is customized to support those Examiner functions that are not available in IFW. The patent applications in the IFW system serve as the office copy and legal record of the application since FY 2003.

The USPTO also has committed to cooperate with the EPO to elaborate the "Open Source" development policy for the ***epoline***® on-line filing software. Additionally, USPTO and the Trilateral Offices are working together in pursuing character coded text document technology using XML for managing and prosecuting patent applications filed electronically based on WIPO- Annex F DTDs. The IFW will also be accessible by the Patent Enterprise Access Integration (PEAI) system. The PEAI will provide full content access within the IFW by USPTO personnel and customers as well as full content access to EPO and JPO.

The USPTO is working in close cooperation with the EPO to determine the value of integrating the EPO's eOLF server with WIPO's PCT-Safe Client in order to facilitate electronic PCT filings in the U.S. As the result of Trilateral Office collaboration, the USPTO and EPO agreed that USPTO would provide support to EPO's US National Plug-in development effort. This effort will create a US submission Graphical User Interface (GUI) that will be plugged into EPO's ***epoline***® client.

Further collaboration with the Trilateral Offices to achieve the common goals include plans to support the acceptance of patent applications authored by PatXML, EPO's electronic filing authoring tool and PCT-SAFE, WIPO's electronic filing authoring tool through USPTO's submission tool, Electronic Packaging and Validation Engine (ePAVE). The USPTO also developed a new authoring tool in late 2003 - EFS-ABX (Application Body XML) in an attempt to provide customers with an alternative tool for authoring patent applications and as a replacement for the current authoring tool - Patent Application Specification Authoring Tool (PASAT). These efforts will enable the USPTO to provide its customers with multiple electronic filing tools.

The advancements made in the implementation of electronic patent capture, processing, and search functionalities are to support the continued growth in the workload, which cannot be effectively managed in the current paper-based environment. Implementing an E-Gov strategy, that includes electronic receipt, processing, reporting, and publication will enable USPTO to migrate to a more efficient operating environment that supports USPTO business goal of providing quality services and products in a timely manner to our customers and stakeholders, consistent with the President's Management Agenda, USPTO 21st Strategic Plan, and the OCIO Strategic Information Technology Plan. The key functionality of a final end-to-end process will:

- Accept compliant WIPO Annex F Document Type Definitions for routine utility applications through e-Filing authoring and submission tools. WIPO compliance is a major step toward enabling our applicants to electronically author once and file patent applications around the world;

- Provide electronic exchange of priority documents with the EPO. Electronic exchange relieves applicants of the burden of providing paper copies of the priority documents;

- Provide electronic end-to-end application processing pipeline for all new application processing. Fiscal year 2003 was the first year in which the functionality changed to image-based electronic processing;

- Capture images of all application papers in the electronic file wrapper, including applicant follow-on papers, amendments, and all USPTO generated correspondence. This process greatly reduces the number of lost application papers and increases the USPTO's ability to reconstruct a file upon request from applicant. Digital image capture also provides electronic collaboration, as well as improved response time to customer inquiries;

- Pre-populate the Patent Application Location and Management (PALM) system with bibliographic data and pre-grant publication data from electronic filings. This procedure eliminates data entry errors from keying the bibliographic information and improves filing receipt quality for applicants;

- Provide official contents of the file wrapper electronically to the Order Entry Management System (OEMS) for order fulfillment. Inclusion into the OEMS will improve quality and decrease turnaround time for customers ordering certified copies of application file wrappers;

- Provide applicants with the ability to access images of all their application papers via the Patent Application Information Retrieval System (PAIR). Image accessibility from PAIR system will leverage applicants' investment in Internet and World-Wide Web technologies and allow customers on-line access to the official file including Office actions, amendments, remarks, field of search and prior art;

- Integrates the WIPO's PCT-Safe client product with the EPO's epoline eOLF server. This integration will allow a US applicant to file a PCT application electronically in the US using WIPO's PCT-Safe client; and

- Collaborate with the EPO on a US National Plug-in for ***epoline***®. The cooperation among the organizations will permit EPO customers to use EPO ***epoline***® software to file US national applications.

The Patent E-Gov program will integrate the individual automated information systems (EFS, EFW, EXPO, Pre-Exam, FOS, PAIR, OEMS, PACR, OACS, and RAM) and achieve the appropriate legal requirements of the transformed patent business process. The electronic patent application process must support statutory regulations promulgated by Congress, as codified under Title 35 of the United States Code (35 U.S.C.), both as the statutes currently exist and as they may become enacted in the future. In addition, the electronic patent application process must be commensurate with USPTO's rules and interpretations of the statutory regulations, as published within Title 37 of the Code of Federal Regulations (37 C.F.R.). In general, the benefits of electronically automated patent capture, processing, and search systems will provide for a more efficient, quality-focused, and customer-friendly service.

2.1.1.1 Image File Wrapper (IFW)

a. Description

The Image File Wrapper (IFW) system is an image technology system for storage and maintenance of records associated with patent applications. The IFW system replaces the standard paper applications in paper file wrappers. Paper components of the application file contents (including the specification, oath or declaration, drawings, information disclosure statements, amendments, Office actions, and file jacket notations) of pending applications will be scanned into the IFW system as electronic image files.

The electronic image files in the IFW system are the official records of the applications. All Office personnel will perform all processing and examination with the electronic image files, instead of paper source documents. The IFW system is consistent with the data processing system used by the European Patent Office (EPO). The USPTO plans to increase information exchange by leveraging common storage architecture.

As of August 2004, all Patent Examiners in the full complement of 284 General Art Units (GAUs) are working in the IFW environment with all their applications scanned into the IFW system. Examiners have been trained to use IFW desktop tools, messaging system, and desktop application navigator to bring up examiner's docket and any application on their docket. Examiners may print out a working paper file consisting of selected parts of the application (e.g., the specification, drawings, or most recent claim set).

Future activities for IFW include providing access to unpublished applications for Trilateral, International Priority Document Exchange (IPDE), search results, access and retrieval capability of selected papers, and Order Entry Management System/Certification (OEMS) interface in early FY 2005. Interface to private and public Patent Application Information Retrieval System (PAIR) has been deployed. The private and public Patent Application Information Retrieval system (PAIR) were enhanced with the inclusion of IFW data. With the click of a mouse, the private PAIR system allows applicants access to the entire file history of their applications, including the images of every paper of record if the application is in the IFW database.

Additionally, the public PAIR system allows anyone, anywhere in the world, access to the file history, except for non-patent literature, and application images, if available in IFW, of an application not covered by confidentiality laws.

As these initiatives are developed and implemented, it is anticipated that they will facilitate an increase in electronic filings and the web-based solution, becoming the primary delivery for all patent customers. Some of the capabilities that are deployed include single view and personalization of follow-on papers, electronic interchange, PAIR integration, and two-way communication.

b. Commitments and Benefits

The IFW enables patent applicants to electronically access their applications in the IFW system via private side of Patent Application Information Retrieval (PAIR) system. The contents of published applications that are in the IFW system are be viewable by the public through the public side of PAIR in FY 2004. In addition, the benefits of the IFW are as follows:

- Increases the integrity of the Office records;
- Reduces the potential for loss of records and misfiling;
- Provides Patent applicants the means to view and print their own pending patent applications;
- Provides patent applicants a secure means to monitor the status of their applications;
- Facilitates prosecution of patent applications through secure sharing of patent application documents with the Trilateral Offices;
- Enables applicants to electronically create and deliver patent application documents;
- Allows parallel processing of the application by various parts of the Office; and
- Facilitates intra-office access to an application file and to other authorized parties.

2.1.2 Patent Search Systems (PSS)

Patent Examiners have, in the past, relied upon a variety of automated tools to perform a comprehensive prior art search. The Search Tools projects support the Patent Business Area macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. In the *21st Century Strategic Plan,* the USPTO made commitments toward reducing pendency and improving quality of patents. To meet these commitments, the USPTO is improving the search and retrieval capability of patent examiners.

2.1.2.1 Primary Search and Retrieval Systems (P-PSRS)

The general public and the USPTO use the primary search and retrieval systems to retrieve patent information. The following section describes these systems, which comprise text or images from patent applications.

2.1.2.1.1 Examiner Automated Search Tool (EAST) and Web-based Examiner Search Tool (WEST)

a. Description

The Examiner Automated Search Tool (EAST) evolved from the text and image retrieval capability initially provided in workstation cluster rooms to selected patent examining Groups. Beginning in February 1996, the USPTO upgraded the desktop workstations of all patent examiners to provide desktop image workstations. In November 1997, new Windows NT-based image search and retrieval software - Image Search and Retrieval (IS&R) - was deployed. IS&R offered rapid access to all U.S. patent images.

In August 1999, the separate Global Patent Information Client (GPIC) and IS&R keyboard-based coded clients were replaced with a single high performance text and image client - EAST. EAST enables users to search all in-house databases - U.S. patent images and text, and foreign patent data - from a single, high performance application.

FY 2005 will include Discrepancy Report (DR) fixes to EAST and minor enhancements as necessary. This project includes maintenance releases that put the DR fixes into production. We plan two maintenance releases per year, with one in FY 2005 due to relocation to Alexandria Headquarters that will involve software testing. EAST will incorporate FPAS functionality in FY 2006.

EAST will also be modified to support Issue Paper P-28. To meet the requests of applicants and to ensure the success and viability of competitively sourcing search functions, USPTO would implement a pilot program for competitively sourcing the search and/or opinion process for PCT patent applications. East will be redesigned as well so that version one is available for the examiner, U.S public an international users. Development is planned for FY 2006 and FY 2007, with maintenance out until FY2010. In addition, modifications to enable gray-scale and color image views will be made to provide improved viewing of retrieved documents, and automated linkage between IFW and EAST using XML will be developed. Integration between EAST and IFW will enhance examiner work product quality.

Other planned activities include:

- Enhancements to EAST client to use new BRS API. This enhancement enables EAST to keep pace with BRS upgrade and will improve system performance;
- Support for IFW printing through the Group printers. This project is to stay current with IFW changes;
- Updates to EAST to work in the Public Search Room (PSR/SC) which involves testing changes in registry setting to limit what the public can do, supporting removal of paper from the PSR/SC; and
- Simplification of user interface with the ultimate goal of eliminating the need for WEST and FPAS, while maintaining the existing functionality. The impact will be (1) eliminating the need for two search clients and (2) reducing training requirement for examiners using search system.

The Web-based Examiner Search Tool (WEST) had as its origin the Global Patent Information (GPI) Web text search tool deployed in April 1997. GPI Web was a server-based web application, using as its interface the Netscape Navigator web browser. The USPTO deployed a browser-based client as a means to attract more examiners to use automated search tools. The rationale was that browser based clients are more intuitive and therefore more user friendly.

In June 2000, WEST 2.0 was deployed; offering foreign patent searching by USPC, patent classification searching in Manual of Classification order, customizable display formats and a host of other enhancements. Continuing enhancements are planned for future years including access to new databases and the ability to support launching WEST from the eDAN GUI and automatically passing a list of relevant documents to be reviewed in WEST. Future activities for WEST include both enhancement and maintenance to the system.

The enhancement work in FY 2005 and FY 2006 will support Issue Paper F-2 and the need to collect requirements from and tailor EAST and WEST for PCT outsourcing pilot. The activities are described as follows:

FY 2005

- Provide the ability to search patent application text (new database with major security impact cost of which is not known at this time);
- Provide means for highlighting and adding notes to the retrieved documents in support of documenting searches and preparing office actions; and
- Support launching WEST from eDAN GUI, automatically passing a list of relevant documents to be reviewed in WEST.

FY 2006

- Provide display enhancements necessary to support capability to identify and manage duplicate patent records across databases.

The maintenance of WEST from FY 2005 to FY 2009 include the following activities:

FY 2006

- Canadian patent abstracts added to the USPTO database suite;
- Ability to highlight and add notes to retrieved documents in support of documenting searches and preparing office actions; and
- Certification and Accreditation activities.

The WEST development team will support the Public Search Room version of the Examiners' WEST search client. This capability covers a series of two releases each year coinciding with Examiner WEST, including usage by CIPO and PTDL users. USPOT will expand support for CIPO in FY 2005.

b. Commitments and Benefits

The commitments and benefits to the customer and staff are described below:

- **Improved Process**: The desktop search tools permit patent examiners to search, retrieve, and review U.S. and foreign patents at their desktops in an efficient and effective manner. The integration of the various search tools for image search, text search and foreign patents enable patent examiners to become more proficient with a single tool that does all three functions. EAST and WEST allow the user to search multiple text databases (e.g. USPAT, EPO, JPO, Derwent, IBM TDB) with a single query and obtain a consolidated answer set for review of document images. Time saved through the seamless integration of image search and retrieval with text searching of multiple databases and with workflow tools (OACS) permits Examiners to devote more resources towards quality and productivity;

- **Reduced Costs**: Providing robust image retrieval capabilities to all patent examiners has allowed the USPTO to significantly the paper search files, thereby saving storage space and the costs associated with refiling the documents the examiners pull from the search files for further study; and

- **Improved Work Environment**: The physical surroundings in which patent examiners work will be improved as paper search rooms are eliminated and examiners no longer need to work with paper that is often very old and dusty. The space currently occupied by paper can be returned to the staff. The work area would be cleaner, less cluttered/more open, and generally more esthetically pleasing.

2.1.2.1.2 Patent Examiner Computer Search Support and CSS Auxiliary Databases (CSS)

a. Description

To determine invention patentability and make classification decisions, USPTO employees use automated text searching to search through large volumes of full-text patent documents to find and retrieve only those documents that are relevant. The Computer Search System is central to a number of USPTO operations, including examination and classification, and implied operations such as data translation.

The Computer Search System project improves the quality of patent examination searches, provides additional functionality, supports increasing numbers of patent examiners, and reduces operating costs. The USPTO investigated and selected a candidate product to replace Messenger in July 1997. USPTO deployed the selected product in July 1998 to perform searches of the Derwent World Patents Index. In FY 1999 USPTO completely replaced Messenger by moving all Messenger databases to OpenText's (formerly Dataware) BRS text search engine. With the use of the new text search product, patent examiners are able to search the text and sections of text (such as the Background, Detailed Description and Claims sections). They will also eventually be able to search graphics and other complex work units attached to a patent, such as chemical structures.

The new search product is fully integrated into the USPTO's electronic operations. All patent data, U.S. and foreign, can be treated as a single comprehensive search resource. Patent examiners can conduct a single search of multiple databases and receive a consolidated search result. Text search results are also integrated with image retrieval capabilities via the WEST (Web-based Examiner Search Tool) and EAST (Examiner Automated Search Tool) interfaces.

In FY 2000, value-added indexing, such as technology-specific thesauri, keywords, notes on documents, and compilations of trade names, common names, synonyms and art-specific acronyms, were deployed. The addition of this indexing facilitates the retrieval of pertinent documents by providing additional and varied search terms.

The USPTO will add enhancements to the text search system to permit more in-depth searching and use of the system. In FY 2001, a new database for PGPub was added. In FY 2002, a new database for U.S. Patent OCR text was added, which included data back to 1920. In FY 2003, U.S. Patent back-file OCR data back to 1790 is being added. In the future, foreign full text patent databases will be added. Also in future years, the CSS will support pre-search and interference search functions, use of a common command language to search internal and external databases, data mining, searching of complex work units, and incorporation of Certificate of Corrections data into the U.S. patent database.

Current activity is a continuation of BRS Middle-Tier Phase III. The Phase III encompasses ongoing development of BRS Middle-Tier Architecture Implementation software that will reside between clients, such as EAST and WEST and patent text databases. This software will allow the Patent Examiner to accomplish patent searches with greater flexibility in the number of simultaneous text searches that could occur during high usage periods. This is the version of Middle Tier will enable Searching IFW.

There will be continued support for BRS/Search® database load and text search capability. CSS provides the electronic search system used by examiners, and the public search room (PSR/SC), for accessing and retrieving published information, primarily U.S. and foreign patent documents. CSS consists of two essential elements: 1) a search engine and 2) information databases, collectively known as BRS/Search®, a COTS text search environment proprietary to OpenText Corporation. The database load processes approximately 2,500 new documents in each of the weekly US Patent grants (every Tuesday) and US Pre-Grant Applications (every Thursday). Additionally, the database load feeds the Application on the Web full-text (AppFT) load process. On a monthly basis, the database load processes the trilateral office's First Page Database (FPDB) content (abstract and bibliographic data) of the European Patent Office (EPO) and Japanese Patent Office (JPO). In addition to these US and foreign documents, the database load processes weekly deliverables of the Derwent World Patent Index (WPI) file to provide enriched global document content access for examiners use only. On a bi-monthly cycle the US and foreign documents databases are updated with the CDS Reclassification output. The Automated Routing Tool (ART) system will be developed and maintained in CSS and this capability will also be the basis for future projects, such as Automated Classification Evaluation (ACE). CSS also supports the Key Word database (QBE) and projects that use QBE, including PLUS and ART.

b. Commitments and Benefits

The Computer Search System project supports the Patent Business Area macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. The USPTO made a key commitment toward reducing pendency and increasing quality of patents. To meet this key commitment, the USPTO needs to provide patent examiners with the appropriate automation tools for processing the patent applications. One of the steps necessary to realize this commitment is the expansion of electronic search capabilities to those provided by modern commercial off-the-shelf search products.

In accomplishing this step, the Computer Search System project will provide the following benefits:

- **Improve the Quality of Patent Searches**: The Computer Search System will provide advanced search capabilities and tools to improve the retrieval of relevant references. Further, the system will enable patent examiners to retrieve documents relevant to patent ability decisions from a large number of USPTO-owned and commercial databases;

- **Reduce Pendency Time**: By providing a single point of access to a number of databases, the system will enable examiners to filter through large amounts of data quickly to identify relevant material. Time consuming manual search efforts will be minimized; and

- **Reduce Operating Costs**: Since the Computer Search System will be based on COTS (commercial off-the-shelf) text search and retrieval software in a client-server environment, development, operating and maintenance costs will be greatly reduced.

- **Pre-Search**: The text search functionality of commercial off-the-shelf products can be used to provide patent examiners with an automatically executed text search based on the text of the patent application being examined. Patents Linguistic Utility Service (PLUS), a query by example search system, allows such a text search to be conducted. The title, abstract, background and brief summary sections of the applications are OCR'd to perform the search. Pre-searching will eventually receive the text of incoming patent applications from the Patent Application Capture and Review (PACR) system;

- **Data Mining**: The Computer Search System will support data mining by providing tools for analyzing search results using various criteria such as location of hits, years in which the retrieved documents occur, companies to which patents are assigned, and the most prevalent classifications. Search and data mining results will be represented graphically to provide a picture of the distribution of data by one or more user-specified criteria. Such visualizations can also provide useful feedback to the search process;

- **Complex Work Units**: The Computer Search System will provide mechanisms for searching complex work units such as mathematical equations, chemical structures, and data in tables. This may involve setting submission standards so that this data can be captured in a form that permits searching. This will provide a search capability that does not exist in the current text search system; and

- **Certificates of Correction**: Corrections to patent data are documented in Certificates of Correction, which are appended to the paper copies and images of U.S. patents, but which are currently not available in text-searchable form. Once the corrections data has been captured, probably through the use of OCR technology, the Computer Search System will provide access to the data. This will improve the quality and search capability of the U.S. patent database.

2.1.2.1.3 Patent Classification Data System (CDS)

a. Description

The Patent Classification Data System (CDS) maintains current patent classification information for USPTO. The CDS includes new issues (Weekly Issue of Patents and PGPubs), Withdrawn

Patent Number File (WPN), Reclassification data, Subclass Data File (SDF), Master Classification File (MCF), PGPub MCF, and Foreign Patent Master Classification File (FPMCF). CDS provides updated files for both internal and external customers. These files are also used to create reference publications, for example, the U.S. Manual of Classification, Classification Definitions, the Classification Index, the IPC Concordance, and the IPC manual. This activity also supports Prior Art Support (Issue Paper F-3).

b. Commitments and Benefits

The CDS is meeting the commitments to both customers and staff alike by reducing the processing time for classification tasks and improving user search capability. In addition, the benefits of CDS are as follows:

- **Support for Strategic Plan Initiative**: CDS provides for competitive sourcing of reclassification functions by allowing the private sector access to reclassification data;
- **Increased Utility**: Accessible, electronic classification data will allow patent professionals access to higher quality, up-to-date USPC information. In addition, users will be able to modify and access enhanced search linkages to other classification systems;
- **Enhanced Search Capability**: Examiners are able to efficiently perform classification searches of both U.S. and foreign patent documents; and
- **Work Sharing:** IPC Reform implements mutually agreed-upon reclassification activities to be performed by the Trilateral Offices (EPO, JPO, and USPTO).

2.1.2.1.4 Foreign Image Search Capability (FISC)

a. Description

The Foreign Image Search Capability (FISC) supports the load and retrieval of foreign patent document images from our exchange partners (European, Japanese, Canadian and other patent offices) to provide access to the images by examiners and the public via the Public Search Room (PSR).

The objective of the Non-Patent Literature project is to provide patent examiners with resources to make more effective use of non-patent literature, primarily by providing easy access to additional, inexpensive and more versatile electronic information service providers (containing technical journals, magazines, newspapers etc.).

There will be ongoing support of the Foreign Patent Access System (FPAS) for examiners, users of the Public Search Room (PSR), and the partnership Patent and Trademark Depository

Libraries. FPAS is a USPTO LAN system consisting of a desktop client application for accessing a relational database and electronic image warehouse loaded and maintained by the Foreign Image and Data Load (FIDL) system and a network caching server for storing each users requested foreign patent documents prior to display at the desktop. Foreign patent documents are retrievable through a limited Structured Query Language (SQL) search functionality of bibliographic data contained within the relational database, without requiring end users to possess knowledge of SQL itself.

The Foreign Image and Data Load (FIDL) system will continue development. The FIDL system receives foreign patent documents through exchange media (magnetic tapes or CD-ROMs) from Industrial Property partners. The FIDL process the exchange media to extract bibliographic and metadata for loading to a relational database. Full facsimile images are extracted and transferred to USPTO's electronic image warehouse for on-line, real-time delivery to a search client (EAST, FPAS, WEST). FIDL is currently limited to support exchange media in compliance with WIPO ST.33 (magnetic tape) or ST.40 (CD-ROM) standards. FIDL processes for foreign patent documents from Industrial Property partners not in accord with these standards need to be developed. Other activities include maintenance of the EPO provided EPOQUE workstations.

b. Commitments and Benefits

The FISC activity will meet the commitments and benefits to the customer and staff by:

- Supporting the patent application examination mission requirement to perform a national prior art search and a Patent Cooperation Treaty (PCT) minimum documentation prior art search, thereby satisfying U.S. patent laws and international treaty obligations;

- Providing electronic access to various search assistance tools, facilitating examiner's determination of relevant fields of search, thereby improving examination efficiencies;

- Facilitating assignment of USPC classifications to foreign patent documents, allowing for high volume processing without incurring additional demands on available personnel resources; and

- Providing electronic access to concordance information that will assist the examiners in correlating the appropriate classification to search in each classification system without the requisite need for detailed training in the implementation of each system.

2.1.2.1.5 Patent Application Image Retrieval System (AIRS)

a. Description

The Patent Application Image Retrieval System (AIRS) contains the current U.S. patent hardware and software image storage infrastructure that comprises of two functions - Image

Retrieval and Weekly Application Load. The Image Retrieval function returns metadata and publication images in response to requests from client applications. Initially, the three major interfaces of the Image Retrieval function are: the Examiner's Automated Search Tool (EAST); the Web Examiner Search Tool (WEST); and, Publication and Trademark Copy Sales (PTCS). There are two maintenance releases per year, except for FY 2005 because of relocation.

b. Commitments and Benefits

The commitments and benefits of the Patent Application Image Retrieval System to staff and customers are met by providing a robust infrastructure for hardware and software technology in storing and manipulating patent images. This infrastructure will make possible the timely publication of applications. The maintenance of AIRS will also help USPTO support the statutory requirement to publish applications in 18 months.

2.1.2.1.6 Patent Image Retrieval System (PIRS)

a. Description

The Patent Image Retrieval System (PIRS) serves as the patent document image data source for all the automated examiner search tools, the Public Search Room, Office of Public Records, and PTO public Internet access programs, which provide U.S. Patent image data. PIRS contains the most current data for issued patents, and is updated with the latest Patent Weekly Issues and, where necessary, Certificates of Correction and any other changes to issued patents. PIRS supports the weekly load of patent images for access by the search clients, EAST and WEST, as well as other applications. PGPub PIRS will include the most current PGPub application image data, which will be available to Examiner search tools and to the public over the Internet.

There are two major activities for PIRS. First, image storage will be consolidated which includes patent and application images on the web, US patent for examiners, foreign patent for examiners, and US applications for examiners. The image storage for all the systems will be consolidated into a single system as a two-year effort in FY 2005 and FY 2006. This project also involves server replacement and OS upgrade.

b. Commitments and Benefits

The commitment to the customer and staff are being met as PIRS continues to provide instantaneous retrieval of text data and images. The benefits of the system are that (1) image search files are kept current; (2) millennium agreement is supported by the system; and (3) the quality of the search product is improved.

2.1.2.1.7 Application Images on the Web (AIW)

a. Description

As part of its mission to disseminate the information contained in patent applications, the USPTO has decreed that patent application publications will be available to the general public via the Internet. The USPTO has an AIW system to provide the general public with the ability to retrieve domestic publication images via a connection to the Internet. The AIW system will mirror the operation of current internal USPTO systems. The publication image data store is populated on a weekly basis with tapes containing publications retrieved from the Application Image Retrieval System (AIRS), USPTO's production image database.

b. Commitments and Benefits

The commitments to the customer and staff are met by providing the public an easy means of accessing publications. The benefit for USPTO is the cost savings in providing the information electronically instead of manual delivery of data. This system also helps to comply with the E-Gov requirements of providing services electronically, in this case the Internet.

2.1.2.1.8 Patent Application Text on the Internet

a. Description

The Patent Application Text on the Internet provides the public with access to published application text in support of the 18-month statutory requirement. The public searches published application using the text capability and then accesses the images through the text results.

b. Commitments and Benefits

The Patent Application Text on the Internet enables examiners to access patent applications from the Internet. The benefits are as same as the Patent Application Images on the Web and the Patent in that the system supports the publication of patent applications at the 18-month timeframe.

2.1.2.1.9 Patent Application Images on the Web (PIW)

a. Description

This activity supports the publication of images of patent applications on the web in a timely manner. Patent application images on the web will be upgraded to support electronic retrieval of references. Also, image storage will be consolidated, which includes patent and application images on the web, US patent for examiners, foreign patent for examiners, and US applications for examiners. The five-image storage would be consolidated into one single system.

b. Commitments and Benefits

The commitments to the customer and staff are met by supporting the retrieval of references directly from the Internet. The benefit of this capability is that USPTO complies with the statutory requirement to publish applications at 18 months.

2.1.2.1.10 Applications Full-Text Search on the Web (APPFT)

a. Description

The Applications Full-Text Search on the Web (APPFT) is a stand-alone Internet application, which allows the general public to search and retrieve Pre-Grant Published patent applications. The system operates outside of USPTO's firewall with a copy of the PGPub BRS database that the examiners use within PTO. The APPFT supports standard graphical web browsers such as Netscape Communicator or Microsoft Internet Explorer. The APPFT provides linkages for users to view page images of a published application once a search has located it.

b. Commitments and Benefits

The APPFT meets the commitment to the USPTO customers and staff by eliminating the time-consuming and error-prone manual activities involved in the search and retrieval process. The benefit of APPFT is the ability to provide customers more comprehensive information. The APPFT also supports the statutory requirement for dissemination of patent information and the system does not require two separate data loads per week.

2.1.2.2 Specialized Search and Retrieval Systems (P-SSRS)

The Specialized Search and Retrieval Systems (P-SSRS) provide access to highly specialized data. The data may include annual submissions of nucleic and amino acid sequence or prior-art searching of polynucleotide and polypeptide sequences. The P-SSRS also contains other types of information that may be more scientific or technology based. The following section includes the Patent Specialized Search and Retrieval Systems.

2.1.2.2.1 Automated Biotech Sequence Search System (ABSS)

a. Description

The purpose of the Automated Biotech Sequence Search System (ABSS) System is to sustain the USPTO's business function of performing prior-art searching of polynucleotide and polypeptide sequences claimed in patent applications examined by Technology Center 1600 (Biotechnology). ABSS is designed to accept and store electronic sequence listing data submitted by applicants, and support searching of polynucleotide sequences using data stored from both applicant

submissions and public and commercial databases of published sequence information. In addition, the system supports publication and dissemination of sequence information following patent issuance. Since 1989, the ABSS system has been the key factor in sustaining and improving cycle time rates on applications involving claims polynucleotide and polypeptide sequences. Examination techniques made available by the ABSS would be impossible, not just inefficient, without automation. For example, the comparison of one DNA sequence of several hundred characters (bases) against millions of similar published sequences would be impossible without the use of computers, especially at the analytical level required by the patenting process. Technology Center 1600 continues to receive many patent applications that contain large numbers of claimed sequences that need to be searched. Many additional applications of a similar nature are being developed by the biotechnology industry. Given these projected workloads, the need for continued improvement in the USPTO's ability to process sequence searches is imperative. The current number of sequences in commercial databases doubles in size every 12 months. In addition, the number of sequences to be searched occurred in nearly 7,000 applications. If the growth in the number of sequences and in the number of sequences to be searched continues as expected, the ABSS hardware and software will continue to require enhancements over the coming years to maintain or, preferably, improve overall performance speed and sequence searching sensitivity.

The ABSS is a special purpose search system with limited applicability to other USPTO examiners and art areas. Most of the development of the ABSS system is unique, since biological sequence searching is not done anywhere else in the USPTO. The system has, however, been built using Commercial Off The Shelf (COTS) software and hardware such as Sun Microsystems workstations and servers, and operates on the UNIX operating system as well as maintaining license and server maintenance for ChemDraw, which is used by chemical examiners to create chemical structures for inclusion in office actions and searching commercial chemical databases.

Based on current growth rates in the number and size of the filings, an additional server system will need to be added to the current ABSS. This addition is necessary to be able to continue to provide timely search results to examiners. The strategy to implement a more scalable, robust, and stable system will be revisited to possibly replace the existing ABSS systems with a new system based on Linux operating system.

b. Commitments and Benefits

ABSS supports the Patent Business Area business macro goal "To grant exclusive rights, for limited times, to inventors for their discoveries, and to provide service to customers," and supports the specific Patent Business Area goal to "Receive applications and publish patents electronically."

Expansion of the ABSS system provides USPTO customers with the assurance that they will receive a comprehensive prior art search of the polynucleotide and polypeptide sequence art, representing the highest level of performance for such service available worldwide. In addition,

the USPTO's efforts to receive applications and publish patents electronically is greatly facilitated by an expanded ABSS, which has already provided USPTO customers with the first application using computer readable format files for processing of patent application components in the USPTO, and will continue to support efforts for perfecting electronic application filing and management of complex work units, such as polynucleotide and polypeptide sequence listings, for all patent applications.

An expanded ABSS supports the USPTO's commitment to the customers, and specifically provides these benefits:

- **Reduction in Processing Cycle Time for Sequence Searches**: An expanded ABSS provides the processing power needed to handle the increasing volume of sequence claims being filed by applicants, and the additional processing power needed to search through commercial prior art sequence databases containing millions of sequence records and doubling in size each year;

- **Improved Sequence Search Quality**: Ability to produce more comprehensive, detailed sequence search analyses using more efficient hardware/software, which results in more rapid biotechnology patent decisions and improved patent examining corps productivity, and provides world leadership in prior art sequence search methodology;

- **Improved Ability for Accepting Validated CRF Data**: The expanded ABSS uses data provided from the CRF receipt system software as input data for the pending and issued databases and provides the USPTO with the databases that effect timely and quality examination of patent applications which contain disclosure/claims to amino acid and/or DNA sequences. This searching is conducted by using applicant's computer readable sequence listing. This supports the USPTO's objectives to receive and process applications electronically;

- **Provision for Electronic Processing and Publication**: An expanded ABSS continues support for elimination of time-consuming and error-prone keying activities by using electronic sequence records submitted and stored to generate search queries, and providing electronic data to support the patent publication process;

- **Greater Accountability**: Continued expansion of an in-house operation of the ABSS System provides greater control over the production process, improved system reliability through direct maintenance actions, lower overall cost versus dial-up service, and greater security over sensitive sequence information contained in patent applications; and

- **Lower Cost/Higher Efficiency**: Research and analysis to create an expanded ABSS ensures that the USPTO incorporates the most efficient sequence search processing system at a reasonable cost, and eliminates the threat of short-term ABSS obsolescence.

2.1.2.2.2 Foreign Patent Access System (FPAS)

a. Description

The USPTO will continue to support the Foreign Patent Access System (FPAS) for examiners, users of the public search room (PSR), and the partnership Patent and Trademark Depository Libraries. FPAS is a USPTO LAN system consisting of a desktop client application for accessing a relational database and electronic image warehouse loaded and maintained by the Foreign Image and Data Load (FIDL) system and a network caching server for storing each users requested foreign patent documents prior to display at the desktop. Foreign patent documents are retrievable through a limited Structured Query Language (SQL) search functionality of bibliographic data contained within the relational database, without requiring end users to possess knowledge of SQL itself.

b. Commitments and Benefits

The FPAS meets the commitments to the customers and staff by providing access and retrieval capabilities for foreign patent documents. The Foreign Patent Access System (FPAS) provides access to the collection of foreign documents contained on EMC mass storage, and is easily accessible to the entire USPTO staff as well as to the general public. The FPAS enables users to access foreign patent documents through a database query capability, and assists USPTO staff and the public in locating the documents. Once a selected document is loaded, FPAS displays electronic images of each page within the document and enables users to order a hard copy.

2.1.2.2.3 Patent Linguistic Utility Service (PLUS)

a. Description

The Patent Linguistic Utility Service (PLUS) is a query by example search system for the US Patents Business Area. To request a PLUS search, an examiner directs an e-mail containing the serial number of the application to be searched to the PLUS mailbox. Once a search request is submitted, the Scientific and Technical Information Center (STIC) staff accesses the application on eDAN and OCRs the title, abstract, background and brief summary of the application. PLUS then generates a word frequency list, which is searched against the text of US Patents, 1971 to date. The examiner receives search results – a listing of US patents with the closest degree of the same significant words as the application as an attachment to the original e-mail.

b. Commitments and Benefits

The PLUS system fulfills the commitments made to the USPTO by providing a robust search capability that provides the following benefits: (1) The Patent examiner can request a PLUS search prior to examining the application; (2) The search results are provided in a text file in a

format ready to copy and paste into a WEST or EAST search window; and (3) PLUS searches also return a large volume of classification information, which assists in the development of useful classified search strategies. In addition, the search results are generally available in a timely manner.

2.1.2.2.4 The Scientific and Technical Information Center and Commerical Database Search (STIC and CDB Search)

a. Description

The Scientific and Technical Information Center(STC) offers a large collection of print sources of non-patent literature and foreing patent documents. STIC has an online bibliographic catalog available for use in STIC branches. The online card catalog, searchable by author, title, Keyword, and subject, is a good starting point to begin your non-patent literature research. STIC is a U.S. Government Depository Library that selects 3.98% of Government documents offered. Documents are arranged according to Library of Congress classification. In addition, the Electronic Information Center (EIC) provides service for electrical and computers art. The EIC provides services to USPTO: ready reference services, commercial database (CDB) searching on Dialog, Datastar, STN, Orbit, Datatimes, Newsnet, Nexis/Lexis, retrieval of full text articles and books through interlibrary loan, runner service to the Translation Branch, circulation capabilities, copying equipment for library materials. Access, and STIC's Online Catalog.

b. Commitments and Benefits

The Scientific and Technical Information Center and Commercial Database Search services meet the commitment to its users by providing specialized information services for its examiners. The benefit is that the STIC and EIC provide tailored, onsite information services. The services and tools offered by the STIC and EIC staff members are customized to meet the information needs of the particular technology center.

2.1.2.2.5 Chemical Drawing System (ChemDraw)

a. Description

The primary objective of Chemical Drawing (ChemDraw) is to provide a robust chemical drawing and naming program that can be made available to Patent employees by means of PTOnet. The system will consist of a server, which hosts the actual ChemDraw software, and the user's workstation, which uses PTOnet to access the software and on which any files created during the session are saved. This project entails the establishment of a server environment to host the software, the creation of an appropriate access method, a shortcut on the Patent Examiner's Toolkit or a desktop shortcut, via PTOnet, and the creation of a ChemDraw folder on the user's hard drive that is designated as the default for saving chemical drawing files.

b. Commitments and Benefits

The ChemDraw system meets the commitment of the USPTO to its staff by allowing the chemical examiners to create chemical structures for inclusion in office actions and searching commercial chemical databases. The benefit of ChemDraw is the ability for USPTO Patent employees to utilize Beilstein's AutoNom 2.1 program to generate IUPAC-standard names from structures drawn in ChemDraw. This system also generates a ChemDraw structure with entry of systematic chemical names for most substances. Other benefits include the ability to represent and manipulate polymers and offers a palette of common biochemistry symbols such as membranes and cellular structures.

2.1.3 Patent Capture and Processing Systems (PCAPS)

The Patent business will continue to enhance the application capture system capabilities by employing a seamless approach to automated capturing. In order to gain greater user acceptance of electronic filing and raise the number of applications filed online, the OCIO is implementing various initiatives predicated on the following e-filing strategy that will establish an electronic commerce (e-Commerce) patent filing system:

- The USPTO will develop and provide valuable electronic filing products to our customers through e-Commerce portal;
- Each proposed patents solution will result in an increase in electronic filings. XML and PDF formats remain the long-term strategy of the USPTO;
- Increase in electronic filings is a goal of the USPTO to the extent that measurable benefits can be achieved;
- Products offered by the USPTO will comply with the World International Property Organization (WIPO) Annex F Document Type Definitions (DTDs); and
- USPTO operating expenses attributed to the processing of paper-filed applications will be reduced as significant numbers of electronic applications are filed.

The EFS-ABX is also major component of the USPTO patent e-filing system. EFS-ABX creates application-body XML files for new utility, provisional, Pre-Grant Publication (PGPub), and Patent Cooperation Treaty (PCT) submissions of Annex F based e-filing systems. Since Fall 2000, the USPTO has been taking advantage of the EFS-ABX technology advancements, achieved Annex F compliance using the Application Body DTD, resolved outstanding ease-of-use issues, and strategically position XML for electronic patent filing. EFS and other patent e-filing systems will accept XML-tagged Portable Document Format (PDF) submissions. The EFS-ABX provides several improvements for the users as well, including simplified image management, simplified client side workflow, ease of use, importation of previously created documents, and ease of installation. As the IFW is deployed and the EFS-ABX provides advancements, the patent filing process will need to transform into an entirely electronically driven process in which the applicants work on patent applications entirely online.

This effort will streamline the current process and allow the USPTO to take advantage of XML-based technology. The application body in the XML authoring tool is a new electronic patent application specification authoring-tool that utilizes Microsoft Word. This capability will help to create patent applications consistent with the XML specifications. These XML documents can be submitted to the USPTO through an e-filing submission tool, ePAVE.

The next generation of patent filing systems is expected to perform single document integration of Office Actions, provide download functionality for Article 20 papers in IFW for applications entering National stage, process claim validation in Office Actions, and update forms paragraphs. The desired outcome is to provide the mechanisms for companies, independent inventors, patent practitioners, and other information exchange partners to file applications, make payments, record assignments of patents, exchange office actions and other correspondence, and retrieve forms, publications, and other information from the USPTO with a minimum reliance on paper.

2.1.3.1 Capture and Initial Processing Systems (P-CIP)

In order to realize inherent efficiencies in the digital world, both from customer and internal operational perspective, delivery of electronic capturing and processing patent systems is an important step in developing the e-Commerce highway at the USPTO. Only by implementing these systems will USPTO realize inherent efficiencies in the digital world. Improvements in the patent systems will aid in the integration of workflow in electronic capture and initial processing of patent applications. The following section includes the applications that are part of the P-CIP systems.

2.1.3.1.1 Patent Electronic Filing System (EFS)

a. Description

The Patent Electronic Filing System (EFS) is designed around a common "submission engine" that presents an electronic form to the applicant to collect bibliographic data and allows the applicant to attach the specification, claims, drawings and other files needed to complete the application as well as submit fees by credit card. The submission engine combines the files into a single compressed file, encrypts and digitally signs the file, and transmits the file to the USPTO over the Internet. The applicant is able to develop the complex parts of the application using an authoring tool based on commercially available software products. Applicants then attach those files to create a submission package.

Future development activity for EFS includes the delivery of a common web-based interface with services that support electronic correspondence to and from customers. Providing flexible and convenient methods for accepting electronic filings is essential to meeting the goals of the USPTO and further making advancements to support the e-Gov strategy. In this regard, EFS will be improved to fulfill order processing of patent applications and to deliver the orders for

patent applications electronically in XML compliant format to the external customers. Enhancements also include Patent Cancellation Proceedings Electronic Filing that allows for the electronic filing and tracking of requests to cancel existing patents that may be infringements of current patents or inappropriate impediments to legitimate commercial activity. In addition, the EFS will be maintained to support the USPCT-ES 1.0 development effort that will integrate WIPO's PCT Safe client project with the EPO's epoline eOLF server. The maintenance will be to ensure that codes of these products satisfy USPTO business needs in the areas of security, fee collection, and data transfer between the U.S. version of the epoline eOLF server and the WIPO server.

b. Commitments and Benefits

The USPTO has made a key commitment toward accomplishing a goal of incorporating e-commerce into its operations. To meet this key commitment, the USPTO needs to achieve electronic submission and processing of patent applications. One of the steps necessary to realize this commitment is ensuring the ability of applicants to submit an electronic application. In addition to meeting a key customer commitment, EFS will provide benefits to customers and staff alike through:

- **Efficient Processing**: With EFS, application files are prepared and submitted in an electronic form. Applications and other papers entering USPTO in electronic form will not have to be converted; they can be routed to the electronic processing and/or publication stream directly. More efficient and timely processing will provide the means to reduce operational costs. The EFP will provide additional XML based tools that will offer a variety of interfaces for patent filers;

- **Greater Accountability**: Applicant queries relating to application receipt will be eliminated, as applicants will have immediate confirmation of receipt by the Office; and

- **Higher Quality Filings**: EFS will also aid applicants in eliminating many of the more common filing problems while creating their document. Applicants will not be able to submit filings containing many commonly occurring errors. Data exchange and data quality will be improved with the international partners. The confidentiality and integrity of electronically submitted patent applications would also be protected.

2.1.3.1.2 Electronic Filing System – Application Body eXtensible Markup Language (EFS-ABX)

a. Description

EFS-ABX is an authoring tool to create a patent application specification. The EFS-ABX authoring tool guides the user to develop the patent application. The tool is implemented as an

MS Word template and runs in MS Word. The output of the tool is an MS Word doc file. Using a function provided by the tool, the author creates a patent application specification in eXtensible markup language (XML) format, based on the Annex F application-body document type definition (DTD). The XML file is submitted to the United States Patent and Trademark Office (USPTO) over the Internet using the Electronic Filing System (EFS). Other Annex F compliant e-filing systems will also accept applications created by EFS-ABX.

b. Commitments and Benefits

The EFS-ABX meets the commitment to the USPTO customers and staff by providing users of Microsoft Word the ability to easily author word documents that contain all of the information necessary to create a valid patent application. The benefits of the EFS-ABX include (1) ease of use; (2) simplified image management; and (3) simplified client side workflow. These three features are highlighted as follows:

- **Ease of Use:** Unlike any other Patent XML authoring solution, EFS ABX is built entirely within the Microsoft Word environment. EFS-ABX is implemented in Visual Basic for Applications (VBA), the development language supported by Microsoft Word text editor. All functionality is implemented as a macro. Each macro is available to the user as a series of custom drop-down menus and short-cut keys. Through the drop-down menus, the authoring tool guides the user to correctly construct the components necessary for a valid application-body XML file. Each menu item has a corresponding short-cut key that makes the tool compliant under Section 508 of the Americans with Disabilities Act;

- **Simplified Image Management:** In addition to creating the application-body instance, the authoring tool also converts all image and drawing graphics contained in the Word file to TIFF. This feature allows the user to create and edit graphics using any tool and format that is integrated with Microsoft Word. The graphic conversion feature allows the user to develop the specification as a single Word document; and

- **Simplified Client Side Workflow:** Because EFS-ABX creates a single Doc file that contains both text and images relating to an application, customers can pass information amongst themselves without having concerns over file access and or permissions.

2.1.3.1.3 US Patent Cooperation Treaty – Electronic Submission

a. Description

The US Patent Cooperation Treaty – Electronic Submission (USPCT-ES) development effort will encompass the integration of WIPO's PCT Safe client product with the EPO's epoline eOLF server and the modification of each product's code to satisfy USPTO business needs in the areas of security, fee collection, and the transfer to data between the US version of the epoline eOLF server and the WIPO server. Implementation of USPCT-ES allows a US applicant to fill a PCT

application electronically in the US using WIPO's PCT-Safe client. A US applicant using PCT-Safe will submit an application that consists of either XML or PDF files. The files will then be electronically transmitted to USPTO epoline eOLF server. Once the USPTO epoline eOLF server has received the package, it will return an acknowledgement receipt to the applicant. This effort is part of ongoing collaboration efforts between the USPTO and EPO.

b. Commitments and Benefits

The USPCT-ES effort satisfies the needs of the customer and staff by providing an end-to-end XML based electronic patent application pipeline. The benefits of this system are the improvements in the data exchange and quality with international partners. This system provides a better quality services and products to USPTO customers and stakeholders which should increase the number of PCT applications filed electronically. The ultimate purpose of USPCT-ES is to achieve the common goals established by the Trilateral Offices.

2.1.3.1.4 PatentIn System and Computer Readable Form – Checker System (PatentIn)

a. Description

The USPTO receives approximately 10,000 initial submissions annually of nucleic and amino acid sequence data as part of biotechnology patent applications. This information is required to be submitted as a Sequence Listing in either paper, or CD, and computer readable forms and must conform to current sequence submission rules pertaining to accepted values and data format. The PatentIn software program provides an efficient and convenient means by which applicants may create the Sequence Listings to comply with U.S. and international filing requirements for biotechnology patent applications containing nucleic and amino acid sequence information. Although applicants may use any available means, more than 50 percent use PatentIn to submit sequence information to the USPTO. PatentIn generates sequence listings in conformance with the World Intellectual Property Organization (WIPO) Standard ST.25.

PatentIn submissions are validated by the Computer Readable Form (CRF) system before loading in the Automated Biotechnology Sequence Search (ABSS) System. CRF takes the amino acid and nucleic acid sequence listing data made using PatentIn 3.0 and submitted to USPTO by customers, processes the sequence listings, verifies the formatting of sequence data, and transfers the formatted data to the ABSS database(s).

In FY 2005, PatentIn is expected to undergo changes to conform to patent application submission rules changes required by legislative mandates and format changes based on international agreements for genetic sequence cases interface with SCORE and EFS will also be possible.

b. Commitments and Benefits

The commitments made to customers and staff are being met by improving the quality of sequence listing of patent applications and enhancing the data validation electronically. These efforts are also yielding higher efficiency in the way the process operates at lower cost. In addition, the benefits are as follows:

- **Improved Sequence Listing Quality**: PatentIn produces the applicant's Sequence Listing electronically, and the program features will permit an analysis of the submission to automatically assess whether or not the submission complies with USPTO requirements. Further validation routines can be included in the program to test other conditions as required by the USPTO;

- **Improved ability for accepting and validating data electronically**: PatentIn contributes to meeting the Patent goal of allowing customers to file applications electronically and permits the office to incorporate aspects of automated processing of applications. Once captured electronically, the Sequence Listing can be transferred to other parts of the USPTO for local processing as required. If an applicant files electronically he or she will not have to file a separate paper copy of the sequence listing, thus decreasing the workload imposed by the need to comply with the sequence rules; and

Lowest cost/highest efficiency: PatentIn covers a specialized submission requirement for biotechnology patent applications that otherwise might not be addressed. That is, the requirement to accept, validate, and process Sequence Listings electronically is complex, and development of PatentIn provides the USPTO with a necessary component that can be combined with an overall efficient electronic filing process.

2.1.3.1.5 Checker System to Computer Readable Form (CRF) Checker System

a. Description

The Computer Readable Form (CRF) and Checker systems are Microsoft Windows software applications, which are used to validate biotechnology patent application sequence listings. The CRF/Checker system consists of the following applications: (1) CRF – a Microsoft Windows application designed for use by USPTO staff for scanning biotechnology sequence listings prior to review by Examiners and (2) Checker – a Microsoft Windows application designed for public use prior to submission of patent applications to USPTO. The CRF system is a pre-processing program that checks biotechnology patent application input files before they are entered into the Automated Biotechnology Sequence Search (ABSS) system database, captures all data supplied by the applicant, and organizes it for export. The Checker software has been designed for single user access. Unlike CRF, data files are not shared over a network from inside the Checker

application. Checker components have the same logic processing rules as CRF, except that there is no built-in database or network functionality. Checker software can be installed and run on a single workstation with a Windows 95/98/ME/NT/2000/XP operating system.

b. Commitments and Benefits

The capabilities of this system satisfy the commitment made to the staff and customers of USPTO. The CRF/Checker system allows patent applicants to verify nucleic and amino acid sequence listings. CRF/Checker employs a logical and intuitive user interface to validate and convert patent applications that are compliant with 37 CRF 1.821 – 1.825. The USPTO staff will have access to a system is updated with timely data. The Checker will also operate in all major public user environments.

2.1.3.1.6 Application Routing Tool (ART)

a. Description

The Application Routing Tool (ART) uses the BRS query by example technology to provide a recommended group art unit (GAU) location, class and subclass for routing pending patent applications that have been successfully scanned into the PASS database. For each application, ART searches the text of the background, summary of the invention, and abstract for certain keywords and compares the frequency of those keywords to already published patents. A score is generated, by classification, for how many times the keywords are found within an application that were also found in published patents. The classification with the highest number of hits is used to determine a tentative classification for routing. OIPE reviews the ART recommendation and makes the necessary updates to PALM.

A companion module of ART, known as the Automated Classification Evaluator (ACE), will also be developed to provide a Supervisory Patent Examiner (SPE) alternative routing suggestions by providing the top three ART routing recommendations.

ART will also be integrated with PASS, in order to augment the Automated and Comprehensive Security Reviews by automatically clearing the current backlog of applications awaiting human security review. ART will be used by the PASS project to provide a suggested routing for an application, as well as, provide an assessment as to whether or not the application has national security considerations.

b. Commitments and Benefits

The ART system fulfills the commitments made to the USPTO to reduce the need for human classifiers to review all incoming patent applications for routing and national security considerations. It is anticipated that at least 90% of all applications will be automatically routed to the corps without a need for a human review; thereby, saving valuable time in getting applications routed to art units, as well as reducing the need to hire additional classifiers.

2.1.3.1.7 Patent Application Services and Security (PASS)

a. Description

The Patent Application Security & Services (PASS) system handles the textual aspect of patent applications. PASS uses optical character recognition (OCR) technology to convert the images of selected application documents, such as the specification, claims and abstract, to a text file. PASS currently performs an automated security review of the text of certain application documents to detect possible national security interest. PASS stores this information, along with the text tagged at a document and paragraph level, in a text database that is accessible by other software clients. The long-term plan is for this text to reside in the IFW schema for centralization of data storage and for ease of access by other software clients through the use of eDAN services and IFW public services. Future enhancements include transitioning PASS to support Next Generation of Electronic Processing and business process improvements.

b. Commitments and Benefits

The PASS system provides commitment and benefits to staff and customers by allowing the Patent examiner automated access for text searching and copy/paste functions, classification for initial routing, expansion of auto-security review capabilities, automatic claims comparison utility to identify Search Copies (RO/US) which are suitable for non-examiner processing, and automated support of the OIPE formalities review process. PASS also enables automated support for petitions processing and amendment entry process. These electronic functionalities will streamline the workflow involved in processing patent applications through online automation. In addition, PASS will minimize the time and error in providing online management of the textual elements of patent applications.

2.1.3.1.8 Supplemental Complex Repository for Examiners (SCORE)

a. Description

SCORE will store unpublished non-image application data and files that cannot be scanned into the Image File Wrapper repository in the tagged image file format (TIFF) because of their file size or type. These files contain sequence listings with millions of pages, tables, or biotechnology information that requires specific file types and has specific viewing requirements. USPTO patent examiners and applicants can then use SCORE to access these application files. SCORE will be the source of biotechnology data for ABSS, PSIPS and IFW through eDAN. Sequence data still be loaded and maintained in a relational database. SCORE will consolidate data management and increase efficiency in data flow and quality control.

b. Commitments and Benefits

The SCORE activity meets the commitments and benefits the customers and staff of USPTO by making available mega data to IFW and other systems that could not otherwise handle the volume of data. As a supplemental data repository, SCORE eliminates existing data irregularities, minimizes storage requirements over by preventing storage of duplicative information, and provides storage and retrieval for complex data types not manageable as TIFF image in IFW. USPTO patent examiners and applicants can then use SCORE to access these application files that may not have been available under other systems.

2.1.3.1.9 Patent Application Location and Monitoring System (PALM)

a. Description

The USPTO relies on the Patent Application Location and Monitoring (PALM) system to provide necessary workflow tracking, patent application status reporting, and examiner production and docket information on a daily basis. In November 2001, the USPTO replaced the legacy, mainframe-based PALM with a system based on modern open system architecture. PALM system performs workflow tracking and status reporting for patent application processing and allows USPTO employees to track the status and location of all cases and monitor internal production activity. The PALM system consists of the following subsystems: Pre-Exam (PX), File Ordering System (FOS), Infrastructure (INFRA) and Exam/Post-Exam (EXPO).

PALM interfaces to many current and planned AISs at USPTO. These systems include: Patent Application Capture and Review System (PACR), Appeals Case Tracking System (ACTS), the National Finance Center (NFC) systems, Office Action Capture System (OACS), Classification Data System (CDS), Time and Attendance Validation System (TAVS), Patent Application Information Retrieval (PAIR), Electronic Filing System (EFS), Image File Wrapper (IFW), Technology and Forecast (TAF) System, Patent & Trademark Assignment System (PTAS), Order Entry Management System (OEMS), PCT Operations Workflow and Electronic Review (POWER), Tools for Electronic Application Management (TEAM), Human Resources Information System (HRIS), Pre-Grant Publication (PGPub), Electronic Data Warehouse (EDW) system, Trademark Application Management (TRAM) system and the Revenue Accounting and Management System (RAM) system.

A major USPTO initiative was the replacement of PALM using open system architecture, which facilitates future modifications and enhancements with fewer resources. The USPTO began the incremental deployment of the replacement PALM system in October 1998 with the deployment of the Infrastructure subsystem. In October 1999, the USPTO deployed the File Ordering System (FOS) subsystem. These subsystems support USPTO organizational structure, employee information, and physical location of the application. In February 2000, the USPTO deployed the Pre-Exam (PX) subsystem that replaced all Pre-Examination functions previously handled by legacy PALM. In March 2001, the USPTO implemented Pre-Grant Publication (PGPub) requirements. In June 2001, the USPTO implemented the patent term adjustment (PTA)

requirements of the American Inventors Protection Act (AIPA) in the replacement PALM system. In November 2001, the USPTO completed the implementation of the Exam/Post-Exam (EXPO) System – the final part of the new PALM system.

Future enhancements that are planned for PALM are described below:

Support the Patent Business Area's strategic initiatives, which include many 21st Century Strategic initiatives in FY 2003 to FY 2004. The enhancements for this timeframe were as follows:

- POWER migration to PALM and IFW;
- P-17 Enhance Current Quality Assurance Program by Integrating Reviews to cover all Stages of Examination;
- P-17a Expansion of the Second-Pair-of-Eyes Review;
- P-17b Evaluation of Search Quality;
- P-36 Mutual Exploitation of Work Performed by Another Office;
- P-40 Enhance the Reviewable Record;
- P-27 Initial and PG-Pub Classification of Newly Received Applications;
- P-29 Competitively Source Reclassification Functions and Transition of International Patent Classification System;
- P-05-03 Post Grant Patent Review E-Processing;
- P-10 Accelerated Patent Examination;
- P-67 18 Month Publication Elimination of Non-Publication and Redaction Exceptions and Exclusions of Plant Application; and
- P-11/12 Simplification of Patent Term Adjustment.

From FY 2005 to FY 2010, enhancement activities will continue to support for the USPTO 21st Strategic Plan. PALM will be able to provide capabilities as follows:

- Provide applicants the option of selecting an accelerated examination procedure. An application subject to an accelerated examination process would have pendency of no longer than 12 months;
- Migrate PCT Ops functionality to new enterprise standard architecture while providing interoperability with other AISs;
- Support Patent Appeals and Interferences Board in conducting patent review proceeds;
- Simplifying patent term adjustment by ensuring that an applicant is not entitled to patent term adjustment unless the USPTO fails to issue the patent within three years from the date the applicant requested examination;
- Eliminate the non-publication and redacted publication exceptions set forth in 35 U.S.C. § 122(b)(2)(B) to the 18-month publication provisions;
- Modify existing PALM Quality Review functionality to facilitate an improved Quality Assurance Program;

- Ensure Multi-Track Examination process to allow the USPTO to better leverage search results from IPOs and qualified contractors named Contractor Search Service (CSS) organizations;
- Change the existing PALM Quality Review functionality to facilitate an improved Quality Assurance Program;
- Provide competitively source assignment of initial (routing) and Pre-Grant Publication (PGPub) classifications to newly received patent applications;
- Provide competitively source reclassification of functions and transference of application dispute resolution to Patent Corps management; and
- Implement functionalities for electronic receipt, processing, reporting, and publication that will enable the USPTO to migrate to a more efficient operating environment. This transition will support the Patent's goal of providing quality services and products in a timely manner to customers and stakeholders.

In general, maintenance activities for PALM will include security upgrades and support for Certification and Accreditation, performance optimization, response to user requests for emergency and normal changes, including Patent Rule changes, and Longhorn and Oracle upgrades. PALM EXPO, PALM File Ordering System, PALM Infrastructure, PALM Pre-Exam, and PCT Ops are expected to have three releases each from FY 2005. Other maintenance costs are associated with data loads, licenses, lease contracts, and preventative services.

b. Commitments and Benefits

All modifications, enhancements, and new development for PALM support the Patent Business Area macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. The USPTO is committed to providing its customers with the highest level of quality and services while meeting all current and future standards. The USPTO is also committed to providing its customers with timely response to requests for enhancements and legislative mandates for changes.

The USPTO has made a commitment to customers and staff, including reducing patent processing time for all inventions. To meet this objective, the USPTO needs to achieve electronic processing and tracking of patent applications. As a step in realizing this goal, the PALM system provides for enhanced daily workflow tracking, patent application status reporting, and examiner production and docket information.

The legislatively mandated PGPub requirements provides benefits to the USPTO's customers by publishing sufficient information about pending applications to enable a knowledgeable reader to make a determination whether the technology described is relevant to the reader's interest. PGPub is tightly integrated with the Electronic Filing System (EFS), Patent Application Capture and Review System (PACR), Patent Application and Information Retrieval (PAIR) system, and existing patent search systems (EAST and WEST), in order to provide the foundation for advanced information dissemination and EPAP capability.

Patent Term Adjustment benefits USPTO customers by increasing the term of their patent if certain delays occur during the patent examination process. The PALM replacement system is strategically positioned to capture the required data to automatically calculate additional patent term.

The next major USPTO initiative is the redesign and development of PALM as an integral component of the fully automated patent application processing system. PALM will be an integral part of the E-Gov initiative.

The PALM system supports the USPTO's customer commitments, and specifically provides these benefits:

- **Necessary Modifications and Enhancements to Meet Changing User Requirements (present and future) and Increasing User Demands**: The PALM system will be responsive to user requests for enhancements and legislative mandates for changes. These improvements are in keeping with future technology forecasts and trends to keep the USPTO up-to-date with the world;

- **Integration to Other IT Projects (present and future)**: The PALM system will be required to maintain the current interfaces and build interfaces to planned systems, especially electronic filing and the Electronic File Wrapper (EFW);

- **Lowest cost/highest efficiency**: Research and analysis to create a better PALM ensures that the USPTO is strategically positioning itself to minimize future problems; reduce hardware, paper, and maintenance costs; improve data quality; increase processing time by automating synchronization of tasks and data entry; and allow for more efficient operations. PALM would increase accuracy and enhance system security through access management and desktop availability of application data.

- **Increased accountability and control**: Improvements in the PALM Replacement system provide greater control over application processing, improved system reliability through direct maintenance actions, and more flexibility to handle changes in patent law.

2.1.3.1.10 Patent Application Location and Monitoring System Pre-Examination (PreExam)

a. Description

As part of the PALM system (see Section 2.1.3.1.8) implementation, the PreExam subsystem will fully support the creation and deletion of all patent applications, the maintenance of bibliographic data related to utility, plant, reissue, design, re-examination, provisional, and Patent Corporation Treaty applications, maintenance of patent numbers and the Pre-Grant

Publication (PGPub) process. The PreExam application also records the receipt of all incoming documents received during Pre-Exam processing, the granting of a filing date when an application is no longer incomplete, the recording of when and why an application number is changed and the assignment of projected publication date for applications that are eligible for Pre-Grant Publication.

b. Commitments and Benefits

The Palm PreExam provides capabilities that meet the commitment made to customers and staff. The functionalities of this subsystem includes the ability to create and delete patent applications, maintain bibliographic data, generate all outgoing correspondence, and classify all patent application for Pre-grant publication. The benefits for the USPTO staff include improved support for application type conversion, improved data entry support for continuity data, and ability to increase the number of out-going correspondence generated during Electronic Application Review. Users can also perform formalities review on all applications for completeness.

2.1.3.2 File Wrapper Processing (P-PFW)

The USPTO is implementing an end-to-end electronic pipeline for the processing of patent applications that will eliminate inefficient paper-based processes, including systems for processing File Wrapper (FW). The deployment of FW systems will be integrated with other systems to allow for electronic processing of FWs, as well as provide image management technology and improved workflow capability. The following section includes systems that support FW processing.

2.1.3.2.1 Electronic Desktop Application Navigator (eDAN)

a. Description

The electronic Desktop Application Navigator, or eDAN was part of the ePhoenix and IFW (Image File Wrapper) deployment and a corresponding eGovernment (eGov) initiative to achieve full electronic patent application processing. By using eDAN and ePhoenix, USPTO Patent Examiners will no longer need to use a paper file to examine patent applications.
eDAN is a critical component of the IFW program and provides Patent Examiners, SPEs and other Patents users with a graphical user interface (GUI) to access documents and display an examiner's docket and corresponding document images. eDAN retrieves documents from the Patent Application Location and Monitoring System (PALM) and from ePhoenix image repository. The eDAN provides its users with a GUI that can access numerous system data stores including: PALM, Assignment History Database (AHD), Revenue Accounting Management (RAM), and the new ePhoenix image store.

This project provides eDAN development and enhancement support for the planned major production releases of expanded eDAN functionality. eDAN will be developed to support the new IFW functionality including expanded processing of all documents comprising the patent application - images and text. eDAN GUI will be improved for access controls based on managed roles. Future eDAN development includes the ability to interface with PALM and IFW to support workflow initiatives. The eDAN will be used to access the workflow tool. The eDAN will develop functionality to update PALM. Future plans are to develop full functionality to process XML documents in eDAN, including XML-formatted patent applications, Amendments, examiner's notes, Claims Tool, and support Interference Searching. XML processing will also be supported in OEMS and ACTS. Other major eDAN enhancements include developing eDAN reporting functionality. In addition, REPS viewing functionality will be migrated to eDAN and IFW in FY 2005.

b. Commitments and Benefits

The eDAN provides the customer and staff the means to electronically process patent applications, especially in the implementation of the Patent E-Gov initiative that is key to the USPTO 21st Century Strategic Plan. Discussions between the USPTO and the EPO resulted in an agreement to adapt the image and retrieval software called *ePhoenix,* used by the EPO for U.S. patent applications. The image-based system will support examination and technical support processing. The eDAN interface will be used in combination with the image-based system in order to give the USPTO a user interface customized to U.S. patent applicants. In addition, the eDAN provides the following benefits:

- The eDAN will satisfy new requirements resulting from changes to patent submission rules in the U.S. and internationally;
- The eDAN will be able to support the appeals and petitions processing through ACTS interoperability; and
- The eDAN enables instant electronic access to application files, elimination of problems resulting from lost papers and lost paper files.

2.1.3.2.2 Madras

a. Description

Application documents contained in the Image File Wrapper (IFW) are available through the MADRAS interface. The Madras system is an interface used to access IFW similar to eDAN. This system was designed by the EPO and predominately used by USPTO Technical Support Staff (TSS) to process incoming applications. The Madras is also used by EPO's Formalities Officers.

b. Commitments and Benefits

The MADRAS system meets the commitment to the USPTO staff by providing the means to access IFW by the EPO. The TSS benefits from Madras interface, including the ability to access administrative functions that are not accessible through the eDAN interface. Therefore, when an application is opened in MADRAS it is locked for editing in order to prevent any other subsequent users from making changes to the record simultaneously. Although the application is still accessible to subsequent users, this access is limited to read-only access and is not recorded in the Access History record. Madras also provides a feature that allows one to easily identify documents that are indexed but not uploaded into IFW. Individual preferences can be set so that documents that have been indexed but not uploaded into IFW appear in a distinct color, which serves as a visual flag that images of those documents are not available. The deployment of Madras provides increased stability and enhanced Image File Wrapper (IFW) performance.

2.1.3.2.3 File Inspection Utility (FIU)

a. Description

The purpose of the IFW File Inspection Utility (FIU) project is to provide increased electronic access, during and after prosecution, to the content related to patent applications filed with the USPTO to USPTO staff, to the member examiners of other IP Offices, to patent applicants and their representatives, and, for published applications, to the general public. Phase 1 of this project will deploy IFW File Inspection to the Patent Corp, which will provide Patent Examiners access to patent applications stored in IFW. Phase 1 will also provide the general public and Trilateral Offices access to all published IFW patent application documents via the Internet, Public Search Facility (PSF), and File Inspection utility. Phase 2 of this project will provide electronic exchange of certified Priority Documents between the Trilateral Offices and with the World Intellectual Property Organization (WIPO).

b. Commitments and Benefits

The FIU meets the commitment to the staff and customers of Trilateral partners by providing them electronic means to monitor patent applications as they are being processed. The benefit is that Trilateral examiners can access unpublished IFW content and U.S. Priority Documents through a secure architecture that allows each examiner to use their existing file/dossier viewing tool and existing authentication. Examiners will also be able to import trilateral application documents into IFW to make them part of the official record.

2.1.3.2.4 Access to Image File Wrapper (Patent Enterprise Access Integration – (PEAI)

a. Description

The IFW will be accessible by the Patent Enterprise Access Integration (PEAI) system. The PEAI will provide full content access within the IFW by USPTO personnel and customers. For instance, the Patent Enterprise Access Integration effort will integrate ePhoenix and IFW, and will support access to electronic file wrappers of published and granted patents. This initiative is a continuation in our collaboration with international partners, especially the EPO and the JPO. PEAI will allow the EPO and the JPO full access to the published and unpublished USPTO patent application documents, including Non-Patent Literature (NPL) documents. The PEAI will also enable the exchange of priority documents for search and examination. In the future, it is envisioned that PEAI will be used by the Office of Public Records to fulfill requests for file histories, and will be publicly available via Public Search Facilities and the Patent and Trademark Depository Libraries.

b. Commitments and Benefits

The Patent Enterprise Access Integration (PEAI) system meets the commitment to the USPTO staff and customers by enabling secure Trilateral Office access to IFW content including published and non-published examination files. The benefit of the PEAI is the support for remote access to internal search systems of partner offices, examination file inspection, and online exchange of electronic priority documents. In addition examiners can share work products through secure connections. Sensitive patent work products between offices are protected and the nature of sensitive transactions is concealed. This initiative ensures patent data privacy and integrity during transfer between offices via the Internet.

2.1.3.2.5 Office Action Creation System (OACS)

a. Description

The Office Action Correspondence Subsystem supports examiner creation of required USPTO correspondence associated with national and international application processing. Key features of OACS include:

- Data retrieval from PALM. Based on application serial number, PALM will automatically provide applicant name, correspondence address, and filing date;
- Over 20 U.S. forms, including Re-examination forms;
- Form paragraph selection by using keyboard or mouse, direct entry or menu, menu selection by form paragraph number, title or category. An optional viewer is provided so users can review Form paragraphs before insertion into their actions;
- Optional Action Wizard for creating Election/Restriction, Examiner's Amendment and Examiner's Answer correspondences;

- Action Wizard and direct edit most PCT action fields;

- Highly customizable form paragraphs, custom forms, correspondence templates, and office action scenarios;

- Built-in document management system. Automatically keeps track of the complete set of documents comprising each Office Action by serial number, including all corresponding forms; and

- Data retrieval from BRS. Based on document number, OACS will retrieve from BRS the publication date, inventor name, and classification and enter the data on form PTO-892.

- A new Patent Reference Capture. Automatically captures the US Patent documents cited on a PTO-892 and PTO-1449 to PALM database.

The USPTO also plans to provide electronic capture and storage of office actions for examiners to search and use for future reference in FY 2003. OACS 2.0 will enable users to save their office actions to a central database in an XML tagged format. The next version will allow USPTO to exchange the PCT office actions with the European Patent Office and the Japanese Patent Office in FY 2004. This capability would use XML; support the exchange of US office actions with foreign offices. OACS will also integrate with EFW and IFW, and support the Issue Paper P-36.

In FY 2005, USPTO will develop a thin client version of OACS that does not depend on a word processor. A new client server for OACS will be able to generate office actions in XML format and utilize XML data inputs for Form Paragraphs. Other routine enhancements will enable OACS to support Issue Paper P-10-01, including changes to Form Paragraphs and support for impact of law and regulatory modifications. OACS will continue to support form upgrades, changes to the logic and wizards resulting from multiple prosecution paths. These activities will entail phase one and phase two integration of OACS to "Workflow" tool, development of OACS client/server in FY 2006 and beyond, OACS server replacement, and OS upgrade expected in FY 2007. OACS will also be integrated with EFW and IFW. A new API interface will be connected to the EAI hub, OACS will enable electronic signatures and automatic counting, and technology refresh will occur to improve functionality, connectivity to other systems, and XML development.

b. Commitments and Benefits

The OACS project supports the Patent Business Area macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. One of the steps necessary to realize this commitment is the integrated desktop access to all automation resources needed by examiners to perform their job.

In accomplishing this step, OACS will provide the following benefits:

- **Improved Process**: Examiners will be able to examine both national and international cases, and fill out the appropriate forms using one integrated application. The integration of the multiple application type processing eliminates the need for separate software applications and reduces the burden on examiners by having to be trained on only one tool. The importation of data from the PALM database, BRS, and data sharing among forms will decrease the amount of time an Examiner spends on completing office actions. Time saved on completing forms will permit Examiners to devote more resources towards quality and productivity and

- **Improved Quality of Office Actions**: OACS will improve turnaround times to update forms and form-paragraphs to reduce the number of outdated forms and form paragraphs mailed to Applicants. Through incorporation of XML tagging OACS will incorporate automatic data validation rules and reduce the resulting electronic file size by capturing only the essential data contents. These activities result in a more consistent use of current US and PCT forms and form paragraphs and office action accuracy thereby enhancing quality of office actions. The reduced file size provided by XML tagging will reduce the growth requirements for additional data storage.

2.1.3.2.6 File Ordering System (FOS)

a. Description

The File Ordering System (FOS) supports the location and movement of application files. This subsystem provides the functionality for recording receipt and dispatch of all application files. In addition, FOS enables ordering of patent and trademark cases from the Files Repository. FOS is a web-based application that appears to be capable of tracking the physical location and status of issued and/or abandoned patents as well as registered or abandoned trademarks. With the implementation of IFW, FOS will also support the tracking and storage of artifacts and the tracking and processing of boxed paper application papers after scanning.

b. Commitments and Benefits

The File Ordering System meets the commitment made to USPTO customers and staff by providing a system that satifies the user requirements for performance and accuracy. The performance for this system will continue to be sub-second for the average transaction, and the FOS is kept fully operational during production hours to help ensure timely processing of patent applications. The benefit to be realized is a system with improved performance and reliability. This system is also compliant with the latest security requirements and regulations.

2.1.3.2.7 Patent Application Information Retrieval System (PAIR)

a. Description

The Patent Application Information Retrieval (PAIR) system provides Internet based access to patent application status and history information. PAIR uses digital certificates issued from USPTO's Public Key Infrastructure to provide strong authentication to restrict access to pending application to patent applicants and/or their designated representative(s), and to maintain the confidentiality and integrity of the information as it is transmitted over the Internet. Status and history information for granted patents is provided with unrestricted access to the public. In FY 2005, USPTO plans to begin the migration of the Private PAIR functionality to the PEAI project and continue maintenance of the PAIR production system.

b. Commitments and Benefits

USPTO has made a customer service commitment to provide customers with the status of their patent application within 30 days. Based on the FY 2000 Customer Survey, USPTO customers expressed 46% satisfaction with filing notice timeliness. PAIR provides USPTO customers access to up-to-date patent application information immediately and securely, representing a method of providing the highest level of service through electronic commerce.
PAIR reduces the number of inquires received for this information that must be handled by staff members. Before the introduction of PAIR, all inquires were received by the Patent Assistance Center, Patent Examiners, or Technical Support Staff within the Corps. Current levels of telephone and written inquiries are unknown because of the numerous points of entry for these types of inquiries. While PAIR does not eliminate all telephone and written inquires, the volume has decreased.

The legislatively mandated Pre-Grant Publication (PGPub) requirement provides benefits to the USPTO's customers by providing information about pending, but published applications. PAIR, under PGPub, enables the applicants to electronically identify and request changes to their applications prior to the publication of the applications.

PAIR supports USPTO by providing these benefits:

- **Reduction in Processing Cycle Time for Patent Application Information Requests**: PAIR allows the customers to access the information that they need immediately without being restricted by external factors and systems deficiencies;

- **Reduction in Task Hours and Personnel Required to Support Customers**: Since PAIR allows USPTO customers to access the information without USPTO staff interaction, less task hours and dedicated personnel are required to support the customer base. The number of telephone calls and written requests has decreased by 40% as a direct result. Other associated costs (i.e., postage, paper, and hardware) have reduced as well;

- **Provision of Electronic Processing and Information Retrieval**: PAIR provides support for the elimination of time-consuming and error-prone processes by providing a search mechanism that utilizes existing electronic records to respond directly to USPTO customer requests; and

- **Lowest Cost/Highest Efficiency**: Research and analysis to create PAIR ensures that USPTO incorporates the most efficient system at a reasonable and justifiable cost while keeping pace with the Information Age and new technologies.

2.1.3.2.8 Patent Application Location and Monitoring – Examination and Post-Examination (PALM EXPO)

a. Description

As part of the PALM system (see Section 2.1.3.1.8), the PALM EXPO subsystem deals with tracking patent application prosecution, publication, the physical location of application, group art unit (GAU), examiner productivity, patent issuance, quality review, file inventory, and lost file reconstruction. The subsystem also supports the production of reports related to examination and publication processes. PALM EXPO Interfaces with Revenue Accounting and Management (RAM), Patent Application Services and Security (PASS), and Image File Wrapper (IFW) apart from other PALM subsystems. PALM EXPO also provides external services for PASS, IFW, and Electronic Desktop Application Navigator (eDAN) so that these AISs can access PALM data.

b. Commitments and Benefits

The PALM EXPO system meets the commitment to the USPTO staff by providing a system that can track patent application process in a timely manner through enhanced system performance and workflow improvements. The capabilities of PALM EXPO provide benefits to the user, including a user-friendly interface for data entry and automated edits to reduce data entry errors. Descriptions of each PALM transaction are also available from online drop down menus as well as a history of location, status, GAU, and Examiners assigned to a case.

2.1.3.2.9 Public Site for Issued and Public Sequences (PSIPS)

a. Description

The Public Site for Issued and Public Sequences (PSIPS) system contains data from sequencing, large tables, and other complex work units. PSIPS will be upgrade to render mega items such as biotech sequences and tables. These items may include computer listings, 3-D crystalline data structures, and other exotic data types. The data is manipulated before it is loaded on to the web

page for access across the Internet, as well as by USPTO examiners. The data manipulation occurs from the information received from RTIS, and data is repaired as problems occur. In addition, enhancements will be undertaken so that data load occurs once, and maintain pointers that are referenced by individual applications and grants. This enhancement will eliminate the need to load data multiple times.

b. Commitments and Benefits

The commitments to the customer and staff are the ability to (1) maintain and support, as necessary, the current PSIPS; (2) move to dedicated hardware; (3) provide improved access to mega sequences on the web; (4) make future enhancements include searching of tables, and possibly sequences; and (5) display and searching of complex work units. In addition, the benefits are as follows (1) compliance with the information dissemination requirements of the patent statutes; (2) more usable information for USPTO examiners; (3) higher availability of table data to the public; and (4) better use of data storage.

2.1.3.2.11 Patent Cooperation Treaty Operations Workflow and Electronic Review (POWER)

a. Description

The Patent Cooperation Treaty (PCT) Operations Workflow and Electronic Review (POWER) System is a United States Patent Trademark Office (USPTO) automated information system (AIS) designed to support an automated, workflow-driven, client-server environment. POWER works with an electronic application in an integrated desktop environment. The POWER system minimizes the movement of paper through the United States Receiving Office (RO/US) processing stream and automates the application filing process under Chapter I and Chapter II of the PCT.

The POWER system supports the initial receipt of an application or later-submitted papers, review of the application by PCT personnel, generation of outgoing correspondence, and tracking of the application while it is being processed by RO/US. Case files ultimately provide information in an electronic medium that facilitates exchange with PCT Operations' principal internal customer, the USPTO Examining Corps, as well as with the World Intellectual Property Organization (WIPO), Trilateral Office partners, and the other international partners of USPTO.

b. Commitments and Benefits

POWER supports the goals of (1) Reducing procedural, process problems and unresolved issues in all business activities; (2) Improving process management for files, papers, and faxes; and (3) Improving resources for our employees to carry out their organizational responsibilities.

To meet these key commitments, the USPTO needs to achieve electronic processing of patent applications. One of the steps necessary to realize this commitment is the automation of the PCT organization for receipt and processing of international applications in electronic form.
In addition to meeting key customer expectations, POWER will provide benefits to customers and staff alike through:

- **Efficient Processing**: With the introduction of automated PCT processing, application files will be rendered into an electronic form that will be routed through the processing stream. Editing and error checking will be built into the process reducing the incidence of error and increasing the quality of the work produced. The electronic processing of applications will shorten the time taken for the applications to reach key stages in the process cycle. More efficient processing and higher quality product provides the means to a reduction in operational costs;

- **Greater Accountability**: Tracking of the status of a given application will be improved with the advent of workflow automation. POWER will collect tracking and status information providing managers the information necessary to most effectively direct staff effort and control pendency. Applicant queries on application status and other case specific queries will be answered more quickly;

- **Increased Compatibility with WIPO and Other Downstream Customers**: POWER would allow the USPTO to send applications and other related documents to and receive the same from other PCT offices in an electronic form. This medium will result in both cost and time savings; and

- **Improved Work Environment**: The physical surroundings in which PCT staff members' work will be improved as stacks of papers are eliminated from desks and floors. The space currently occupied by paper could be returned to staff. The work area would be cleaner, less cluttered/more open, and generally more esthetically pleasing.

2.1.3.2.12 Patent Cooperation Treaty Operations Imaging System (POIS)

a. Description

The Patent Cooperation Treaty (PCT) Operations Imaging System (POIS) supports the PCT Operations Workflow and Electronic Review system. POIS operates across the (PTONet), and is protected by Cylink Secure Domain Units (SDU) encryption hardware. The Scanning Subsystem captures digital images of international patent application documents submitted in paper form as well as allowing manual transcription of bibliographic data. These images are stored in an Oracle database which users may access in order to view, print, index (that is, rename) or annotate (that is, apply markings) the documents. An automated first-level security review module reviews an OCR'ed version of the contents of the application searching for terms and phrases of national security interest. Such applications are electronically referred to a Licensing

and Review Subsystem (LARS-PCT) where specialists perform a more in-depth security review. Images within the POIS database are also available to the Order Entry Management System (OEMS) for preparation of certified copies of international applications. 100% of new international applications are scanned into the POIS system.

In FY 2004 and FY 2005, the data in POIS will be migrated into the IFW system. The data migration will minimize duplicate data input, improve data integrity, reduce redundancy, and improve workflow process. PCT case handling will be accommodated in POIS as the system supports international patent application scanning and data entry. The POIS is the data collection system to the PALM PCT Ops system. These maintenance projects will improve application processing and increase concurrent application availability.

b. Commitments and Benefits

The POIS meets the commitments made by the USPTO to develop a reliable system for capturing international patent application documents. The POIS enables USPTO to handle PCT cases electronically. In addition, the benefits of POIS are twofold. First, POIS provides the same technology and functionality for capturing application paper documents in electronic text and image storage form to support PCT operations workflow and electronic review automated system. Second, migration of POIS to end-to-end electronic patent application processing further establishes foundation for electronic workplace as part of TEAM.

2.1.3.2.13 Patent Application and Location Monitoring System – Infrastructure (PALM INFRA)

a. Description

The PALM Infrastructure initiative supports a new file structure and production schedule for the National Finance Center (NFC) input file and captures and maintains basic information about USPTO's organizational structure, workers, and physical locations, special purpose locations such as search rooms, and relocation planning. This information is required for the implementation of subsequent PALM migration subsystems performing tasks such as tracking patent application prosecution, the location of the application, Group Art Unit (GAU) and Examiner productivity.

b. Commitments and Benefits

The PALM Infrastructure subsystem meets the commitment to the USPTO by electronically managing the organization’s basic information and contact details. The subsystem provides a information in a timely manner through the use of the Internet and other electronic means. The PALM Infrastructure has web-based query functionality, employee locator, and universal resource locator with reports generation capability. Data can be downloaded to support the production of telephone directories, relocation planning, and search room relocation planning.

2.1.3.2.14 Patent Application and Location Monitoring System – File Ordering System (PALM FOS)

a. Description

The PALM FOS supports the location and movement of application files. This subsystem provides the functionality for recording receipt and dispatch of all application files. . FOS replaces file repository operations, including the printing of file orders, enhances the user interface, and provides interfaces with other USPTO automated information systems (AISs) such as ClearPath, the PALM Infrastructure subsystem, Pre-Exam, Examination and Post-Examination (EXPO), the Order Entry Management System (OEMS), and the File Tracking System (FTS). PALM FOS is a web-based application that is capable of tracking the physical location and status of issued and/or abandoned patents as well as registered or abandoned trademarks. With the implementation of IFW, PALM FOS will also support the tracking and storage of artifacts and the tracking and processing of boxed paper application papers after scanning.

b. Commitments and Benefits

The PALM File Ordering System meets the commitment of the USPTO staff by providing a system to track the physical location of an application, perform file inventory, and manage file warehouse operations and support. The benefit of the PALM FOS is the ability of users to store and retrieve artifacts from the Franconia warehouse. In addition, the PALM subsystem has the capability to record the location of an IFW application when a barcode is read from an action folder. This feature enables immediate access to patent application information.

2.1.4 Patent Systems (Other)

2.1.4.1 Patent Modeling and Budget Administration System (OPBudget)

a. Description

The Patent Modeling and Budget Administration System (OPBUDGET) is a business analysis and modeling tool that enables the Commissioner for Patents, Office of Patent Resources Administration (OPRA) to make decisions and assist with the preparation and submission of Patents proposed operating plans and budgets. OPBUDGET provides business managers and senior executives with the ability to view business information from a variety of perspectives, create business models, and perform interactive modeling and scenario building. The OPBUDGET system includes projections of out years staffing needs, production levels, pendency, expenditures, and revenue. The system compares current year projected spending with actual spending and allows for appropriate adjustments. OPRA operates and maintains the OPBUDGET system to (1) support staff and production modeling; (2) formulate estimated

operating budgets; (3) monitor the congressionally approved budget; and (4) project revenue for the Patent Business Unit.

The OPBUDGET system meets USPTO business needs such as activity-based workload estimation and pendency projection. The new system provides individual functional areas within the Patent Business Unit the capability to perform budget planning and monitoring tasks concurrently.

Planned system enhancements will permit OPBUDGET to access Patent Application Locating and Monitoring (PALM) system, Revenue Accounting and Management (RAM) system, Momentum Financials (MOMFN), and National Finance Center (NFC) personnel data from the USPTO Data Warehouse. Plans are to extend capabilities to include budget administration, revenue forecasting, SIRA analysis, and Trademark's operation.

b. Commitments and Benefits

OPBUDGET supports the Patent Business Area macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. USPTO needs to achieve electronic processing of patent applications. One of the steps necessary to realize this commitment is the automation of the preparation and submission of the proposed Patent Business Area operating budgets.

In addition to meeting a key customer commitment, OPBUDGET will provide benefits to customers and staff alike:

- OPBUDGET provides individual functional areas within the Patent Business Unit the capability to perform budget planning and monitoring tasks concurrently;
- The OPBUDGET activity-based structure more directly supports the modeling of alternative patent processing approaches;
- OPBUDGET is more accessible to a wider range of users over the PTONet; and

OPBUDGET is fully integrated into the USPTO's current and long-term strategic information technology infrastructure, which enables easier system maintenance.

2.1.4.2 Office of Patent Quality Review System (OPQR)

a. Description

The Office of Patent Quality Review (OPQR) is responsible for independently measuring and reporting the level of overall quality of examination of patent applications by the Corps. OPQR

is also responsible for conducting its own surveys of Patent Corps performance to evaluate the integrity of the review process within the Patent Corps.

The current system consists of a database that resides on the shared network folders, with one person primarily responsible for the assimilation of the information into a monthly report to the Director and senior management. Current reports do not provide management with sufficiently timely or complete information about the examination process. Although presently the monthly reports are dispatched via e-mail, this is only a recent development within OPQR and only provides fixed types of reports and data to the various management levels. Additionally the present reports are based on a limited review question pool that may not meet the current needs of the various management levels. QRS is a legacy system developed on a PC database outside of the OCIO. The OCIO will continue to provide technical support to keep QRS operational until this system is replaced by a Corp-wide server based system.

b. Commitments and Benefits

The Quality Review project supports the Patents macro performance goal of granting exclusive rights, for limited times, to inventors for their discoveries. Specifically, it supports Patent Business Goal Four: "Exceed our customers' quality expectations, through the competencies and empowerment of our employees." To meet this performance goal, the USPTO needs to track and monitor the progress of the Patents Business Area quality goal objectives. This effort will provide benefits to customers and staff alike as described below:

- Providing accurate, up-to-the-minute, reliable information that the USPTO management wants and needs in a timely manner;
- Enhancing the Patents business area's ability to identify needed modifications to examiner training based on the reported information; and
- Providing diverse options for product review and data entry by multiple USPTO staff members from multiple locations campus wide.

2.2 Trademark Business

The trademark business processes and their supporting systems continue to be in a state of positive change. Technology is being inserted within refined processes that facilitate greater efficiency and improved quality. Significant progress has been made in making computer-based functions and data more available. Within this section are the next steps in the development of the automated systems that directly support the Trademark business area. This includes all system development and maintenance initiatives currently planned, or under way.

The Trademark Office continues on its path of developing the people, processes, and technologies in ways that most appropriately advance the designated business goals. The goals

of the system development efforts are: (1) maintaining current trademark business production and (2) moving to electronic processing and processes. Trademark systems are positioned to facilitate evolution in ways that will yield efficiency improvements to the Office and continued improvements in customer service. Specifically, Trademark systems will be focused on using the Internet to conduct business, automating Trademark business rules even further, and simplifying interaction with Trademark systems. Goals for Trademark business systems include:

- Reduction in the time required to reach first actions to three months from the filing date;
- Improvement in customer satisfaction - in the 21st century, we will achieve 95 percent satisfaction among customers who receive trademarks;
- Expansion of electronic filing and communications capabilities to our customers via the Internet, and
- Implementation of the protocol related to the Madrid Agreement on the International Registration of Marks, pending passage of legislation.

2.2.1 Trademark E-Government System

The Trademark E-Gov System will replace a manual process based on paper with a system that will electronically process and maintain all the records associated with a Trademark application by integrating existing trademark information systems.

The USPTO currently uses a paper-based process that relies on the use of separate automated systems for processing and examination of Trademark applications. Pre-processing of Trademark applications includes: organizing the documents submitted; assigning a unique serial number; classifying the application; and routing the paper file to the appropriate examining law office. Application data is captured from paper documents and stored in the Trademark Information Capture and Retrieval (TICRS) system or electronically transferred from electronically filed applications to the Trademark Reporting and Monitoring (TRAM) system to maintain an electronic location, file status, and prosecution history of each application file. Trademark examining attorneys use the X-Search automated search system to determine if similar marks exist. If the Trademark is allowed to register, pertinent information is extracted and forwarded to the Government Printing Office for production of the Trademark Official Gazette (also published on the Web) and the registration certificate (also published on the Web). The Trademark E-Government initiative will create a fully electronic file management system that will integrate existing IT systems, record all communications and correspondence regarding the examination, automate the control and process of the application and allow for the elimination of paper records.

The objectives of Trademark E-Gov system include reduced operations costs, improved quality through workload and process management, reduced pendency, and international exchange of

information to improve the protection of Trademark intellectual property. Additional objectives include improved access to USPTO information by internal users and the public, improved management reporting capabilities, improved security, and improved efficiency of application management and to support the Work-at-Home effort.

Trademark E-Gov System is the culmination of Trademark business strategy to move to the electronic examination process, starting with the X-Search on July 1993. Followed by deployments of TICRS, TEAS, TARR, TESS and TIPS. Trademark E-Government system is scheduled for deployment in November 2005. Trademark Information System (TIS)/First Action System for Trademarks (FAST) version 2.0 will provide the actual integration of components of the trademark application process with automated workflow that is consistent with the USPTO enterprise architecture. TIS/FAST 2.0 will integrate these IT systems into a single workflow from the electronic filing by the customer, to electronic exam to the posting of the Registration Certificate on the Web.

In addition, the Madrid Protocol has been implemented since November 2003 with the migration to Trademark e-Government. The Madrid Protocol will enable the trademark systems to exchange data with the International Bureau of the WIPO. The interface requires the completion of the Madrid International Trademark Electronic Application Submission system to facilitate text and image data exchange. The USPTO will deploy the Madrid International Trademark Electronic Application Submission (MiTEAS) system through phased implementation. The phased implementation will be concurrent with the completion of the Madrid International Trademark Electronic Application Submission application forms. This approach will ensure that the inbound and outbound transactions of the Trademark Madrid System will interface with other trademark systems that are compliant with the Madrid Protocol.

2.2.1.1 Clearpath Support

a. Description

The Clearpath Support is necessary to maintain the Trademark Reporting and Monitoring (TRAM) system. Clearpath is a computer system that provides the platform for TRAM to store historical data on trademarks. The Clearpath system is a UNISYS product. This project will provide on-going system administration and technical support for Clearpath Developers and hardware/operating system software annual maintenance per contract. It is expected that support for this system will end at the completion of FY 2007 when Clearpath will be migrated to the USPTO Enterprise Architecture.

b. Commitments and Benefits

The Clearpath computer system is critical to the operation of TRAM, which is essential to the Trademark operations. The UNYSIS Clearpath system enables the entire process of the Trademark operations, from application submission to data processing, to occur with minimal

interruption. The commitment to the customer and staff is kept with maintenance of Clearpath support. The benefit derived from such project is that the on-going operations of Clearpath will ensure high availability of TRAM to the Trademark customers.

2.2.1.2 Trademark Postal System (TPOSTAL)

a. Description

The Trademark Postal System (TPostal) generates and sends bulk mail to the U.S. Postal Service Website for printing, stamping, and mailing trademark notices. This system only focuses on local addresses within the United States. In 2003, the USPTO received the Interagency Resources Management Conference Team Award for the Trademark Postal system. TPostal will allow any AIS to send any mail electronically to the U.S. Post Office.

b. Commitments and Benefits

The TPostal system fulfills the commitments to the customers and staff by providing electronic transmission of certain items of U.S. Mail that would otherwise require extensive manual preparation, posting and delivery to USPTO customers. The TPostal project will reduce cost by lowering the amount of paper handling and mailroom processing and reduce the time to notify USPTO business partners of actions taken against their application as the mail will be printed at the nearest post office based on the zip code of the address. The TPostal system is also being developed to be as a reusable component to allow any AIS to send mail electronically to the post office (not just postcards).

2.2.1.3 Trademark Reporting and Monitoring System (TRAM)

a. Description

Initially implemented in April 1983, TRAM System provides support to all facets of Trademark operations. TRAM includes a database consisting of bibliographic text and prosecution history data for more than 3 million marks. TRAM supports Trademark operations from the receipt of a new application in the USPTO, processing and examination of the application, photocomposition activities related to the publication of the Trademark Official Gazette, and into the post registration activities required to maintain registered trademarks. Bibliographic data in TRAM for pending applications and active registrations is updated on a real time basis, is used to produce the Trademark Official Gazette, is sold to the public in machine readable form, and is extracted for use in the automated search system (X-Search). The TRAM System maintains current location and status information on applications and registrations enabling the USPTO to promptly determine the status of any file and to locate files in Trademark work areas or the warehouse. Management information produced by TRAM allows Trademark managers to

monitor employee production, track and adjust workflow, control backlogs, and review the quality of data stored in the system.

TRAM provides operational support for all Trademark processing activities. Maintenance is performed on TRAM to enhance functionality or correct problems. TRAM maintenance activities are initiated when a customer submits an Engineering Change Request (ECR) or a System Problem Report (SPR). This project provides also day-to-day support of TRAM. Routine maintenance and operation will continue after the Clearpath version is migrated to the USPTO Enterprise Architecture. Current support includes enhancements to TRAM for Trademark's E-Gov initiative and the FAST/Madrid integrated environment. This project ends with the implementation of that environment in FY 2006.

b. Commitments and Benefits

The needs of the customer and the staff are being met by an electronic system that provides customers and staff the ability to submit, capture, and extract Trademark data for multiple uses. The staff and customers have readily available access to Trademark information that is important for monitoring and reporting the status of Trademark applications. In the near future, TRAM will be able to perform data exchanges based on the defined procedures and formats of the Madrid Protocol between WIPO and any member country of the Madrid Protocol. In addition, the benefits of the TRAM is the electronic filing of TIS, management reporting, and examiner production tracking, and file tracking to ensure that the applications are properly processed.

2.2.1.4 Trademark .Net Support

a. Description

This activity provides the seed funding to deploy electronic filing of the Trademark applications, an essential component of Trademark E-Gov initiative. The project will focus on AIS enhancement so that the Internet can be used to conduct business. Trademark business rules will be modified to accommodate the use of the Internet and simplify interaction with Trademark systems.

b. Commitments and Benefits

The Trademark .Net Support will assure that a key goal of Trademark will be met – to expand electronic filing and communications capabilities to our customers via the Internet. In addition, the benefit is that the activity provides full electronic support for examination of Trademark applications. The seed funding will enhance the quality of examination through improved workload and process management, and reducing Trademark business costs.

2.2.1.5 Trademark Cropped Image Manager

a. Description

The Trademark Cropped Image Manager is an application that implements color to document submissions that contains cropped bi-tonal images, cropped color images, or images converted web-browse viewable format such as JPEG or TIF format. This project is to upgrade the current software to a new version since the vendor no longer supports existing version. The upgrade will ensure that the systems that this software supports will enable image views in color.

b. Commitments and Benefits

The commitment to the customer and staff are being met by providing the latest technology in color imaging, enabling major Trademark AIS to take advantage of the latest technology such as the IFW, Trademark Certificates, the Office Gazette, and public search databases. In addition, the benefit for the Cropped Image Manager is that color imaging will enable the Trademark customer to view images that accurately portrays the original document submission.

2.2.1.6 Trademark E-Commerce Law Office

a. Description

The E-Commerce Law office was established to provide a new concept for processing trademark applications electronically. A new office structure is being created with the goal of 30 days to first action for TEAS filed applications. The first technical phase of this project is limited to the pre-examination processing of new applications filed via TEAS. The goal is to process these applications on the floor where law offices are located and not to move them to the Pre-Examination Section floor for any reason. Initial revisions to the examination process and the supporting office functions apply to personnel and not to the automated systems.

Future initiatives may include moving Intent to Use processing to the law office and being the first pilot office for processing amended identifications. In addition, electronic communication with the applicant also will be implemented. Compliance with security requirements under UEA will also be met.

b. Commitments and Benefits

The Trademark E-Commerce Law Office meets the needs of the customer by supporting the total electronic record of a Trademark application. Also, this activity helps the USPTO move toward paperless E-Gov initiative as a complementary activity to the TIS/Madrid. In addition, the benefits of the latest technologies added to the E-Commerce Law Offices is the total customization of e-mail functionalities, correspondence loaded into TICRS with the use of

programs, updated transaction status in TRAM database, and updated announcements of incoming and outgoing event notices in the TIS database. These communication technologies will ensure that the most recent information is distributed.

2.2.1.7 Trademark Electronic Application Submission System (TEAS)

a. Description

The Trademark Electronic Application Submission (TEAS) and Trademark Electronic Application Submission – International (TEASi) projects provide for the implementation of an electronic communication capability with trademark customers using the Internet. The final system is intended to support the receipt of all Trademark forms electronically through standardized transactions using the Extensible Markup Language (XML) and Simple Object Access Protocol (SOAP).

The initial focus of the project is on the submission of data to the USPTO. Future operations will include electronic data transmission from the USPTO to customers for Office Actions created during the prosecution of a case and post-registration actions. This project is the first step towards a complete electronic workflow solution for Trademark prosecution.

The current strategy is to leverage the technologies and capabilities of mainstream World Wide Web browsers as a means for interacting with Trademark customers. The final goal is to make all transactions and interactions with Trademark customers electronic. For example, a priority activity is to develop Trademark Electronic Application Submission System – International (TEASi) for the Madrid Protocol

TEASi 1.0 will deliver the initial four Trademark Application forms which are a key system component that is required to support USPTO's participation in the Madrid Protocol. The four-4 forms are Application for International Registration (MM2) Free Text and Pre-Population, Irregularities, and Subsequent Designation to the International Registration (MM4) Designation. The project specifically will port the existing MiTEAS forms into the current TEAS environment with a limited number of changes that include: (1) Migration of Web Services for MCDB, RAM, and DBRIDGE from the .Net environment to the TEAS environment; (2) Completion of the automatic update of the Internal Fee Calculator from WIPO; and (3) Expansion of Browser Capability to include Opera, Mozilla, and Netscape 4.7.

b. Commitments and Benefits

The Trademark Electronic Application Submission (TEAS) and TEASi projects support the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks. The link to the Madrid Protocol will enable electronic interaction with the WIPO and other member organizations in a defined format.

The electronic receipt and transmission of data will reduce the labor intensive processing of paper documents and is a key ingredient to the eventual automated electronic workflow of the Trademark processes. With this solution in place, it is expected that data accuracy will increase, pendency will go down, and lost cases will be reduced. In addition, the Trademark customer will have easy access and communication during their Trademark prosecution.

- **Customer satisfaction**: Achieve and maintain customer satisfaction by simplifying the application process through electronic filing;
- **Productivity**: Streamline data capture process in PreExamination Section; and
- **Cost Reduction**: Eliminate the cost to capture application data electronically.

2.2.1.8 Trademark Identification Manual (TIDM)

a. Description

The Trademark Identification Manual (TIDM) system provides trademark examiners with a web-based interface for searching and retrieving the text of the Trademark Classification Manual. The TIDM is also used for Trademark acceptable identification on the Internet and Intranet to permit BRS searching of Trademarks goods and services codes. The TIDM system is intended to replace the manual search currently conducted on the Folio Views system. The purpose of this project is to provide easy updates of the Identification Manual to authorized users at the Trademark Assistant Commissioner's office. The updated database will be available for search and retrieval by all trademark-examining attorneys. Further, the updated database will be exported to XML format for the Cassis CD-ROM products and the ID manual on the Internet.

b. Commitments and Benefits

The commitments and benefits of the TIDM to staff and customers are met by providing accurate information on classes, goods and services. Upgrading the existing TIDM to newer technology will ensure that the staff and customers continue to have access to this information. In addition, the new system will be supported by the vendor, which also ensures high availability of the system with routine maintenance.

2.2.1.9 Trademark Image Capture and Retrieval System (TICRS)

a. Description

The Trademark Office receives and processes large volumes of applications and related correspondence. Currently, paper versions of these documents are routed and stored in

conventional paper file systems. The Trademark Image Capture and Retrieval System (TICRS) project will provide the capability to manage these documents in electronic form by capturing applications and related correspondence.

Scanning technologies are also required to maintain the database of cropped trademark images. The trademark image database contains over one million images. New images are added to this database continuously. Additionally, amendments to existing images are entered to replace the previous version. The database of images is currently updated, in batch. Maintenance of this database, in the future, requires more immediate changes. This project will install the capability to scan images and apply the update immediately from within trademark operations.

The scanning of incoming trademark documents will enable the implementation of re-engineered business processes, which will reduce processing cycle times and improve operating efficiency. Capturing drawings in an electronic format will replace the manual process of pulling drawings for use in the Trademark Search Library. Use of Optical Character Recognition (OCR) technology to convert scanned documents to text allows elimination of manual data entry and will improve quality.

Scanners have been installed in the law offices to fulfill a requirement that new or updated images should be added within the law office to eliminate having to remove the paper image from the file and send it off-site. Also, a key aspect of this AIS is to enhance the system to support the Trademark E-Gov initiative and the FAST/Madrid protocol.

b. Commitments and Benefits

The TICRS project supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks. This commitment requires achieving electronic processing of trademark applications, including related correspondence. In addition, the TIS/Madrid Protocol and the Trademark E-Gov will be supported by TICRS. Benefits of the TICRS project are described below:

- **Unit cost**: Reduced data capture, storage and retrieval costs;
- **Customer satisfaction**: Improved data quality as data is captured via OCR rather than manual keying and improved record keeping will result in greater file integrity and reduction in lost records;
- **Productivity**: Reduce contractor costs and level of effort associated with manual processes; and
- **Pendency**: Minimize pendency by reducing processing time associated with recovery of "lost" or misplaced files.

2.2.1.10 Trademark In-House Photocomposition System (TIPS)

a. Description

The Trademark In-House Publication System (TIPS) creates the *Trademark Official Gazette* (TMOG), Registration Certificates, Updated Registration Certificates, and related products. Each week the Office notifies members of the public of the activity in the trademark registry. This is formally accomplished via the Gazette and related products. The Trademark Official Gazette provides the public with notification of the cases that are published for opposition (approved for publication by the trademark attorney advisor), those marks that are registered (both principal and supplemental registers), and cases that have undergone post-registration events (including cancellations, renewals, affidavits, amendments, corrections, restrictions, republications under section 12c and new certificates). The current photocomposition process provides the automated means whereby those products are created from the contents of the Trademark Reporting and Monitoring (TRAM) database. TIPS is extending the functionality of the current system by including images in the text data sent to the Government Printing Office (GPO).

Before the introduction of the trademark photocomposition system, it was necessary for all data for the Trademark Official Gazette to be keyed using paper files as the source. The introduction of this system allowed for publication directly from the automated records. This system is maintained and modified, as changes are required.

TIPS will provide an even greater level of automated support for the creation of the Trademark Official Gazette. Using desktop layout software the USPTO produces the proof of text and images of the Trademark Official Gazette at the USPTO rather than waiting for text only proofs from the Government Printing Office. By automatically incorporating the image data directly, the Office will be able to verify that the correct image is associated with the trademark application and will be able to reduce costs and production time by eliminating the requirement to create a separate camera-ready image for pasting into paper proofs. In addition, current development activities include enhancements to TIPS to support the Madrid Protocol and OG proof printing.

TIPS provides specific benefits that are intended to:

- Print of the proofs with images at the USPTO allows proofreaders for the first time to verify that correct images are associated with the mark before publication;

- Eliminate the manual process used to prepare the paper copy of the image for insertion in the Trademark Official Gazette; and

- Ensure that the image server used by the search system and other microcomputer-based systems has the current version of the image associated with the mark.

With the new release of TIPS (Registration Certificates in-house), the following benefits are to:

- Provide the ability to print registration certificates and updated registration certificates in-house;

- Eliminate the manual sizing of the Trademark image currently done as part of the final legal review; and

- Reduce cycle time by eliminating sending data to Government Printing Office for printing of proofs and images to a contractor for preparation for publication.

b. Commitments and Benefits

The Trademark In-House Publication System project supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks. Some of the steps necessary to realize this commitment are producing the Trademark Official Gazette and registration certificates using digitized images rather than the cumbersome paper process.

Integrating text and image data will have a positive impact as follows:

Pendency: This system will aid in reducing trademark disposal pendency and will improve the accuracy of the electronic images of figurative elements. The process will remove the need for the manual pulling and matching of drawings from paper files and the mechanical reproduction and layout of these images. The Office is transmitting both text and image data in one electronic format to the Government Printing Office;

Customer Service: The USPTO will have the capability to print the registration certificates on demand in the Publication and Issue Section as a result of the process change. The process will drastically improve the ability of the USPTO to service requests for trademark records, as well as consolidating the means for maintaining vital office records. The ability to store and retrieve Registration Certificates and Updated Registration Certificates will drastically improve the time frame and process for obtaining and producing copies to satisfy customer requests; and

Data Integrity: Verifying and ensuring that the latest image for the trademark application is present on the image server will occur earlier in the processing cycle, thereby increasing the accuracy of data for pending applications.

2.2.1.11 Trademark Information System / First Action System for Trademarks 2 (TIS/FAST 2)

a. Description

The USPTO currently uses a paper-oriented process for processing Trademark applications. Pre-processing of Trademark applications includes: organizing the documents submitted; assigning a unique serial number; classifying the application; and routing the file to the appropriate examining law office. Trademark examining attorneys use the X-Search automated search system to determine if confusingly similar marks exist. If the Trademark is allowed to register, pertinent information is extracted and forwarded to the Government Printing Office for production of the Trademark Official Gazette, and the registration certificate.
Currently, the trademark examiners at the United States Patent and Trademark Office (USPTO) use a variety of systems with different client applications to perform their work. The TIS/FAST 2.0 will provide trademark examiners with the functionality to perform actions with a more unified client interface to many disparate USPTO data sources and subsystems. The objectives of TIS/FAST 2 include reduced operations costs, improved quality through workload and process management, reduced pendency, and international exchange of information to improve the protection of Trademark intellectual property. Additional objectives include improved access to USPTO information by internal users and the public, improved management reporting capabilities, improved security, and improved efficiency of application management.

FAST 1.0 went into production in January 2003. FAST 2.0 is scheduled for implementation in November 2005. The FAST is being developed by the Trademark Systems Division (TSD) and is the initial client component of the Trademark Information System (TIS). Some of the features in FAST provides (1) faster processing of applications and other correspondence by reducing many manual processes; (2) more efficient management of caseloads; (3) decrease in lost cases; (4) electronic interface with the International Bureau (IB) and the United States Patent and Trademark Office (USPTO); (5) US applicants to submit applications for international registration; and (6) international applicants to seek protection in the U.S.; (7) a mechanism for tracking workload volume that includes, but is not necessarily limited to, the number of examinations, actions, and other actions/tasks associated with examination; (8) printing of office actions to docket room in current law office or to central printing site for mailing; (9) Provides the capability to perform transactional edits prior to actions being taken; and (10) a flexible mechanism for modifying actions and navigating between and within actions. FAST 2.0 adds the following functions to the existing system: (1) electronic processing driven entirely by workflow and (2) additional functionality and automation for examination, publication and issue, intent to use, and, law office management, and outgoing correspondence.

b. Commitments and Benefits

The TIS/FAST 2 project supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks.

The implementation of an integrated and "paperless" operation is part of the Business Process Reengineering effort. Without the systems to support the newly defined business processes, the

USPTO cannot proceed with those processes that are intended to allow the USPTO to meet its goals of maintaining pendency times, enhancing examination quality through workload and process management, and reducing Trademark pipeline costs. The project is crucial to the concept and implementation of the re-engineered Trademark process, including the following initiatives:

Implement Automation for Patent and Trademark Applications: TIS/FAST 2 provides the full electronic support for examination of Trademark Applications;

Expand Work-At-Home Opportunities: With TIS/FAST 2 all documents are available electronically, thereby allowing employees to work on cases from their home as they become available and not have to come into work to pick up the paper files. All generate work is also handled electronically; and

Implement and Accelerated Examination Path: TIS/FAST 2 allows for the electronic identification and notification of cases that need special processing based on application's attributes and status in the examination process.

In addition, TIS/FAST 2 supports the President's Goal of promoting E-Gov by allowing USPTO to share information more quickly and conveniently with the public, businesses, and other intellectual property offices. In addition, a component, TEAS, supports the strategic goal of a citizen-centric E-Gov for Trademarks by providing for more efficient communication with the public and our customers by providing a single point of access to trademark application information.

2.2.1.12 MiTEAS

a. Description

The USPTO became a Contracting Party (member) of the Protocol by depositing the Instrument of Accession (required membership document) with the International Bureau (World Intellectual Property Organization or WIPO). The Office has participated in meetings relating to the development of regulations for implementing the Madrid Protocol, a treaty concerning the international registration of Trademarks, which was adopted in Madrid, Spain, on June 27, 1989. The Protocol itself relates to the Madrid Agreement Concerning the International Registration of Marks of April 14, 1891, as revised at Stockholm on July 14, 1967, and amended on October 2, 1979.

The USPTO, in conjunction with delegates from WIPO, the United Kingdom and Canada, defined procedures and formats to be used to exchange Madrid Protocol data electronically between WIPO and any member country of the Madrid Protocol. These standards cover both text and image data.

The bill implements the protocol related to the Madrid Agreement on the International Registration of Marks (adopted June 27, 1989 and effective April 1996). The Protocol permits U.S. trademark owners to file for registration in any number of member countries by filing a single standardized application, in English, with a single set of fees, with the USPTO. The Madrid Protocol System will support the following functions: accepting electronic as well as paper applications; publishing a revised version of the Trademark Official Gazette which includes Madrid Protocol information; exchanging electronic data with WIPO (the Electronic Data Interchange File); modifying application processing and post-registration software; and creating an archive file of all data sent to and received from WIPO.

The Madrid project includes the development of a new Internet AIS to support the exchange and processing of protocol filings. In addition, many existing automated information systems must be modified in order to support processing of Madrid filings in the USPTO and to support notification to the international bureau. Systems impacted by Madrid Protocol will include TRAM, TRADEUPS, TICRS, TIPS, TEAS, X-Search, TIS, RAM and PTAS.

b. Commitments and Benefits

Under Madrid Protocol trademark customers will:

- Be able to obtain a single registration valid in all participating European Union (EU) member countries and other participating states, with one renewal date, by filing one application with the World Intellectual Property Organization (WIPO), with one fee, in one language;
- No longer be required to register trademarks in individual EU member states;
- Save money on amending their registrations by filing one amendment application with WIPO; and
- Lead to reduce waiting periods for processing of trademark registration applications as the Protocol stipulates members must act upon the applications within eighteen months.

2.2.1.13 Trademark Reference Law Library (TRLLS)

a. Description

The Trademark Reference Law Library (TRLLS) provides access to reference material for use by the trademark examiners and lawyers. The data generally consists of commercially available CDROMs containing technical documentation required to assist examiners in trademark searches.

b. Commitments and Benefits

The TRLLS provides commitment to the staff and customers alike by ensuring that errors are minimized during the processing of Trademark applications. The ability for the Trademark examiners to seek information electronically also contributes to an expedited process. The customers will benefit by knowing that their Trademark applications are reviewed with the up-to-date reference information that provides accurate input into the examination procedures.

2.2.1.14 Trademark Tradeups System (TRADEUPS)

a. Description

The Trademark Data Entry and Update System (TRADEUPS) capture the character based trademark data elements. This data supports the processing of trademark applications through pre-examination, examination, publication and issue, and post-examination. It is also used for notification (publication) to the public at different points in the life of an application/registration.

As the number of filings continues to grow, it becomes costly and difficult to maintain accurate records of the content of those files. Since the data captured in TRAM is used to populate the database of the search system, the quality of examination is a function of the quality of the capture process. The Office of Trademarks is revising the filing process to improve the quality of the data submitted to the office and captured internally. Through the Trademark Electronic Application Submission (TEAS) initiative, electronic filing has been offered as a way to streamline the communications between the applicant and the trademark attorney advisors. For paper submissions, standard forms are being designed for all Trademark filings. These forms will more easily support scanning and optical character recognition for data entry. Both efforts rely upon data tagging as a way to identify data elements rather than forms-based presentation and acceptance of data elements. Future exchange of data both within and outside of the Office is envisioned to be through tagged data elements. TRADEUPS provides the facility necessary to process tagged data and supports these reengineering initiatives.

TRADEUPS accepts, and allows for the creation of, flat files of textual data. The data source may be electronic submission, scanning/OCR or keyed. The data is acceptable as either tagged or not tagged. The Legal Instruments Examiner is provided with this data in digital form and the ability to enter, change, tag, re-tag and verify the contents of the file. The initial implementation supported the capture of new applications.

Subsequent releases incorporated the business rules for other document types. TRADEUPS was enhanced in December 1998 to support modifications of existing trademark records. However, through the trademark registration cycle, it is necessary to amend and correct pending applications and registrations. These changes may reflect alterations in the bibliographic data content or changes to the elements that the office creates and maintains to describe each case.

TRADEUPS provides a common interface for entry or modification and validation of any trademark submission. A common interface minimizes training as personnel are reassigned from

one area to another. It also supports the display of the trademark image so that validation and maintenance of image data will be improved. TRADEUPS will be modified to support the redesign of business processes of FAST/Madrid, and modifications to support Madrid Protocol data. Maintenance activities for Tradeups include migration to XP, compliance to Section 508, XML for TEAS, and system performance monitoring.

b. Commitments and Benefits

TRADEUPS supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks. To meet this key commitment, the USPTO needs to modernize the Trademark Reporting and Monitoring (TRAM) system. One of the steps necessary to realize this commitment is to capture and maintain the character-based trademark data elements.

The successful implementation of TRADEUPS has had a direct and positive impact on the efficiency and accuracy with which new applications are entered into the USPTO's database. Generally, the benefits of the system contribute to improving–

Productivity: Benefits in productivity will continue to be realized as less manual effort is required to enter the data from new applications with the introduction of electronically filed and scanned/OCR applications. The productivity increases will allow the Office to adapt to the increase in filings without proportional increases in data entry (contractor) staff;

Unit Cost: Streamlined data entry has resulted from all new processes. Less time is required to capture the character-based data and less effort is required to identify the data elements within incoming documents. Efficiency will be realized, as the data entry and data modification functions become increasingly similar. Operational support demands decreased as the introduction of this system removed the need to support USPTO non-standard desktop equipment;

Customer Satisfaction: Customer satisfaction is expected to increase as the office improves throughput and the quality of its records and decreases pendency. Some of this improved quality has been recognized with the data entry portion of TRADEUPS; and

Employee Satisfaction: The ability to modify data is available from the desktop, which is a capability that some attorney advisors have requested.

2.2.1.15 X-Search System

a. Description

The Trademark Office relies exclusively on automated searching for examination. The automated trademark search system (X-Search) contains data on live, abandoned, cancelled, and expired trademark applications and registrations in both text and image formats. This system is one tool used to determine the registrability of new applications. This is accomplished by executing sophisticated search functions against the data in a search for marks that are confusingly similar. The search includes the examination and retrieval of all trademark records including text and image data. The demand on the search system is increasing. Usage of the search system has continued to increase at a rapid rate. In FY 2001 there were 328 examiners using the system, averaging of over 250,000 searches per month.

In addition, members of the general public from within the Trademark Search Library and selected Patent and Trademark Depository Libraries use X-Search. Generally, the public relies upon this system in the development of new marks, prior to filing for application. Demand by the public for access to X-Search is increasing. In addition to requests for extending the search system to additional PTDLs, there was a public demand for a search capability on the Internet. The Internet search capability is provided through the Trademark Electronic Search System (TESS) project.

In response to Public Law 105-330, the USPTO conducted a study on how to better protect Native American tribe official insignia. It was determined that the insignia is added to the existing database as non-registration data. The data can be accessed via the X-Search system and TESS.

In addition to the X-Search system, the ID-Manual was made searchable using BRS in June of 2001. In the future, the Trademark Manual of Examining Procedure also will be made searchable using BRS. A key enhancement area will be to convert data from Word documents to BRS Searchable Database to support FAST/Madrid. The search engine has been in use at USPTO since 1998 with a migration to X-Search 8.0 completed in mid FY 2004. The current system is maintained by a combination of contractor support and government employees to ensure that examining attorneys can use the current capability.

b. Commitments and Benefits

The X-Search system supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward reducing application processing time and increasing quality of trademarks.

The X-Search Replacement project assisted the Trademark Business Area in their efforts to make improvements in the following areas:

- **Productivity**: by allowing increased numbers of concurrent users;
- **Employee satisfaction**: By reducing search times and providing enhanced functionality; and

- **Customer satisfaction**: By providing additional access to Trademark data through on-line access.

2.3 Dissemination

Dissemination of USPTO's extensive body of scientific knowledge stimulates development of new inventions and technologies that improve national and international economic conditions. The information dissemination function area at the USPTO can be divided into three offices: (1) the Office of Electronic Information Services (OEIS); (2) the Office of Public Information Services (OPIS); and (3) the Office of Public Records (OPR). These offices are under the Executive for Customer Information Services (ECIS), and serve the public both separately and collectively. For purposes of providing clear understanding of their operations, needs, and plans, this Capital Asset Plan and Business Case has been developed with three "answers" for each question. Taken as a whole, these responses represent the USPTO's information dissemination organization.

OEIS: The Office of Electronic Information Services (OEIS) oversees the effort to achieve Patent and Trademark business objectives for the dissemination of electronic information. Working with the Patent and Trademark businesses OEIS manages a line of electronic information products and services, develops plans for improving product lines, evaluates new electronic information products and services, researches marketplace alternatives, and manages customer accounts. OEIS also provides statistics, analyses, and reports relating to patenting activity for USPTO executive management, Federal and foreign government agencies as well as the public. There are two branches under OEIS: (1) The Data Dissemination Branch (DDB) and the Electronic Products Branch (EPB).

The DDB manages the dissemination of patent and trademark databases to USPTO customers and international partners. The Branch recommends specifications for data base dissemination products and reviews contractor deliverables for compliance with those specifications. The DDB serves as USPTO experts on definition and availability of data base products. The Electronic Products Branch (EPB) defines, validates, and prioritizes functional requirements for electronic dissemination products. The Branch provides technical experts to support development of electronic dissemination products. These experts evaluate and recommend technologies for the dissemination of electronic products that are consistent with USPTO System Architecture guidance. The Branch also advises and coordinates with the Patent and Trademark businesses for the maintenance and modification of electronic dissemination products as required by changing business needs.

OEIS is also responsible for maintenance. Optical Disk Product Services leverages substantial expertise of EPB staff throughout the agency. The approach saves duplication of effort in contracting, hardware, and labor, ensures that all dissemination products meet minimum

requirements for public use at PTDLs, and ensures that agency complies with requirements to make electronic products available to Federal depository libraries, usually at no cost to USPTO. In addition, OEIS provides patent and trademark data directly to information vendors who update and maintain their own databases and/or subsequently resell the data. This patent and trademark data is disseminated through the Data File Delivery (DFD) system via File Transfer Protocol (FTP) and DLT cartridges. The FTP files are available by 2:00 a.m. on issue day. The DLT cartridges are disseminated on issue day via the purchaser's courier service. There are approximately 50 external customers that receive approximately 150 files that are disseminated daily, weekly, monthly and bi-monthly. A typical weekly dataset size is just less than 1 gigabyte.

Each year the USPTO produces nearly 200 Cassis optical disc masters containing a wide variety of patent and trademark information. The Cassis products include patent text data, patent image data, trademark text data, and trademark image data. Over 70,000 discs per year are sold to the public, distributed to intellectual property offices around the world, and are made available for use at no charge in PTDLs and the USPTO search facilities. An additional 38,000 discs are distributed each year to Federal Depository Libraries directly from the Government Printing Office.

OEIS currently has Cassis workstations in all of the PTDL's. This equipment needs to be replaced at the end of life cycle. The hardware will be replaced as it reaches end of life cycle and is no longer supported by USPTO and the vendors. OEIS also supports the IPD mission to provide patent and trademark information in products designed for searching by the public at Patent and Trademark Depository Libraries, at Federal depository libraries, or by anyone who cares to subscribe. Other OEIS activities support mastering and dissemination of the following products and activities:

- Tape loading, hardware configuration, software configuration, data manipulation, and dissemination;

- The Assignment File which contains data of assignment information recorded at the USPTO for patents granted and patent applications published;

- Patents ASSIST provides searchable text of many patent search tools including: Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office, Index to the U.S. Patent Classification, IPC - USPC Concordance, Manual of Classification, and Manual of Patent Examining Procedure. In addition, Classification Definitions, a Patentee/Applicant-Assignee Index, and a Classification Orders Index are included. The Patentee/Applicant-Assignee Index shows ownership at time of issue for utility patents 1969 to present, for other patent types 1977 to present, and inventor names 1975 to present. The Classification Orders Index is a list of classifications abolished and established since 1976 with corresponding Classification Order number and effective date. Updated quarterly. Includes a copy of the Cassis2 Installation and Reference Manual and product-specific User's Guide;

- Patents BIB contains bibliographic information for utility patent grants issued from 1969 to the present and for other types of patent documents issued from 1977 to the present. In addition, bibliographic information for patent application publications is provided starting in March 2001. There are more than 15 searchable fields including title, abstracts from September 1988 to present, current classifications, assignee at time of issue, date of issue, serial number, inventors' names and full addresses (if not assigned at time of issue), and status (i.e., withdrawn, corrected, expired for failure to pay maintenance fees, reinstated, reexamined or term extended). Patents BIB provides image locations on USAPat discs for patents issued 1969 to date and USAApp discs for patent applications published March 15, 2001, to date. Includes a copy of the Cassis2 Installation and Reference Manual and product-specific User's Guide.

- Trademark and Patent data dissemination products and services require a support server for file staging, file processing, and repository. This server supports the following information dissemination activities: the Data File Delivery (DFD) FTP system, the USPTO patent grant (PatFT) web database, patent statistics (NTAF) database, CD-ROM/DVD-ROM information products, USPTO's international data exchange partners, and commercial data resellers;

- The Trademark Annual Products are actually retrospective files containing all data within the Trademark System. They are referred to as annual files because they are created at the end of each calendar year; and

- Trademark Applications containing the daily transactions of trademark activity such as published for opposition, registrations, renewals, cancellations, and other activities, including the TTAB that has all daily Trademark Trial and Appeals Board (TTAB) proceedings.

OPIS: The Office of Public Information Services (OPIS) promotes awareness of and provides access to patent and trademark information products and services to external customers. OPIS distribution channels include onsite public search facilities, a nationwide network of libraries, and telephonic-based 24x7 customer assistance service. OPIS maintains customer service operations and implements enhancements to current IT platforms for electronic information delivery or service control. OPIS utilizes existing USPTO information products, drives development and provides user requirements for new products, and develops training programs and general information products to assist external customers. Key activities include administrative and technical oversight and support to the Divisions under the Office of Public Information Services (OPIS) which plays an integral role in providing patent and trademark information to domestically and world wide. The OPIS provides over-arching technical support to the public information issues and projects affecting the USPTO offices. In addition, the editorial and Web publishing of general information products, public information directories, and product/service catalogs are maintained by OPIS.

OPR: Office of Public Records is comprised of two business areas that operate on under a commercial, fee for service model—Assignment Service Division (supported by the Patent and Trademark Assignment System (PTAS)) and Document Services Division (supported by the

Order Entry Management System (OEMS)). The PTAS system data supports information used in the Assignment Historical Database (AHD) system. The mission of OPR is to aid patent and trademark owners in establishing and maintaining their property rights by recording assignments and providing certified copies of official USPTO documents in support of priority and legal requirements. The PTAS system is an image based workflow system for the recordation of assignment documents. The information from PTAS provides the data for use in the AHD system used for the searching of recorded assignment information. OEMS is an order tracking system that accepts orders, requests documents from the various PTO image stores and physical locations, extracts data from various PTO databases for the creation of certification statements, tracks order status and directs the delivery process to be followed when completed. The two branches that support the OPR are the Assignment Services Division and the Document Services Division.

The Assignment Services Division (ASD) examines and records assignments and other transactions (licenses, liens, etc.) affecting patent and trademark property rights; advises attorneys and intellectual property owners on requirements for recordation; and researches assignment records to resolve customer issues concerning USPTO ownership records. There is currently a backlog of approximately 115,000 paper document recordation requests with a processing time in excess of 203 days. This backlog is the result of budget and resource cuts that have occurred over the last few fiscal years. Because of the real time reporting of assignment recordation on the Assignment Historical Database (AHD) customers who have submitted paper documents are seeing lags in the recordation of ownership records which is subsequently affecting the orderly commercial transactions, administrative proceedings and litigation involving their intellectual property rights. The Assignment Services Division is receiving approximately 1200 documents a day and is processing approximately 1000 documents a day which allows for an increase of 1000 documents a week or one additional processing day a week or 4 days a month—adding approximately 48 processing days to a years paper receipts. Through the combined use of USPTO staff and contractors working on overtime it is estimated that processing time for recordation of paper documents could be reduced from the current 203 days to approximately 50 days.

The Document Services Division (DSD) manages systems, processes, and procedures to fill orders for certified and uncertified copies of U.S. Patent and Trademark Office Records. The Division answers customer questions and resolves customer problems related to order fulfillment; manages contracts involved in the production of copies; develops requirements for new and enhanced information systems used for uncertified and certified document delivery and implements solutions; maintains and analyzes statistical data on workflow, productivity, and timeliness, and identifies sales and business trends; maintains liaison with Partnership Patent and Trademark Depository Libraries for the purpose of fulfilling customer requests for copies of U.S. Patent and Trademark Office records; updates automated information of record for patented files; and reconstructs patented and abandoned patent application files. The OPR uses the Patent and Trademark Assignment System (PTAS) to record patent and trademark assignments.

The CIS will continually evaluate partnering with industry, and will strive to continually streamline operations and improve customer service. The underlying approaches to improve CIS products and services will involve the following key Strategic Themes for CIS:

- **Leverage the Web to deliver CIS products and services**: Allow customers enhanced electronic access to relevant USPTO information and services;
- **Streamline CIS product and service delivery processes**: Automate existing manual processes or eliminate unnecessary information dissemination functions;
- **Focus on the Customer**: support a USPTO-wide customer communications / change management process; and
- **Continue to support partnerships and international programs**: Continue to partner with external entities to provide efficient and effective customer service, including the Trilateral and WIPO IT projects – and the PTDL program. This strategic theme focuses on providing Program Management support to CIS as the Office proceeds on its transformation to meet the needs of the USPTO 21st Century Plan.

The USPTO Dissemination Services will continue to provide quality USPTO products. The services support the OCIO business objectives to manage the life cycle of its electronic data and information products and services through daily management, tracking, and distribution of patent and trademark products. In addition, patent and trademark products are designed for searching by the public at Patent and Trademark Depository Libraries, at Federal depository libraries, or by anyone who subscribes to the service. The information and products that are distributed externally by USPTO are accurate, timely, and accessible for the customers.

2.3.1 Patent Data on the Web

a. Description

This system provides public access to the full text and images of patents and published applications via the USPTO web site. In October 2000, the patent database on the Web was expanded to include additional U.S. patent image data back to 1790 and other ancillary documents. The patent image data can be accessed by a class/subclass search or by patent number. In FY 2001, the USPTO began electronically publishing patent applications and making them available on the web. Biosequence repository data was made available in FY 2002. In FY 2004, assignment data will be added to the web. OpenText in Albany, NY hosts the USPTO patent text (1976-Present) as a service. This function will be moved in-house in FY 2004. Beginning in FY 2004 and completing in FY 2008, perfection of back-file data will be developed and placed on the web. In addition, as part of the consolidation of image storage project, the five image storage systems (Patent and Application images on the web, US patent, foreign patent, and U.S. applications) will be consolidated into one single system. This activity is expected to start in FY 2006 through FY 2007, including enhancement for the display of color images in FY 2006.

These patent databases, as well as other databases that the USPTO currently provides to USPTO examiners and Patent and Trademark Depository Libraries (PTDLs), are made available to the public using in-house resources. BRS Search is used as the search engine and to achieve economies of scale since the Web-based servers can "copy" the content of the in-house server. The data is replicated outside the USPTO firewall to ensure that public access does not negatively impact examiner access, and to prevent public access to PTOnet and USPTO's internal systems. Maintenance activities for this system involves the support for the weekly issue loading, and two maintenance releases.

b. Commitments and Benefits

Offering the same databases used by examiners to the public improves the public's ability to search, enabling them to research the most recent technology and information. Cost reductions have been realized in FY 2004 as the Office will stop providing paper copies of cited patents in office actions and refer applicants to the web site for patent reference information. Also, making more data available could reduce the number of applications for ideas already patented. In addition, this system brings access to patent and trademark information closer to citizens and businesses that need such information to make important business and investment decisions to successfully compete in the global economy.

2.3.2 Assignment Historical Database (AHD)

a. Description

The Assignment Historical Database (AHD) is the database used by various USPTO organizations and the Public Search Facilities for reviewing recorded assignments. The system today is a Clearpath Cobol/DMSII database with access from either legacy terminals or PC terminals. In addition to the on-line access, data is distributed on weekly, bimonthly and annual basis to USPTO customers.

The text data for issued and published Patent Assignments and Trademarks was added to the Web in FY 2004. In addition to the current electronic store of assignment data there are data stores on microfilm and index cards that will need to be assessed for transfer to new electronic media. In FY 2005 and beyond, Patent and Trademark Assignment search programs on the Web will be enhanced to operate more effectively on the Intranet, UPWSnet, and the Internet, i.e., assignments will be provided on the Internet for both text and image formats in addition to search capabilities for the Madrid protocol.

b. Commitments and Benefits

The Assignment Historical Database supports the Customer Information Service performance goal to promote awareness of, and provide effective access to, patent and trademark information. The Program is committed to the following business goals:

- Consistently achieve customer satisfaction by understanding and supporting customers' needs;

- Promote the use and accessibility of intellectual property information;

- Improves in-house ability to respond to customer inquiries and requests by enhancing current research capabilities to include image display;
- Develop the highest quality information products and services which deliver information when, where, and in the format needed; and

- Promote cooperation with other intellectual property offices through cooperative projects and exchanges.

2.3.3 International Exchange Standards

a. Description

USPTO is supporting the international exchange standards for patent applications. Effective January 2005 the WIPO/PCT Patent Application and Patent Grant Data/XML (Red Book) DTD will be deployed into production, creating the following data files:

- Patent Application Data/ XML (Red Book) contains the full text (bibliographic data, specifications and claims), drawings, and complex work units (tables, mathematical expressions, sequence data, and chemical structures) of each patent application publication;

- Patent Application Data/ XML (Red Book) - (text only) contains the full text (bibliographic data, specifications and claims), without drawings or complex work units; and

- Patent Application Bibliographic Data is a by-product of the Patent Application Data/ XML (Red Book) and is created each week and place on the USPTO website and available to the public at no charge.

b. Commitments and Benefits

Support for the dissemination of International Exchange Standards satisfies the commitment and benefits to the staff and customer. The international patent data is available to the external customers to allow them pertinent information regarding international patents. For the staff, the use of XML file with associated external entities constitutes the complete record of the published grant.

2.3.4 CD-ROM Reference Library (CRLS)

a. Description

The CD-ROM Reference Library contains a collection of programs that allows the public to search information from CDs and DVDs that are produced by organizations within the Office of Customer Information Services (CIS). Working with the Patent and Trademark businesses, the CD-ROM Reference Library maintains and provides access to collections of patent, trademarks, and related information in CD and DVD format. The CD-ROM Reference Library responds to customers through various media and providing the public with patent and trademark information. The CD-ROM Reference Library will have approximately two releases per year as part of the OCIO release management strategy. In general, some of the maintenance activities for PAIR will include security upgrades and support for Certification and Accreditation, performance optimization, timely response to user requests for emergency and normal changes, timely response to change requests resulting from changes in interfacing AISs, timely response to change requests as a result of changes in the technical environment including, and Longhorn and Oracle upgrades.

b. Commitments and Benefits

The CD-ROM Reference Library is making the commitment to provide the public with access to patent and trademark information in an efficient manner. The products and services of the CD-ROM Reference Library are beneficial to customers and staff alike by enabling the customer to receive information in a timely manner and allowing the staff to retrieve the information in a central location through electronic means. This system reflects continuation of CD-ROM and DVD libraries of patent, trademark and assignment information that can be independently accessed at numerous sites. These libraries provide a measure of backup capability and meet international treaty agreements.

2.3.5 Customer Information Services Budget Model

a. Description

The Executive for Customer Information Services (CIS) operates a world-class information services business that delivers quality information products and services to meet the needs of the USPTO, and the International Property community, and the public. The CIS evaluates requirements, determines specifications, evaluates the marketplace, and recommends improvements in a product line of information products and services in a variety of media and access points. The Office of the Executive for CIS maintains and provides access to collections of patents, trademarks, and related information in electronic, microform, and paper format in the Patent and Trademark Office's search facilities and the national network of Patent and Trademark Depository Libraries. The Office oversees the complete effort to achieve Patent and

Trademark business objectives through support of e-business objectives and quality information dissemination products and services. Four areas of information include: (1) electronic information products; (2) public information services; (3) patent public records; and trademark public records.

b. Commitments and Benefits

This activity satisfies the commitments and benefits the staff and customers. The CIS Budget Model will enable reduction of paper collections and maintenance as well as providing assistance in coordination of international and trilateral projects. Customer needs will be met by ensuring the availability of USPTO information products and services. The Model will also improve electronic information access and online customer transactions that will serve external customers nationwide.

2.3.6 Data File Delivery System (DFD)

a. Description

This system provides operational support for the dissemination of bulk full text and image patent and trademark data to customers. Data is available for dissemination via magnetic tapes and via FTP download over the Internet. This process will also include all support data files that are created on a daily, weekly, monthly, bi-monthly or quarterly basis and in a variety of formats (such as XML and TIFF). Weekly releases of patent grants and published applications are assembled, validated, and made ready for dissemination to the public, international exchange partners, and to Patent and Trademark Depository Libraries (PTDLs). Files for FTP download are placed on a publicly accessible server but require password access, provided as part of the product sales agreement with customers.

b. Commitments and Benefits

This system supports the weekly dissemination of new patent grants and published patent applications. Through DFD, bulk data is provided to USPTO customers over the Internet and via magnetic tape media. The DFD system supports the goal of maximizing dissemination of USPTO information and enhances the availability of government information.

2.3.7 Enterprise Contact Center System (ECC)

a. Description

The Enterprise Contact Center (ECC) utilizes state-of-the-art contact center technology to modernize customer service for United States Patent and Trademark Office (USPTO). The ECC solution includes following functionalities: Automatic Call Distribution (ACD), Interactive

Voice Response (IVR), Computer Telephony Integration (CTI), Teletype/Telecommunications Devices for Deaf (TTY/TDD) services, unified messaging (fax, voice and e-mail) and integration with the USPTO Customer Contact Management System (UCCMS) (Siebel CRM tool), Nortel Private Branch Exchange (PBX), USPTO's Enterprise Asset Management System (EAMS) (Remedy help Desk tool).

The ECC provides USPTO internal and external customers with easy; convenient and speedy access to USPTO provided information and services. Currently the system serves 17 business centers utilizing approximately 266 agents and supervisors. It operates at the Crystal City location and will also support users at the USPTO Alexandria Headquarters.

The USPTO phone system refers to the existing Centrex in Crystal City and the Nortel Private Branch Exchange (PBX) at the USPTO Alexandria Headquarters

b. Commitments and Benefits

The ECC meets the commitments of the customer and the staff. The ECC provides automated Call Routing, Integration with UCCMS and EAMS through API, ECC connectivity with Nortel PBX and digital phone at USPTO Alexandria Headquarters, and daily support of USPTO OCIO Help Desk. These capabilities enhance the ability of USPTO to improve its customer service functions, especially through the use of interactive tools. In addition, the benefits of the ECC are dissemination of information and call tracking, and reuse of data. Customers and staff will be able to exchange information by utilizing more than one source of communication. The ECC provides great flexibility in which the USPTO user community and its customer base can dynamically exchange information, and apply the same data for multiple sources of information dissemination.

2.3.8 File Tracking System (FTS)

a. Description

The USPTO's File Tracking System provides customers with the opportunity to review and copy paper records of patents and trademarks. The File Tracking System will follow a release management strategy with approximately two releases per fiscal year. The maintenance activities include, timely response to user requests for emergency and normal changes, timely response to change requests resulting from changes in interfacing AISs, timely response to change requests as a result of changes in the technical environment including, Longhorn and Oracle upgrades, and other routine checks.

b. Commitments and Benefits

The FTS provides an environment for customers to access patent and trademark files. Customers can review copy of paper records through a system that tracks the records on file. The patent and trademark information can be easily located and retrieved by the customer.

2.3.9 Order Entry Management System/Certification (OEMS)

a. Description

The USPTO receives requests for copies of patent and trademark documents by: mail, fax, phone, electronic mail, or by direct customer input via the Internet web site, and fills these orders through the use of the Order Entry Management System (OEMS). Orders are entered, fees collected, requests processed, documents retrieved and reproduced, and the complete order package is routed for distribution by U.S. mail, Federal Express, Internet, or fax.
The OEMS interfaces with both patent and trademark electronic image systems to retrieve images used to fill customer requests. Documents, which are not in an image store, are retrieved from the paper format and reproduced manually. Currently, the OEMS is able to deliver copies of US Patents and published patent applications to customers through the Internet. It is planned that other public images will also be available for delivery through the Internet.

The OEMS is also capable of generating the official USPTO "certification" statement that is affixed to certified documents; generating form letters for correspondence with requestors; is able to provide status information to customers directly through the Internet site; and provides operational and management reports to the Office of Public Records.

Future enhancements include automating the exchange of priority documents with the World Intellectual Property organization, the Trilateral Partners, and other foreign intellectual property offices. In addition, the OEMS will be modified to provide an interface with IFW/PEAI to enable retrieval of patent applications from complete File Wrappers, and progress toward an object-oriented environment compatible with the USPTO enterprise architecture. OEMS will receive full functionality to process XML documents to produce products available through IFW such as process XML-formatted patent applications. OEMS must migrate to new software architecture to provide the vehicle for electronic business that USPTO commercial customers expect.

Feedback from customer focus sessions and preliminary market analysis showed a demand for specially bundled and customized information products that can be fulfilled with the use of OEMS. For example, customers have asked for "foreign filing packages" which would include a mix of individual documents (application-as-filed), inventor's declaration, recorded assignments) assembled and ready to transmit to foreign Intellectual Property Offices (IPO). Similarly, while much information is now available about patents and trademarks when issued, new products are being requested which would allow customers to receive current information such as maintenance fee payment status, ownership transfers and reclassification.

b. Commitments and Benefits

OEMS supports the Information Dissemination Services macro performance goal to promote awareness of, and provide effective access to, patent and trademark information. With the new OEMS and its regular enhancements, the USPTO will continue to have a highly flexible order management system capable of accepting orders for all publicly available USPTO products. The fundamental design of OEMS anticipates business area updating of new products, retrieval sources, prices, fee codes, payment methods, customers, delivery medium, delivery times, etc.

OEMS provides readily accessible management information that includes a wide range of production operation statistics, daily management control reports, and overall program trend data by operating system, operator, product, and processing time. For example, individual operator identifications are assigned in order to capture individual productivity; sales information is available by product; processing times are available by product; and, the growth in the customer base is available by customer type/location and/or payment means.

2.3.10 Patent and Trademark Assignment System (PTAS)

a. Description

The Patent and Trademark Assignment System (PTAS) is a workflow/image-based system that automates the flow of assignment documents through the Assignment Recordation Services Program. The legal documents along with a recordation cover sheet enter the system via scanning, direct import from the Electronic Trademark Assignment (ETAS) sub system, the Electronic Filing System (EFS), or faxed into the system. Paper submissions are scanned manually then stored (no paper is handed for Internet or faxed submissions) until they are ready to be mailed. Electronic submissions are faxed back to the customer with either a notice of recordation or a notice of non-recordation. The PTAS system moves the electronically scanned documents through the various functional phases (indexing, examining, and mailing). The PTAS automatically updates the public database (Assignments Historical Database) once the assignment is deemed recordable and the images are extracted to tape for microfilm conversion. This system also produces reports that provide the Assignment Recordation Services Program with information on the document cycle time and the number of documents processed during each cycle phase. PTAS will be updated to improve submission process of both Patent and Trademark Assignments through the Internet interfacing with electronic AISs - ETAS, TARR and PAIR. Support will be on-going to the Patent and Trademark Assignment System, including the web application that reside in the DMZ that allow electronic filing of both patent and trademark assignments.

b. Commitments and Benefits

This system meets the commitments to the customers and staff alike by promoting the awareness of and providing effective access to patent and trademark information through Information

Dissemination Services. The benefits of the PTAS include increased throughput capability, and more accurate recordation of assignments that encourages individuals and companies to always record transfer of properties in return for the fees charged by USPTO.

2.3.11 Patent Data Dissemination System

a. Description

This system supports loading of weekly issues of grants and published applications. The patent and trademark applications and grants captured as electronic data are used to generate machine-readable, digital copies that are made available to the public in well-documented formats. Both domestic and international customers pay a fee based on USPTO's cost of disseminating the data. Customers who purchase patent and trademark text and image data files are primarily large-scale commercial retailers of on-line database services who provide the data to thousands of their customers, thereby contributing to wide-scale dissemination of USPTO information to the public. The USPTO also exchanges data files with its Trilateral Partners - European and Japanese Patent Offices.

b. Commitments and Benefits

This system promotes awareness of, and provides access to, patent and trademark information. Understanding and supporting customers' information needs as described below meet the commitment to customer satisfaction.

- Promote the use and accessibility of intellectual property information;
- Develop the highest quality information products and services which deliver information when, where, and in the format needed; and
- Promote cooperation with other intellectual property offices through cooperative projects and data exchanges.

The benefits to the customers are as follows:

- Provide effective access to USPTO information through the sale of patent and trademark data files to commercial vendors for the cost of dissemination;
- Improve the speed of delivery of data products to USPTO external customers;
- Improve the USPTO external customer's satisfaction with USPTO's data products;

- Deliver the patent and trademark data products to USPTO external customers on the day of public availability;
- Ensure the same high quality control of the data products as in the current system; and
- Allow the USPTO external customers on-line access to download appropriate data products.

2.3.12 Public Search Room/ Service Card (PSR/SC)

a. Description

The USPTO's Public Search facilities provide customers, some of whom are professional researchers, with the opportunity to review and copy paper records of patents and trademarks (commonly referred to as file wrappers). This system provides automated and internal controls to ensure file integrity while allowing public access to file content. The system includes a badging component to create plastic badges to identify customers. The USPTO's Public Search facilities provide customers, some of whom are professional researchers, with the opportunity to review and copy paper records of patents and trademarks, commonly referred to as file wrappers. The USPTO Solicitor has determined that file wrappers, as the only archival record of the prosecution history of a patent or trademark application, are legal documents that must be better controlled.

A new controlled access file area where files are read and copied by the public was established in FY 1998 as the Patent File Archive. Through the use of a badging system (e.g., User IDs) containing customer information and the File Tracking System component, the number of files checked in and out can be tracked and limited.

Midterm actions in FY 1999 worked toward providing further security for the file reading area. In FY 2000, the USPTO improved the receiving and tracking of file wrappers and extended the system to the Trademark Search Library. The USPTO is scanning file wrappers to capture and retain data and images in FY 2003. This will allow Public Search Room customers to access electronic file wrappers via workstations. In FY 2003, the USPTO implemented electronic access via workstations, with many requested file wrappers being captured at the source. Starting in FY 2005, the Public Search Room Badging will follow a release management strategy for approximately two releases per year.

b. Commitments and Benefits

The following benefits will be achievable through implementation of the Controlled Access System and User ID Database:

- Badging for access to search room by users will permit USPTO to implement file tracking and file scanning, with printing for multiple users also possible;

- File wrapper access is controlled because users will be limited to a maximum number that can be withdrawn at one time. Wrappers must be returned before new ones will be issued. Wrappers still outstanding when the search room closes will be tied to the identity of the searcher who withdrew them;

- Electronic access will eliminate loss/deterioration of paper file wrappers; and

- System will block file checkout beyond maximum number set for one user. Daily reports will identify outstanding files and users who checked them out.

2.3.13 Public Search Room/Universal Public Workstation (UPWS)

a. Description

The Public Search room provides the public with access to USPTO database search applications through availability of the Universal Public Workstation (UPWS). The UPWS provides a shell from which the applications will be launched. Their functionality is unaltered by the UPWS. UPWS resides in its own domain, UPWS Network (UPWSnet), and is separate from PTOnet. UPWSnet interfaces with PTOnet through a firewall that safeguards PTOnet from unauthorized access.

The USPTO imposes fees for the use of its automated systems in its public search facilities. The UPWS provides a single workstation platform for secured public access to USPTO systems, fees collected without staff assistance and before services are provided, and with appropriate usage statistics for financial and workload reporting. By building the fee collection into the UPWS rather than into each USPTO application, software development for multiple systems will be saved, and local and networked printing will be chargeable for systems that have previously had no vehicle for public fee collection. This project will follow a release management strategy of approximately three releases per year.

b. Commitments and Benefits

The UPWS provides a client-server solution to provide public user access to USPTO automated applications and automate the fee collection processes within the Public Search Facilities. The UPWS controls public access to the search tools, collects the appropriate fees based on usage of these tools, collects the appropriate fees for printed output from these tools, and provides user and management reports. Providing public access to this information on the USPTO campus enhances convenience for public customers and helps to increase awareness of the availability of USPTO information and increasing the means for the public customers to browse, research, and request published patent application.

2.3.14 Public Search Facilities Division

a. Description

The Public Search Facilities Division (PSFD) provides U.S. patent, trademark, and assignment search advisory service to the public. The Division maintains patent, trademark, and assignment files and facilities for public use; identifies public user training needs for automated file and system access; plans, designs, and develops training course content and materials; conducts scheduled training for public uses of automated systems in USPTO public search facilities; provides overall administrative direction for the Division; sets policy and provides guidance to Branches to ensure consistency of public operations in the search areas; and develops and implements an overall program to meet current and long-range user needs.

Major activities of the Public Search Facilities Division include: (1) maintaining the Trademark classified paper search file for public access as a litigation requirement; (2) providing oversight and reporting of services and operations for multiple patents and trademark search facilities on USPTO campus, contract monitoring and COTR staffing for contracts supporting multiple facilities, and operate the Public Training Facility for on-line training and materials; (3) providing hardware and software maintenance for proprietary debit card equipment from Digital Access Company (DAC) installation of equipment on public copiers and microfilm reader/printers for collecting print fees automatically from machines placed throughout the USPTO; (4) consolidating existing patent and trademark branch public search facilities into one consolidated public search facility in FY 2005, with trademark paper facility separated elsewhere; (5) providing electronic search facility for public access to patent and trademark information; and (6) supporting Trademark Office in trademark registrations.

b. Commitments and Benefits

The Public Search Facilities Division is satisfying the commitments to the staff and customers. This investment provides weekly issue registration copies and updated certificates for three dissemination programs, provide source material for two public user search collections in TMSL, and provides document source for fulfilling copy requests and creating CD-ROM product. These electronic resources are timely, accurate, and secure. The public has access to the design and work categories of registration search. The On-line fee collection is automated.

2.3.15 Patent and Trademark Depository Library Program

a. Description

The Patent and Trademark Depository Library Program (PTDLP) administers and supports a nationwide network of 86 libraries that disseminate patent and trademark information to the

public. Through the activities of the Program office, the PTDLs are equipped to respond to the customers' patent and trademark information needs and to promote the use of the patent and trademark systems. This program also provides on-going training to librarians to assist them in effectively and accurately supplying information to the public, and the addition of an Internet portal.

The portal will facilitate 24/7 access to USPTO information resources targeted to the needs of customers served by the nationwide network of 86 PTDLs. The site will be available after normal PTDLP/USPTO business hours, which is in support of the President's E-Gov agenda, and addresses the needs of PTDLs, which are located in six different time zones.

The portal will contain a core collection of reference materials and resources, training programs and other tools to allow the PTDLs to do their work on behalf of the USPTO with greater effectiveness. The website will also provide access to various databases such as WEST and X-Search. Information products like the Manual of Classification, the Goods and Services Manual, USPTO forms, a library of training materials including multimedia, text, video resources, and other knowledge management resources compiled by the PTDL Program Office for the use of the PTDLs will be made available. A secure, closed e-mail system to promote communication between and among PTDLs and PTDLP will also be available.

b. Commitments and Benefits

The Patent and Trademark Depository Library Program meets the commitments to customers and staff, and offers the following benefits:

- PTDLs assist user/applicants to be better prepared when corresponding with the USPTO;
- PTDLs increase use of patent and trademark information products, which increases revenue for the USPTO; and
- PTDLs provide immediate venues for USPTO requirements in the field such as serving as pilots for new system deployment, providing meeting space for USPTO presentations, training, and identifying local audiences for customer focus sessions.

These activities will improve customer access to relevant data in a timely manner, enhance the quality of services that PTDLs are able to provide to the public on behalf of the USPTO, and ultimately, improved customer satisfaction.

2.3.16 Technology Assessment and Forecast Services (TAF)

a. Description

An ongoing effort for Customer Information Services is to capture, enhance, and maintain data extracted from USPTO's patent text database and other data sources to form the Technology Assessment and Forecast (TAF) database. The TAF database is used to produce a wide variety

of statistical and analytical reports published by the USPTO and specialized reports both in paper and electronic format, requested by USPTO management, other government agencies, and the public. These reports assist USPTO management in fulfilling the USPTO's role as advisor to the Secretary and the Administration in matters of policy concerning intellectual property, science, and technology. The TAF database is a major source of information used to produce USPTO's Cassis products.

Key activities beginning in FY 2004 will be the migration of TAF database to a new server and operating system that will be supported by USPTO operations. Support for the current TAF database server and operating system will be discontinued in the near future. The TAF database will be migrated to a newer server and operating system that will be supported by USPTO operations. This initiative will enable the TAF database and IPD/TAF Branch to continue to meet USPTO obligations to provide accurate patent statistics to Federal and international organizations and to the public. The server migration will also enable the production of general patent statistics to meet the needs of USPTO management. Maintenance of the TAF server, database data loading, verification, analysis, and reporting system will enable the TAF database and OEIP/TAF Branch to continue to meet USPTO obligations to provide accurate patent statistics to Federal and international organizations as well as to the public. TAF will also enable the production of general patent statistics to meet the needs of management.

b. Commitments and Benefits

Commitment to the customer and staff are met by improving the TAF database to provide greater variety and depth of patent information and a shorter response time for producing specialized TAF reports. The TAF database is continually increasing in size. This growth requires continuous maintenance and periodic upgrades to the database server to assure timely responses for internal and external customers. Operational improvements to the database and server reduce time required for manipulation and reporting of the data and improve data integrity. Considerable effort is made to verify and correct data inconsistencies. In addition, the TAF benefits the customers and staff by (1) making general patent statistics and information available through TAF products and reports generated from the TAF database and (2) meeting the needs of USPTO management for reliable and timely patent statistics and information by reporting via the TAF database.

2.3.17 Trademark and Assignment Data Dissemination System (TADDS)

a. Description

This activity supports the daily feeds for both the text file and 24-hour box image files to bulk data dissemination customers, and provides the daily feeds for both the bulk customers and the Internet systems of TARR and TESS.

b. Commitments and Benefits

TADDS supports the dissemination of trademark data for both text and images.

2.3.18 Trademark Application and Registration Retrieval System (TARR)

a. Description

The Trademark Application and Registration Retrieval (TARR) system allows USPTO customers to access trademark application information. TARR provides Internet access by the general public to the status of all trademark applications and registrations. This Internet capability will contain a link to general information about the USPTO and to a phone list of the Trademark Examining Attorneys. The site is securely isolated from the internal database and other internal USPTO systems to ensure the integrity of internal systems.

b. Commitments and Benefits

Customers are able to use the web site to retrieve information about pending and registered trademarks obtained from the USPTO's internal database by entering a valid trademark serial number or registration number.

2.3.19 Trademark Daily XML File (TDXF)

a. Description

The Trademark Daily XML File (TDXF) is a replacement for the Trademark Weekly Text File (TWTF) produced by USPTO Automated Information Systems. Formerly, the TWTF was used by the Information Products Division (IPD) of the Office of Electronic Information Products (OEIP) to supply USPTO customers with text information on trademark applications and registrations, trademark assignments, and records of the Trademark Trial and Appeal Board (TTAB). The TDXF replaces the TWTF by supplying the same information in eXtensible Markup Language (XML) format, and distributing the data on a daily basis. The TDXF is also enhanced with the trademark applications and registrations status and history data currently comprising the Trademark Application and Registration Retrieval (TARR) database. TDXF provides the Trademark Daily XML to the IPD whereby the Data File Delivery (DFD) system is used for dissemination to the Daily XML customers. The Trademark Daily XML system is also used to generate the retrospective trademark applications data in XML format.

b. Commitments and Benefits

The TDXF provides benefits and commitment to the customer by delivering trademark data products to external customers on the day of public availability. The information is offered as

soon as it is made available for distribution. Ultimately, the level of customer satisfaction increases as the speed of delivery improves in offering the data products.

2.3.20 Trademark Electronic Search System (TESS)

a. Description

The USPTO has always provided the public with access to trademark applications as soon as practicable after filing. Trademark data has been distributed in a variety of ways including: paper (TMOG); in bulk as files on magnetic tape; on CD-ROM (Cassis); via the telephone (status line and the trademark assistance center); at the Trademark Search Library, through the records maintained at the Patent and Trademark Depository Libraries (PTDLs); and through the X-Search system accessible at three PTDLs. This project allows the USPTO to offer a new, enhanced search system of a more current trademark database on the Internet called the Trademark Electronic Search System (TESS). This database allows unprecedented opportunities for access to Trademark data with an average of nearly 3 million image pages and over 7 million text pages retrieved each month.
In August 1998, the USPTO provided a full text-searchable database available through the Internet. The search facility allows free search access to active applications and registrations. With the use of that facility, members of the public can conveniently search existing applications and registrations prior to entering the application process. This database was updated every two months.

In February 2000, the USPTO deployed TESS to replace the search database deployed in August 1998. In FY 2001, Native American Insignia data was added to the database for searching. TESS provides the general public users a text and image database that is updated daily. The USPTO will improve the current offering in response to comments and suggestions from its customers. Principally, the USPTO installed database will be updated more frequently and will contain expired trademarks. TESS will be upgraded to BRS 8.0 to further enhance trademark searches on the Internet.

b. Commitments and Benefits

This system is intended to enhance customer satisfaction by improving the Trademark search capability that the Office currently supports. TESS also serves as an alternate search system in the event that the X-Search system is not available, thereby, establishing redundancies in the search functions to ensure that trademark data is available for dissemination. The benefit of the TESS is that customers and staff should have on-going access to trademark data.

2.3.21 USPTO Contact Center Division (UCCD)

a. Description

The USPTO Contact Center Division manages the USPTO-wide enterprise call center. The Division provides general information services and customer support to USPTO answer incoming general Patent and Trademark inquiries from the public via telephone, e-mail, fax, and postal mail. These inquiries include telephone calls received through the 1-800-PTO-9199 number, as transfers from other call centers, and as over-flow ("Dial-0") calls from the Patent Technology Centers located at the Alexandria Headquarters. The Customer Service Representatives (CSRs) manage the telephones and respond to incoming e-mails and require necessary software, hardware, and peripherals to perform this function. Customer requests for publications are fulfilled and mailing labels generated, contractor support is provided to distribute printed material to external customers. Publications are reproduced and inventoried to meet anticipated demand, contractor support is provided to store and deliver publications to the USPTO campus for distribution.

b. Commitments and Benefits

Using a variety of automated tools (e.g. PALM employee locator), the UCCD provides assistance to public customers on any inquiry related to Patent or Trademark publications, procedures, policy, or the status of an application, payment, or office correspondence. The UCCD fulfills the commitment and benefits to staff and customers by ensuring that the incoming customer interactions (telephone calls, faxes, e-mails) are handled in the most efficient and expeditious manner. The USPTO customers receive accurate information in order to more effectively complete patent or trademark applications, fees, or office actions. Information is captured for each question including the reason for the call and steps for a resolution. Inquiries are handled in timely distribution through correct publications to customers, resulting in increased customer satisfaction.

2.3.22 USPTO Customer Contact Management System (UCCMS)

a. Description

The USPTO Customer Contact Management System solution will allow the USPTO to significantly improve its customer service capabilities, to provide better tools for customers to service themselves, and to allow USPTO to better analyze and understand the customers' needs. The Customer Contact Management System is a systematic and automated means to insure that USPTO is responsive to it customers whether the customer seeks delivery of a product or service or is seeking information. UCCMS will allow the USPTO to capture and leverage customer-specific information to create a more effective and efficient environment for the USPTO to deliver our products and services to our customers. The key activities for the UCCMS are as follows starting in FY 2004: (1) implementation of UCCMS into core Patents Customer Service Centers; (2) integration of UCCMS into the core Customer Information Services (CIS) operations; (3) integration of UCCMS into the core Trademark Trial and Appeals Board (TTAB) customer service operations; (4) integration of UCCMS into the core Patents business products

and services to the customers; (5) integration of UCCMS into core Trademark business systems; (6) integration of UCCMS with the USPTO.GOV website; (7) implementation of the COTS Sales Order modules of the UCCMS website; and (8) implementation of the COTS Customer Outreach module within the UCCMS suite of applications.

b. Commitments and Benefits

This system is intended to expand customer contact and response capabilities by providing problem and knowledge management, customer research, practitioner/partner management, order entry management, and customer payment management functionalities. Benefits to the USPTO include improvements in customer service, increased availability of USPTO services, ability to conduct and manage practitioner registration, improved public access to information as a result of enhanced customer response capabilities, and an overall capability for effective financial management.

2.3.23 Patent Electronic Business Center Imaging System (EBCIS)

a. Description

The Electronic Business Center Imaging System (EBCIS) replaces the manual filing and retrieval of Customer Number Applications, Public Key Infrastructure (PKI) applications, and correspondence related to both. EBCIS provides accurate, rapid and reliable methods of automated document storage. This system also provides access to patent client requests for electronic access to USPTO business processes, using secure transactions and authenticators. The project is being undertaken to eliminate inaccurate, slow, and unreliable manual methods of document storage. The project will serve as a baseline for further expansion of EBC document management capabilities.

EBCIS meets the USPTO goal of supporting an electronic workplace and providing accurate and rapid response to requests from the public requests for access to e-commerce facilities.

b. Commitments and Benefits

EBCIS enables the USPTO to carry out its mission by providing support for effective response to customers and accurate records management. EBCIS will provide rapid and systematic storage of customer application number and PKI application documents coupled with rapid retrieval capability not currently present with the manual operation.

- **Customer response time**: A reduction in the time necessary for responding to customer inquiries;

- **Efficiency of staff resources**: Having access to data immediately will allow current staff resources to complete assignments more efficiently; and

- **Opportunity costs**: Reduction in time spent retrieving documents, searching for lost documents, and rework, can be used by staff members to increase time spent on new assignments and allow more work to be accomplished.

The system is designed to increase productivity by employees engaged in document storage and retrieval 100 percent. This increase of productivity will result from the increased rate at which documents are stored and retrieved and the elimination of manual errors and resultant time lost searching for improperly filed documents.

2.4 Financial Management and Human Resources (Corporate Support)

2.4.1 Financial Management

Sound planning and effective use of the USPTO's resources are dependent on the availability of timely and accurate financial management data. The Chief Financial Officer/Chief Administrative Officer (CFO/CAO) is the principal advisor to the Director on financial management. The CFO/CAO oversees implementation of the Chief Financial Officers Act, the Federal Managers' Financial Integrity Act, Federal Financial Management Improvement Act, and the Government Performance and Results Act, including the preparation of audited financial statements and performance measures, and is responsible for audit resolutions. The Deputy CFO and Comptroller provides resource management and policy in the areas of budget formulation, justification, and execution; financial accounting and reporting; planning and implementation of all fee setting and collection activities; procurement activities; and, in collaboration with the Chief Information Officer, financial management systems. . The Deputy CFO and Comptroller provide administrative oversight to and coordinate the activities of the Offices of Finance, Procurement, and Corporate Planning.

The Office of Finance provides user support and manages, through all phases of the information technology life-cycle, six integrated financial management information systems; performs accounting operations for the receipt and expenditure of appropriated offsetting collections and deposit funds of the United States Patent and Trademark Office, including implementation of sound financial management policies and procedures, maintenance and reconciliation of general accounts and related fiscal records, preparation of financial statements and various internal and external reports, liaison with independent financial auditors, audit and certification of vouchers for payment, administration of the travel program and the transit subsidy program, debt management, administration of deposit accounts and collection of maintenance fees as well as overall fee processing services and advice, and provision of up-to-date account information to customers and vendors; maintains a framework of internal control and monitors compliance with laws and regulations; manages a United States Patent and Trademark Office activity-based cost accounting model for use in management decisions, budget formulation, and external reporting; and provides timely financial analysis and advice to program offices. The Office of

Procurement awards and administers a wide variety of contracts and simplified purchases for the acquisition of goods and services required throughout the agency. The Office of Corporate Planning formulates, interprets, and executes budgetary policies. In collaboration with program officials, the Office of Corporate Planning also develops, establishes and maintains comprehensive budget plans that support the USPTO mission statement, goals and objectives, and that recognize total dependence upon user fees for agency income. The Office develops, presents, and defends annual budget requests; obtains the apportionment of user fees; and allocates and maintains budgetary accountability of funds based upon planned and actual collections of user fee receipts. The Office plans, directs, and implements all user fee activities of the USPTO, applying business-like standards which include the setting of user fees, monitoring of user fee receipts, and projection of current and future year user fee receipts. The Office is also responsible for maintaining external liaison in budget matters, including the publication of reports on budget and work performance activities, and serving as budget liaison among the staff offices reporting to the Deputy CFO and Comptroller. All three offices also are responsible for the storage, retrieval, and reproduction of financial records.

The daily responsibilities of these three offices are supported by the Core Financial System (CFS) that encompasses Momentum Financials, Procurement Desktop (PD), the Internet Purchasing Application (IPA), and Travel Manager.

As part of normal operations and maintenance of the CFS, Travel Manager was upgraded in FY 2004 and Momentum Financials will be upgraded in FY 2006. The primary objective in FY 2005 is to operate and maintain the current CFS application software, hardware, and communications necessary to carry out the financial and acquisition activities to support USPTO business processes. Plans for FY 2006 include an upgrade of Momentum Financials to version 6x, which is a completely web-enabled application. The upgrade will also include the replacement of PD and IPA with the implementation of Momentum Acquisitions (a subsystem of Momentum Financials), Vendor Self Service (VSS) and Central Contractor Registry Connector (CCRC) (both of these are components of Momentum Financials). The Objectives of this implementation will be to expand the USPTO's ability to participate in e-Government and paperwork reduction initiatives; increase compliance with Section 508 requirements; and augment existing automated acquisition functionality. Achievement of these objectives will enable the USPTO to continue to maintain high quality financial information, be compliant with laws and regulations, and to improve its ability to acquire the goods and services necessary for its mission.

To support the e-Government initiatives in the President's Management Agenda, the USPTO plans to implement Government-wide e-Travel by the end of FY 2006. Once implemented, the e-Travel initiative will provide an end-to-end travel service ranging from planning, reservations, and authorizations to claims and voucher reconciliation. Integration of e-Travel to Momentum Financials will enable USPTO to record the financial impact of each transaction that will be part of the e-Travel implementation.

2.4.1.1 Momentum Financials (MOMFN)

a. Description

Momentum Financials, USPTO's financial system of record, is a commercial off-the-shelf (COTS) client/server application that provides all the major facets of Federal financial management. Momentum Financials subsystems include: the general ledger, budget execution, planning, purchasing, accounts payable, accounts receivable, automated disbursements, travel accounting, external reports, and fixed assets. Momentum Financials' graphical user interface provides an integrated workflow facility including seamless integration with other administrative support systems such as Procurement Desktop and Travel Manager.

b. Commitments and Benefits

Momentum Financials currently enables the USPTO to carry out its mission by providing support for effective financial resource management. This includes merging financial functions and data, electronic data processing, and data access. Momentum Financials covers all the major facets of federal financial management.

During FY 2005, Momentum Financials version 3.7.4.1 will continue with normal operations and maintenance. Some of the benefits achieved in Momentum Financials 3.7.4.1 include:

- **E-Gov:** We are moving closer to e-Government with the utilization of Automated Disbursements functionality in Momentum Financials. At this time we are disbursing 99% of the USPTO's payments electronically;

- **Customer Service**: Momentum Financials provides users with easy access to correct entries quickly through drop-down lists for selected fields. The USPTO utilizes this functionality for approximately 50% of Momentum Financials' available fields. Momentum Financials' existing functionality provides for customized routing lists, accounting templates, approvals, and user-defined fields to meet special needs specific to individual program offices. There are over 200 customized routing lists, hundreds of accounting templates for each fiscal year, several types of approvals, and five user-defined fields. All of these have been established based on unique USPTO business rules and procedures utilizing Momentum Financials' existing functionality;

- **Improved Management of Workload**: All vendor invoices are scanned and stored in Momentum Financials for routing and record-keeping purposes. All the scanned invoices are routed to end-users for certification of receipt and acceptance of goods and services. The Office of Finance no longer has a need to store and maintain paper invoices. Momentum Financials enables multiple users to access documents as they are routed, eliminating time that might be lost when routing to a single individual who may be out of the office;

- **Information**: Improved reporting capability provides timely and accurate data for managers to make effective budgeting and business decisions. Users are afforded ready access to financial data through on-line queries and reports. They are also able to export the results of the queries to third-party software products for further data analysis and manipulation. Existing on-line reports provide easy, quick access to important information; and

- **Greater Fiscal Integrity**: Integration of other USPTO systems with Momentum Financials will ensure that financial management information is accurate, up-to-date, and consistent among all systems. Accuracy and quality of the financial data will further facilitate the USPTO's track record of ten twelve years of unqualified audits.

In FY 2006, Momentum Financials will be upgraded to version 6x. This version is web-enabled and offers a number of functionality enhancements to include the implementation of a new subsystem and two new components:

- **Acquisitions**: This new subsystem has been renamed from 3.7.4.1 Purchasing subsystem and has been expanded to include transactions that require action under the Federal Acquisition Regulation (FAR). As a result, the Acquisition subsystem will replace the functionality currently in the AIS utilized by the Office of Procurement, Procurement Desktop (PD). FPDS-NG and FedBizOpps integrations will be implemented as part of this component to replace dual form entry and manual posting of solicitations. As a result of this implementation, PD will be retired, and the existing interface between PD and Momentum will be eliminated;

- **Vendor Self Service (VSS)**: This component will replace the functionality currently in the AIS utilized by the Office of Procurement, Internet Purchasing Application (IPA). As a result of this implementation, IPA will be retired; and

- **Central Contractor Registry Connector (CCRC)**: This component will allow for integration with the government Central Contractor Registry (CCR) database. The integration will allow for scheduled updates from CCR to be updated in the CCRC before ultimately updating the Momentum Financials vendor table.

With this upgrade we will be able to resolve a handful of vulnerabilities identified during Certification and Accreditation to include meeting Section 508 requirement. USPTO continues to make a commitment to improve efficiencies and reduce demands on resources while providing accurate accessible data electronically. The benefits of implementing Momentum Financials version 6x for our users and customers are as follows:

- **E-Gov:** We are continuing to move closer to the President's Management Agenda e-Government initiatives with the implementation of Acquisitions and VSS which will

allow for the electronic notification of solicitations to prospective vendors and the vendors' electronic submission of offers. In addition, VSS allows for vendors to submit invoices and check on payment status electronically;

- **Customer Service**: Momentum Acquisitions has the ability to transmit awards electronically; this will allow contracting officers to send electronic copies to contractors, Contracting Officer's Technical Representatives (COTR), and program managers to expedite the acquisition processing time;

- **Improved Workload Management**: Contracting Officers will have the ability to electronically schedule milestones throughout the life cycle of each action, which will prompt the system to send automated reminders of scheduled deadlines; and

- **Greater Fiscal Integrity**: Implementation of Momentum Acquisitions will ensure that contracting and financial data are accurate, up-to-date, and contained in a single system. This implementation will eliminate the need for the existing interface between Momentum Financials and Procurement Desktop; thus there will no longer be a need for data reconciliation to ensure consistency between the two separate systems.

2.4.1.2 Procurement Desktop (PD) with the Internet Purchasing Application

a. Description

Procurement Desktop (PD) is a commercial off-the-shelf (COTS) client/server automated procurement system. This system supports every phase of the procurement process for contracting officials and enables the USPTO to carry out its mission by providing support for effective resource management. PD currently interfaces with the USPTO's financial system of record, Momentum Financials.

The Internet Purchasing Application (IPA) was implemented in December 1998. This Electronic Commerce initiative has radically altered the acquisition process by utilizing innovative technology to simplify and streamline the current process. This application provides USPTO with the ability to post acquisition information on the USPTO's Internet page and electronically collect responses from vendors in a much more timely and cost efficient manner.

b. Commitments and Benefits

During FY 2005, PD and IPA will continue with normal operations and maintenance. In FY 2006, the Momentum Financials upgrade to version 6x will include the implementation of the Acquisitions subsystem and the Vendor Self Service component. As a result, PD and IPA will both be retired.

2.4.1.3 Travel Manager

a. Description

Travel Manager is a commercial off-the-shelf (COTS) client/server application, which supports the USPTO's travel process to include travel orders, vouchers and other travel-related data. Travel Manager currently interfaces with the USPTO's financial system of record, Momentum Financials.

b. Commitments and Benefits

Travel Manager continues to provide many benefits to the USPTO and our travel customers by providing greater efficiency in processing, improved accountability and greater data integrity. During FY 2005, Travel Manager will continue with normal operations and maintenance. In FY 2006, Travel Manager will be retired as a result of the e-Travel initiative's implementation at the USPTO.

2.4.1.4 e-Travel

a. Description

The eTravel initiative was launched as a result of the President's Management Agenda, Quicksilver Task Force, President's Management Council, and the E-Government Act of 2002, and is managed by the General Services Administration (GSA). It is one of the original 24 e-Government initiatives. The Federal Travel Regulations (FTR) has recently (December 2003) mandated that the Department of Commerce (DOC) implement an eTravel product (also known as eTS: eTravel Service). This project will consolidate all steps of a travel transaction in a Web-centric service. DOC will select one eTravel System provider that all its bureaus will utilize.

eTravel will be implemented at the USPTO as an end-to-end travel service supporting activities ranging from planning, reservations and authorizations to claims and voucher reconciliation. This vendor owned and operated Commercial off the shelf (COTS) application will replace our current travel software tool, Travel Manager, and the travel preparer's need to contact USPTO's Travel Management Center (TMC), SATO, for flight information and booking reservations. Integration to USPTO's Core Financial System, Momentum Financials, will record each transaction's financial impact.

b. Commitments and Benefits

As a government-wide eGov initiative, eTravel naturally compels all agency participation. USPTO will complete the three milestones as mandated by the FTR; develop migration plan by March 2004, begin migration by December 2004 and complete migration by September 2006.

This collaboration of agency resources and efforts to maximize administrative, financial and information technology best practices will provide value to customer agencies and conserve taxpayer dollars. Across-the-agency policies, procedures, software licenses and travel purchasing will afford Federal travelers and travel managers to operate more efficiently.

In FY 2006, eTravel will be implemented and as a result the Travel Manager AIS will be retired. Some of the benefits of this implementation will include:

- **E-Gov**: As a government-wide e-Government initiative this implementation will meet the requirement set-forth;

- **Customer Service**: The eTravel application will allow travel coordinators to complete all travel arrangements within the travel authorization. By utilizing the Online Booking Engine (OBE), transportation requirements, hotels, and rental cars can be initially reserved, and then automatically booked upon the travel authorization's approval. This will reduce the direct contact and involvement of travel consultants from the Travel Manager Centers (TMC) and thus reduce the transaction fees associated with booking travel arrangements. Individually Billed Accounts (IBA) statements of the traveler's government travel card can be accessed during the travel vouchering process to retrieve expenses and authorize direct reimbursement. Also, this integration will continue with the commitment of the CFS to improve efficiencies and provide accessibility of data electronically. In additionAlso, with one centralized location of detailed travel information, reporting of specific service vendor, regulation compliance or travel preferences it will facilitate reporting at all levels; and

- **Fiscal Integrity:** The integration of Momentum Financials will have the ability to verify funds availability, ensure valid accounting code elements, generate timely obligations and authorize accurate disbursements to the traveler or split between traveler and credit card vendors.

2.4.1.5 Cost Accounting System

a. Description

During FY 1997, in compliance with the Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Standards*, the USPTO implemented an Activity Based Cost/Management System (ABC/M). Although, originally implemented on a stand-alone basis, unconnected to PTOnet, the cost accounting system has now passed through the lifecycle testing process and has been implemented on PTOnet. Using the cost accounting system, costs are

collected on an agency-wide basis for all USPTO costs. Costs prepared using this system have been audited each year since 1997 and have been found to meet audit standards. Furthermore, the methodology was audited in 1998 and approved by the IG.

Currently, the cost accounting system is used to support federal requirements for Fee Setting, Financial Statements (Statement of Net Costs), Budgeting, Performance Reporting, and a variety of financial management reports.

b. Commitments and Benefits

The cost accounting system allows the USPTO to fulfill its reporting and budgeting requirements per FFAS No. 4 and OMB A-11, accurately calculate the work performed for USPTO fees, and to report and analyze performance measures such as the Patent and Trademark efficiency measures.

During FY 2005, the Cost Accounting System will continue with normal operations and maintenance. In FY 2006, the Cost Accounting System will be upgraded to the latest version to allow increased speed and facility in cost model analysis, better report preparation and presentation, better data import, better drill down capability, and many functional improvements.

2.4.1.6 Enterprise Data Warehouse (EDW)

a. Description

The Enterprise Data Warehouse (EDW) is intended to help managers and analysts provide a meaningful analytical tool to analyze business processes, resource use and needs, and other information. The analysis will assist senior management at USPTO to formulate business, strategic, and tactical decisions that will achieve the goal of USPTO becoming a world-class organization. The EDW resides on a USPTO server serviced and maintained by the Office of the Chief Information Officer. The EDW was developed to provide easy access to the data from a number of USPTO systems using Business Objects as the reporting tool.

The EDW includes data sources for financial and non-financial applications or data sources such as PALM (EXPO), RAM, Activity Based Cost/Management (ABC/M), National Finance Center Office of Human Resources, Federal Financial System (now retired), and Momentum. The EDW is a single database located in an Oracle 9i db.

The Financial Systems Division of the Office of Finance oversees the operations of the extract, transformation, and load from these data sources into a single EDW database. The loads are done via PL/SQL. Once the information is in the EDW the data is integrated in universe/s for the different subject areas.

The subject areas include Patent, Office of Human Resources, Compensation Projection, Cost Accounting, Revenue, Momentum, and data from the retired Federal Financial System. Finally reports are created using Business Objects for querying reporting and analysis of data.

Business Objects is a COTS product application. It enables organizations to track, understand, and manage enterprise performance. The agency's solutions leverage the information that is stored in an array of corporate databases. Each subject area addition requires that the Data Warehouse Team, consisting of all key stakeholders, identify which data elements from existing systems will offer value in an integrated read-only system, and copying that data to a subject area of the EDW. Long-term data warehouse activities include data quality engineering and the introduction of data mining to discover patterns in data and to conduct advanced data analysis.

The EDW provides meaningful information to USPTO managers and analysts for analysis and support in decision-making. Based on interviews with USPTO executives, the business needs that drive implementation of a data warehouse are as follows:

- Productivity analysis and isolation of significant productivity factors;
- Workflow analysis to support reduced patent and trademark processing cycle times;
- Technology trend and workload analysis to support staffing and organizational structure decisions; and
- Financial analysis to support resource allocation.

In FY05, the Call Accounting subject area is expected to be made available. This enhancement provides accounting of USPTO phone calls captured by the Avotus Optivity Telephony Manager (OTM) Software. AVOTUS OTM is the phone system installed at the new USPTO Headquarters in Alexandria.

Starting in FY 2006, the USPTO plans to incorporate trademark data into the EDW. Availability of trademark data through EDW will provide useful information to Trademark attorneys and managers in general. The EDW will provide a reporting tool that supports the provision of USPTO services and products. The new trademark subject area will be linked to current EDW data and will compile integrated data as it relates to the Trademark business. Also, the USPTO plans to add a Human Capital Management report area to EDW. This change will facilitate the Strategic Management of Human Capital – one of the President's Management Agenda government-wide initiatives. The Internet will be used to enable query of pre-defined reports, workforce information that can be available to USPTO managers. Agency managers will be able to make assessments regarding the current workforce and implement changes that benefit the USPTO's mission through the reports.

FY 2006 will also include an upgrade of the EDW COTS product from client/server software to web-based application. The upgrade to a Business Objects web-based application delivers a

more powerful web query, reporting, and analysis capabilities. This approach provides a thin-client solution that enables users to easily track, understand, and manage organizational data over the Intranet and Extranet, while maintaining tight security over data access.

b. Commitments and Benefits

The Enterprise Data Warehouse supports the macro policy performance goal of helping to protect, promote, and expand intellectual property rights systems. It accomplishes this by integrating a very critical asset, data. This is a Corporate Support commitment employing the strategy of effectively managing resources. The business benefits of the enterprise data warehouse:

- Allows for implementation of a common data architecture and realization of the benefits of data sharing;
- Focuses attention on data quality and requires data cleansing to integrate the data found in disparate source systems;
- Provides strategic and tactical information for decision-making. This information also is critical to corporate competitiveness; and

The Enterprise Data Warehouse enables the USPTO to carry out its mission by providing effective resource management through the creation of a centralized repository for key indicators linked to the strategic planning process.

In addition, EDW allows for Budget and Performance integration, one of the President's Management Agenda initiatives by reporting on budget, accounting, and performance in an integrated manner. This integration is designed to help produce performance-based budgets at the Agency.

2.4.1.7 Revenue Accounting and Management System (RAM)

a. Description

Serving as a subsidiary ledger to Momentum Financials, the Revenue Accounting and Management (RAM) system enables the USPTO to collect fees by means of multiple payment methods, including credit cards, checks, EFT, and deposit accounts, and expedites the processing of fee related refunds.

The first phase of the RAM system replaced the Cash Receipts/Deposit Accounts (CRDA) system. It also incorporated enhancements such as improved internal controls, audit trails, and validity checks. RAM increased the accuracy of the revenue accounting process, addressed known deficiencies in CRDA, and brought the USPTO into compliance with Federal

requirements for automated financial systems. The second phase of RAM further enhanced reporting capabilities and also improved patent maintenance fee processing, and patent subscription services management.

Enhancements in the form of functional extensions to RAM will continue through FY 2005 and will feature changes identified through business reengineering efforts. These enhancements will include additional support for Electronic Commerce, and also will improve accountability through interfaces with various USPTO systems such as TIS/Madrid, TEAS, EFS, OEMS, PALM/EXPO, PTAS, ESSTA, and TRAM. Other key activities are as follows:

- Support for Fee Rebate requirements as it may be necessary for the USPTO's new Fee Legislation;
- Modernization of RAM to support the transition toward e-Government business;
- Improvements to the fee code table to allow more dynamic fee structure, potential fee code logic enhancements; and
- Patent model revisions due to changes to processes and activities in the patent model.

In addition, the functional extensions for RAM will continue throughout FY 2008. These enhancements will support e-Commerce and improve accountability through interfaces with various USPTO systems such as EFS, PALM, and TIS. Other features for RAM will expand the number and type of USPTO products and services that customers can order over the Internet and comply with Section 508 requirements.

b. Commitments and Benefits

RAM enables the USPTO to carry out its mission by providing support for business process improvements and effective resource management. By implementing this system, the Office of Finance will be able to provide better customer service. In addition, the Office of Finance will provide benefits to customers and staff as described below:

- **Productivity**: The Maintenance Fee Branch will increase productivity using the existing number of FTE;

- **Information**: Improved reporting will provide timely and accurate data for managers to make effective budgeting and business decisions. Transform RAM into a more durable, reliable, scalable E-Government solution with flexible access to information;

- **Greater Fiscal Integrity**: Integration of other USPTO systems with RAM will ensure that customers have sufficient funds available in the USPTO Deposit Accounts at the time services are delivered;

- **Customer Service**: Customers will be able to use the Internet to obtain consolidated transaction statements (for all payment types); obtain current deposit account balances;

request the opening or closure of a USPTO Deposit Account and request a refund of an overpayment, undelivered service, etc.; and

- **Better Management of Workload**: Business processes will occur in the office directly affected by the process, providing a systematic and consistent process for the management of the case. For example, the maintenance fee staff during the prosecution of the fee will process changes in address.

2.4.1.8 Office of Finance Imaging System (OFIS)

a. Description

Office of Finance Imaging System (OFIS) provides the Office of Finance with rapid and systematic storage of financial documents coupled with rapid retrieval capability. OFIS also enhances the business processes by allowing the Office of Finance to route work packages to the PTO business office supporting the paying customer. Business offices use the stored documents as research material. The Office of Finance deployed the Office of Finance Imaging System (OFIS); an electronic image storage system designed to significantly reduce the costs associated with storage and retrieval of documents. The Office of Finance routinely incurred more than $250,000 in annual costs associated with the storage, retrieval, and reproduction of financial records prior to the development of OFIS.

This capability has been further expanded by increases in the volume and, accordingly, the capability of the OFIS to store financial documents other than those generated by the Revenue Accounting and Management System (RAM) system. Documents are scanned as images and routed to program areas for resolution. In addition, OFIS enables system users to obtain reports and generate correspondence to customers. In FY 2005, the system will be maintained within managed and scheduled release cycles adopted as a standard for this systems performance within the automated business process of the system sponsor.

b. Commitments and Benefits

OFIS enables the USPTO to carry out its mission by providing support for effective resource management. OFIS will provide rapid and systematic storage of financial documents coupled with rapid retrieval capability not currently present with the manual operation. Benefits of the system include:

- **Customer response time**: A reduction in the time necessary for responding to customer inquiries for both internal and external customers: these customers include the Office of Finance and the Office of the Inspector General auditors;

- **Efficiency of staff resources**: Having access to data immediately will allow current staff resources to complete assignments more efficiently;

- **Opportunity costs**: Reduction in time spent retrieving documents, searching for lost documents, and rework, can be used by staff members to increase time spent on new assignments and allow more work to be accomplished; and

- **Storage costs**: Reduction in file space. Capturing documents in image form will allow a reduction in file space needed for storage and paper files. The space currently occupied by files and papers could be returned to the Office of Finance staff.

The system is designed to increase productivity by employees engaged in document storage and retrieval 100 percent. This increase of productivity will result from the increased rate at which documents are stored and retrieved and the elimination of manual errors and resultant time lost searching for improperly filed documents.

2.4.2 Human Resources

The Office of Human Resources assists the business areas in accomplishing their missions by providing recruiting, compensation and recognition, planning and consulting, staffing, and employee and labor relations. Many of the most significant business issues that the USPTO faces today are human resource management issues. Whether meeting customer hiring goals or meeting the rapidly increasing demand to promote industrial and technological progress in areas such as biotechnology or computer software, all USPTO managers have a growing need for speedy recruiting and meaningful and accurate information about their employees. Currently, the USPTO Office of Human Resources relies on several automated systems that, due to limited functionality and antiquated technology, fail to provide the Office of Human Resources with the functionality and information necessary to address these needs.

2.4.2.1 Office of Human Resources Systems (OHRS)

a. Description

The systems used by the Office of Human Resources support three areas: (1) Employee Relations/Labor Relations case tracking; (2) staffing process; and (3) National Finance Center client access for personnel information management. The case tracking for Employee Relations/Labor Relations involves Microsoft Access database, which tracks the status of administrative, union grievances, or union complaints. The system generates reports that indicate trends and status to OHR management. The system also provides statistical information. The HR Trax/Merit Assignment Program includes the Microsoft visual basic system that automates the staffing process with the exception of patent examiner recruitment. The system creates the vacancy announcement, captures detailed information about each applicant, and generates all forms related to the staffing process including closeout letters to applicants that did not receive offer of employment. The system utilizes bi-weekly downloads from the National Finance

Center (NFC) system to give users information about USPTO applicants. The system maintains a database of information on external applicants. The system. The Office of Human Resources Systems also has client access for National Finance Center systems. These NFC systems provide for entry of personnel information, development of leave and earning statements, and production of W2 forms. NFC updates these systems periodically and USPTO must update the client access.

b. Commitments and Benefits

The Office of Human Resources Systems meet the commitments to the customers and staff by providing personnel action systems that can monitor and process information and actions on employee relations, labor relations, merit assignment, vacancy announcements, and other HR functions. The OHR systems have allowed reduction in the amount of paperwork required for personnel actions and improved the delivery of business information. Personnel actions and reports are generated more efficiently with the support from the OHR systems.

2.4.2.2 Equal Employment Opportunity Case Management Retrieval System (EEOCMRS)

a. Description

The Office of Civil Rights uses the Equal Employment Opportunity Case Management and Reporting System (EEOCMRS) to support the Office of Civil Rights processing of complaints of civil rights discrimination and requests for reasonable accommodations. The EEOCMRS consists of a commercial off the shelf software product known as "iComplaints" that permits the Office of Civil Rights to enter, process, archive, and retrieve documents, track the processing of cases, and generate reports, in an efficient, secure, user-friendly, and quality work product.

b. Commitments and Benefits

EEOCMRS enables the USPTO to carry out its mission by providing an integrated approach to human resource management and support for business process improvements. The benefits of the system include:

- Improved case management;
- Case material readily available as needed;
- Cost and space savings from elimination of paper file storage for closed cases;
- Improved statistical reporting capability on all active EEO and reasonable accommodation cases; and

- Improved business operational efficiency through immediate access to case materials by all participants

2.4.2.3 Job Application Rating System (JARS)

a. Description

Since January 1998, the USPTO Office of Human Resources has used the Job Application Rating System (JARS) to expedite the processing of applications for employment from entry-level patent examiners. JARS has received complete approval by Office of Personnel Management (OPM) auditors and provides internal controls and streamlines labor intensive personnel processes. JARS complies with OPM instructions regarding the fair and open hiring of applicants for federal employment. Applicants submit applications by means of the Internet. Reviewers can view qualified employment applications accompanied by electronic images of supplemental documentation stored in a central directory. Supervisory Patent Examiners (SPE) and Sector representatives view all listings of all applicants for the sector and can re-score them accordingly. SPE and sector representatives can request the automatic issuance of Certification that applies the rule of three.

Starting in FY 2005, JARS will be modified to integrate with the Recruitment One-Stop System (OPM USAJOBS) for electronic transfer of an applicant's resume in XML format. The Recruitment One-Stop system is one of the E-Government initiatives to serve as a single application point to streamline the federal employment application process. This integration is mandatory by OPM. JARS will also migrate to J2EE environment and possess the capability to check application status from the on-line application for the Internet. A development activity includes implementation of pre-employment testing for Patent Examiners in support of the USPTO 21st Century Strategic Plan. JARS will have the capability to provide pre-employment testing information to Supervisory Patent Examiners and Office of Human Resources in the hiring process. Test scores will be processed by JARS to ensure that potential Patent Examiners are qualified for hiring.

b. Commitments and Benefits

JARS enables the USPTO to carry out its mission by providing a streamlined and integrated approach to human resource management and support for business process improvements. Benefits of the system include:

- Reduced overall time from the initiation of a request for employment to completion of a re-scored listing;
- Elimination of paneling costs paid to another agency;
- Near instantaneous return of certificates; and

- Automated protection of veterans' hiring preferences

2.4.2.4 Time and Attendance System (TAAS)

a. Description

The Time and Attendance System (TAAS) will automate time and attendance submission and reporting. The system will integrate with the current Time and Attendance facilities provided by the Department of Commerce. This system implements all the provisions of time and attendance specified by Title 5 and other OPM mandates. It also implements all of the functionality operating in the OP 690E Excel spreadsheet used by patent examiners and legal instrument examiners.

b. Commitments and Benefits

USPTO employees will be able to report time and attendance information directly from their desktops in a timely manner. The TAAS will capable of automating audit submissions. The benefit of the enhanced TAAS will allow Office of Human Resources to effectively manage its resources.

2.4.2.5 Office Administrative Services Request System (OASRS)

a. Description

The Office of Administrative Services (OAS) provides centralized space and facilities, office services, and other support services to all United States Patent and Trademark Office (USPTO) employees. Initially, the OAS utilized a manual, paper-based process for requesting services, where users submitted requests to the OAS via form PTO-1464. In support of OAS' goal of business process automation, and the Government Paper Elimination Act (GPEA), the Office Administrative Services Request System (OASRS) was developed. OASRS automates all of the OAS business processes that are most often initiated by form PTO-1464.

Through the implementation of OASRS, OAS is able to provide a consistent, centralized method for USPTO employees to request services. In addition, OASRS facilitates the management of workflow within the OAS organization, provides employees with easily accessible electronic forms, and generates useful management reports. The OASRS supports business functions such as work-item management, case management, and exception handling. This system facilitates work processes, which benefit from collaborative communication and document tracking, in a shared and organized environment. OASRS also tracks and monitors service requests throughout the entire business process. USPTO users are able to submit, receive, track, monitor and close service requests electronically. OASRS controls and tracks the flow of work

throughout the organization. OASRS reduces the amount of time that employees spend implementing requests for services, searching for status information, and preparing periodic reports for OAS management.

b. Commitments, Benefits, and Performance Measures

The Corporate business area enables the USPTO to carry out its mission by providing effective resource management. OASRS provides the following benefits:

- Immediate receipt, acknowledgement, tracking and checking of all requests for service;
- Elimination of the redundant function of redoing forms at administrative stations through the USPTO;
- Direct routing of correspondence through signatory authority for budget approval;
- On-line, electronic submission of requests for administrative services from the actual requester to the person responsible for insuring that the service is rendered;
- Scheduled and ad hoc management reports for all supervisors exercising authority over the process; and
- Built-in, on-line, remote application administration and reporting.

2.4.2.6 Personnel Folder Tracking System (PFTS)

a. Description

The Personnel Folder Tracking System (PFTS) uses Infolinx, a COTS which enables the Office of Human Resources (OHR) to accurately track the location of personnel record files of individual USPTO Employees. Infolinx will not operate on XP workstations. Infolinx currently operates on two NT workstations. The data from Infolinx is stored in the MSAccess database, and resides on one of the workstations. The vendor can only support the system because special keys and codes are needed for maintenance access, including loading onto a workstation.

b. Commitments and Benefits

The Personnel Folder Tracking System benefits OHR by tracking personnel folders that are moved or located in any environment. The PFTS provides OHR with effective material records management, management verification of resource availability, and compliance with IG direction to ensure that no personnel folders are lost. This system also enables the Office of Human Resources to comply with the internal control requirements of the Office of Personnel

Management (OPM) by having the capability to track the official USPTO personnel folders at all times.

2.5 Intellectual Property Leadership (Policy)

a. Description

The Policy function provides leadership and direction to the USPTO's core business corporate support areas. The function also promotes and provides expertise in the area of intellectual property rights. Within this document, the Policy function encompasses those AISs required to support the Director, Deputy Director, General Counsel, Office of Enrollment and Discipline, and Office of Legislative and International Affairs.

The Policy business processes and their supporting systems continue to be in a state of positive change. Technology is being developed to assist in the performance of business processes. These innovations will provide greater effectiveness and efficiency to workers in the Policy business area. Significant progress has been made in making computer-based functions and data more available. Within this section is a summary of the next steps in the development of the AISs that consist of the Intellectual Property Leadership Management Support System. This includes all system development and maintenance initiatives currently planned, or under way.

2.5.1 General Counsel's Case Tracking System (GCCTS)

a. Description

The Office of the General Counsel provides legal counsel to the Director of the USPTO and represents the USPTO before the Federal Courts. Their primary responsibility is to defend decisions of the Director, Board of Patent Appeals and Interference, Trademark Trial and Appeal Board, and examiners in patent and trademark cases. Also represented is the Director at depositions of USPTO employees who administer USPTO's responsibility under the Freedom of Information and Privacy Acts. The Office of the General Counsel provides legal guidelines for USPTO personnel, maintains the General Counsel's Law Library, provide legal clearance for proposed regulations and correspondence, and monitor publication of USPTO decisions. The General Counsel's Case Tracking System (GCCTS) is the key management system used to monitor the case docket of the OGC.

The GCCTS will maintain the system within managed and scheduled release cycles adopted as a standard for this systems performance within the automated business process of the system sponsor. Pending upgrades to the automated support package of the OGC will provide for automated tracking of past cases and legal initiatives and for the establishment of an Automated Legal Resources Center (ALRC). Special components have been added by USPTO to accommodate functional needs and reporting requirements in OED and the Office of the

Solicitor. GCCTS is implemented in all OGC offices except TTAB. The new version of Amicus, expected in May 2004, is expected to be 508 compliant, Web based, and operates on Microsoft SQL Server database.

Amicus Attorney is a law practice management software for lawyers. It provides the USPTO's Office of the General Counsel with a solution for managing information, people, schedules, communications, and documents on client files. It can be integrated with the other Office of the General Counsel practice tools and will functionally provide the capability to schedule appointments, manage to-do lists, track people, draft documents, document management, document full text searching, ticklers, track phone calls and content data management.

In FY 2005, this project addresses the need for replacing the current GCCTS system with a 508 compliant system that will include functionalities to serve as a docketing management system and a knowledge management system for the OGC. By 2007, the General Counsel Case Tracking System will require replacement by an up to date system that combines case tracking capability with library management functions. The new system will also incorporate the latest in USPTO Enterprise Architecture.

b. Commitments and, Benefits

The Amicus COTS enables the Office of the General Counsel to carry out its mission by providing effective resource management. Implementation of the Amicus system provides the following benefits:

- Case Management;
- Practice management;
- Immediate tracking and checking of all requests for service is immediately accessible to the basic requester of service;
- Provides tickler case management reports to users and supervisors exercising authority over the process; and
- Document management and document full text searching.

2.5.2 Electronic Freedom of Information Act (E-FOIA)

a. Description

The Electronic Freedom of Information Act (E-FOIA) System is a collection of automated capabilities that enable USPTO to comply with the Freedom of Information Act (FOIA) requirement that mandates public access to records of agencies in the Executive Branch of the

Federal Government. The Act also provides for certain exceptions to the release of records, known as FOIA exemptions. The Office of the General Counsel processes FOIA requests for the USPTO. In the last several years, FOIA requests to the USPTO have doubled and their numbers do not appear to be dissipating. The majority of the requests are for copies of USPTO contracts or other documents related to the administration of the contracts.

In 1996 Congress amended the FOIA statute to require agencies to create an electronic reading room for records that "have become or are likely to become the subject of subsequent requests for substantially the same record." Reference 5 U.S.C. § 552(a)(2)(D), as amended by Electronic Freedom of Information Act Amendments of 1996, 5 U.S.C. § 552(a)(2)(D)(West Supp. 1997) states that the statutory purpose of placing such records in electronic reading rooms is to divert some potential FOIA requests for previously released records. Reference H.R. Rep. No. 104-795, at 21 (1996), pertaining to the release of Government contracting records, which may contain FOIA exempt information. The Amendment also requires the USPTO to make all final agency decisions, entered after November 1996, available in the electronic reading room (Reference 5 U.S.C. § 552(a)(2), effective November 1, 1997). For the USPTO, these final decisions include enrollment and discipline decisions from the Director and the Office of Enrollment and Discipline. These decisions usually contain personal privacy information.

The first step in this strategy was accomplished with the development of an electronic reading room on the USPTO web site in FY 1998. During FY 1999, operational procedures for posting documents were improved. During FY 2001, an electronic redacting capability was added to the process by which the USPTO adheres to the FOIA. Since 2002, an enhancement effort has been started to develop an automated facility that manages postings, file management, archiving, web page maintenance, and document integrity. Specifically, functionalities such as automated decisions posting pilot for one of the Boards and a new system with searching capability are being established. Essentially, this project addresses the need for a system to electronically identify and handle OGC documents that are required to be publicly available in accordance with the Freedom of Information Act. The enhancements will be completed based on scheduled release cycles adopted as a standard for monitoring the performance of this system.

b. Commitments and Benefits

The E-FOIA system enables the USPTO to carry out its mission by providing effective resource management in meeting the requirements of the FOIA statute aforementioned. In addition, the E-FOIA system enables USPTO to comply with the GPEA requirements toward a "paperless" workplace.

2.5.3 Executive Document Management System (EDMS)

a. Description

The Executive Document Management System (EDMS) helps the Director of the USPTO to track and respond to a wide range of official correspondence and response actions taken within the Director's Office or within the subordinate offices that are assigned response actions to individuals that coordinate the executive documents. EDMS records the status of all actions on official correspondence and makes immediate tracking of this correspondence possible. This ensures that official responses and/or other actions are handled in an appropriate and in a timely manner.

To facilitate this process, the current EDMS, which replaced an existing managed manual documentation process during FY 1996, takes full advantage of personal computer-based tools, COTS software and PTONet. The current EDMS is fully operational with periodic enhancements scheduled to take advantage of improvements and to expand functionality in the EDMS software.

b. Commitments and Benefits

EDMS enables the USPTO to carry out its mission by providing effective resource management. The goal of this system is to maintain a stable system of executive document management while continuing to improve efficiency and effectiveness of its automated procedures. In addition, responses to official correspondence occur in a timely and responsive manner and actions in response to official documents occur systematically.

2.5.4 Office of Enrollment and Discipline Information System (OEDIS)

a. Description

The Office of Enrollment and Discipline Information System (OEDIS) provides the Office of Enrollment and Discipline (OED) with an automated means to track applications from applicants who have applied for eligibility to practice patent law before the USPTO through enrollment in the examination process. All applicants who pass the enrollment and examination process are recorded on the official register of eligible agents and attorneys (the Roster) who may practice before the USPTO. The Roster is also maintained using OEDIS. Toward this end, the OED receives and is required to respond to a wide range of official correspondence for the administration and management of examinations for 6,000 applicants each year. OEDIS provides automated receipt and workflow of electronic application information capability. In so doing, the system has enabled USPTO to reduce the time it takes to process applicant information by electronically processing agent or attorney requests, letters, applications and actions. Electronic processing of applicant enrollment information and case files provides information in a media that facilitates exchange of information to the customer (applicant), the USPTO, the OED as well as other external agencies or organizations. OEDIS will also be used to monitor practitioner adherence to rules of patent practice. This functionality calls for the establishment of a practitioner recertification program and modifications to practitioner disciplinary investigations and procedures.

Automation of applications has become necessary as the volume of application increases. The Office receives approximately 1,700 application packages, each of approximately 20-to-30 pages.

OED also has at any given time, about 150 open cases for the complaints against agents and attorneys that may result in disciplinary action. A variety of manual document management and control processes have evolved over the years to support these business needs.

b. Commitments and Benefits

Automation of OED supports the macro performance goal of instituting policy, control, and procedures pertaining to the agent or attorney rights and eligibility in the representation of individuals in patent case law. Future enhancements to OEDIS provide for improved web access by OED managers and reviewers. In addition, the benefits include:

- A system that will provide for automated processing of testing applications and related information requests;
- An archival storage that uses scanning technology;
- Patent practitioners are aware of and competent in new practices and procedures which may lead to reduction in both the number of petitions filed and the pendency of applications;
- A system that will significantly reduce the need for physical space for file storage. Only those cases currently under review will require physical storage. The space formerly occupied by archived paper has been returned to staff; and
- An automated process will eliminate the need to hire a disproportionate number of additional clerical and administrative FTEs to meet the growing workload.

2.5.5 Electronic System for Trademark Trials and Appeals (ESTTA)

a. Description

The Electronic System for Trademark Trials and Appeals (ESTTA) is an electronic filing system that accepts most TTAB proceeding documents electronically (i.e., Extension of Time to Oppose, Notices of Opposition, Inter Partes Papers, Notices of Ex Parte Appeal, Ex Parte Appeal Papers, and Petitions to Cancel). ESTTA also interfaces with TTABIS to allow automated processing of Notices of Ex Parte Appeal, changes of address, and consented motions. Future modifications of ESTTA will allow automated processing of Notices of Opposition and Petitions

to Cancel. The current version also acceptsNotices of Opposition to requests for extension of protection filed under the Madrid Protocol.

b. Commitments and Benefits

The ESTTA enhancements meets the commitments and benefits to the staff and customers by enabling the TTAB to meet or improve processing time for all documents, and providing customers with faster responses to filings, which has been a long-standing customer need. The ESTTA enhancements satisfy customers' requirement for additional electronic filing options as well as providing an immediate response on many of those filings, and a savings in staff resources since no internal review is necessary. The ESTTA will also interface with the Madrid Protocol.

2.5.6 Trademark Trial and Appeal Board View (VUE)

a. Description

TTAB VUE allows USPTO and public users to view image copies of documents in Trademark Trial and Appeals Board (TTAB) proceeding files online . This application also allows the user to print copies of the documents in TTAB proceeding files and perform searches on proceeding data. However, TTAB VUE does not allow the user to see notes, attachments, and any confidential information in theproceeding files for privacy and security reasons.

b. Commitments and Benefits

TTAB VUE fulfills the commitments to the customers and staff by providing integrated information management support for viewing TTAB proceeding files. The application is designed to keep pace with the business needs of the public and TTAB. TTAB VUE is accessible to public users via PTO's Internet site and conforms to the security requirements and practices applicable to USPTO AISs.

2.5.7 Trademark Trial and Appeal Board Information System (TTABIS)

a. Description

TTABIS is a workflow system with the ability to enter data, queue electronic files to employees' desktops for action, prepare correspondence, track cases, generate reports for management, and monitor proceedings in an effective, secure, and timely manner. Electronic submissions are be integrated directly into the TTABIS workflow. TTABIS will be modified starting in FY 2005 to allow communication with the FAST 2.0 (TIS), to operate as a web-based application to speed processing and improve access for work-at-home employees, and additional enhancements to

improve processing and increase efficiency. This activity is part of Trademark Electronic Government.

b. Commitments and Benefits

TTABIS supports the Trademark Business Area macro performance goal of enhancing trademark protection. The USPTO made a key commitment toward accomplishing this macro goal – pendency at 3.0 months to first action and 13.8 months to registration/abandonment.

Benefits derived from TTABIS include:

- Data entry methodology to provide TTAB the support staff with a flexible and user friendly system;
- Improved quality of data captured;
- Management capability to generate necessary reports;
- Ability to process increased submissions withfewer FTEs;;
- Dramatically improved pendency of front-end TTAB processing; and

2.5.8 Appeals Case Tracking System (ACTS)

a. Description

The Appeals Case Tracking System (ACTS) records and manages appeals information using a client server application with automated workflow software to control the movement and record the disposition of each patent appeal case. ACTS enables the Board of Patent Appeals and Interferences (BPAI) to track the status of cases and provide relevant information pertaining to each patent appeal case. The system uses an interface to the PALM system and has increased the accuracy and reliability of appeals information. The system is accessible to users via PTOnet.

The Board of Patent Appeals and Interferences, the user of ACTS, is an administrative tribunal that consists of Administrative Patent Judges who review appeals cases and decide to affirm, reverse, or affirm in part a rejection in a patent application under appeal. Additionally, the judges define the appropriate result, such as the actual decision and the decision date. Administrative Patent Judges also review claims of interferences with existing patents and patent applications during the filing stage of a patent application. The Board will ultimately decide whom, if anyone is entitled to the right of the patent in question. The BPAI tracks information on each patent appeals case, annually receiving approximately 4,000 new ex-parte cases a year and approximately 200 inter-partes cases a year. The average number of cases under review at any given time is approximately 400, some of which can take several years to resolve.

USPTO completed the initial incremental deployment of the portion that supports tracking of appeals in 1998. An additional major deployment in FY 2001 provided for the automated tracking of interferences. In FY 2007, ACTS will automate the insertion of electronic appeal and interference communications generated by Board of Patent Appeals and Interferences (BPAI) into IFW. Declarations, re-declarations, and judgments on patent appeals interferences cases generated in BPAI are printed and scanned into IFW. This project will eliminate the printing of documents in BPAI and scanning documents back into IFW.

Future enhancements consist of ACTS integration with XML for image file as well as improved interface with PALM and RAM. Reports and system capabilities will also be refined. ACTS will enable electronic filing on Interference proceedings for Board of Patent Appeals and Interferences. The modification allows interference customers to submit electronic documents to USPTO for their interference proceedings into an existing database, which currently stores the interference file wrapper.

The maintenance activities for ACTS consists of approximately three releases in FY 2005 to support Certification and Accreditation process, respond to users' request to modify the system in support of business changes, perform COTS and OS upgrades, resolve production problems and perform emergency system fixes. The maintenance schedule will be implemented based on a release management strategy. USPTO will ensure that system performance is optimized and managed through the release management approach.

b. Commitments and Benefits

ACTS supports the macro performance goal of instituting policy, control, and procedures pertaining to patent appeals cases. To meet this top priority, the USPTO needs to electronically track office workflow. ACTS provides the following benefits to customers and staff: (1) ACTS accurately traces the progress and location of each appeal and (2) ACTS permits managers the additional flexibility of rapidly revising rules, roles and routing affecting workflow without disrupting the stability of the data that is used in this project. The enhanced version of ACTS will benefit the customer by accurately tracing the progress and location of each interference with the same flexibility presently afforded to those who route and trace appeals.

2.5.9 Patent Cancellation Proceedings Electronic Filing

a. Description

Patent Cancellation Proceedings Electronic Filing allows for the electronic filing and tracking of requests to cancel existing patents that may be infringements of existing patents or inappropriate impediments to legitimate commercial activity. This system will provide automated support and internal controls to electronically file post grant cancellation of patents. The system will also enable storage of multimedia exhibits and records.

b. Commitments and Benefits

The Electronic Filing System for Patent Cancellation Proceedings meets the commitment to the customer and staff. With the creation of an electronic filing system, the office space rental costs for storing paper files can be minimized. Electronic filing can expedite cancellation proceedings without posing substantial costs in document handling. In addition, the benefits associated with implementing such a system are automated support, instant availability of documents, eliminating the need for storage of paper files and the costs associated with locating lost files, repairing damaged files and reconstructing files. The ability to mark a document for further reference would further increase judicial efficiency. Using the Internet from anywhere in the world, counsel will be able to file documents with the USPTO electronically. Additional benefits are described below:

- **Accessibility**: The ability to view, file and retrieve documents 24/7 (every day of the year, 24 hours a day) for USPTO users and the public;

- **Instant Notification**: The ability to receive immediate notice of new filings with the USPTO;

- **Low Cost to Users**: Use of standard Internet software would minimize out-of-pocket expenses, attorney travel time, postage costs, and the expense of maintaining and storing paper files;

- **Information**: The information concerning the filing of cases would be timely and accurate and will enable the Chief Judge, managers and administrators of the Board to make effective business decisions. APJs would also be able to access information relating to their proceedings in a highly expeditious manner. Bibliographic data about the parties will be collected via public user input into the system and will thus enhance data collection and management;
- **Storage Space**: The system, by creating a paperless electronic environment, would eliminate the need for storage space for paper files;

- **Potential Expandability**: The system would potentially be expanded to provide generation of statistical reports, workflow functions, and online collaboration within the Board; and

- **Human Resource Management**: The system would eliminate the need to hire additional personnel to find and locate paper files, to match papers with files, to reconstruct and repair files and the office space that would be required for such employees.

2.5.10 Office of Legislative and International Affairs Document System (OLIADS)

a. Description

The Administrator for Legislative and International Affairs is the principal advisor to the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office on public policy matters related to intellectual property protection including proposed legislation and international activities of the United States. The Office of Legislative and International Affairs (OLIA) formulates legislative and policy proposals, prepares supporting documentation to carry out the legislative programs and policies of the Patent and Trademark Office, and reviews and prepares analyses of other legislative proposals concerning intellectual property matters. OLIA prepares Congressional testimony on intellectual property for the Director, other Patent and Trademark Office and Department officials, and maintains liaison with Congress, the intellectual property bar associations, industry, and others concerned with proposed and pending legislation.

The staff of OLIA analyzes other policy issues before the Executive Branch and obtains public views through various means including public hearings. The Office promotes international development of intellectual property systems and advocates improvements and more cost-effective means of protecting intellectual property rights of U. S. Nationals throughout the world. This includes developing and maintaining multilateral systems for the protection of intellectual property rights; assisting in the establishment of agreements with other intellectual property offices; participating in the intellectual property aspects of trade consultations and the conclusion of bilateral investment treaties and trade agreements; promoting the establishment of adequate and effective systems in developing countries for the protection of intellectual property rights; developing international standards and procedures to encourage foreign filing by U. S. Nationals and facilitating access by U. S. Nationals to the information contained in U. S. and foreign patent and trademark documents; and providing administrative oversight to and coordinating the activities of the Office of Enrollment and Discipline and the Office of Public Affairs.

To assist in the accomplishment of these tasks, OLIA maintains an on-site library that is also used by the Director of the U.S. Patent and Trademark Office, other offices within the USPTO and the public. The library contains country files for over 200 separate countries, legislative files, subject files, Federal Register notices, public hearings and comments, and treaties and agreements. The anticipated growth in library volume and usage coupled with the need to insure that documents remain available and useable, mandate that the contents be converted to electronic form. OLIADS will develop an automated document management system to provide OLIA with the capabilities of scanning, indexing, searching and retrieving the documents OLIADS will also provide the capability to distribute documents via the PTO Intranet, USPTO web site and on a CD-ROM.

OLIADS version 2.0 maintains the legal documents and other related agreements and information items in an electronic format accessible by attorneys and other employees of OLIA. This effort will be to maintain the system within managed and scheduled release cycles adopted as a standard for this systems performance within the automated business process of the system sponsor. OLIADS will be accessible to USPTO internal users through the USPTO Intranet. OLIADS 3.0 will become Internet accessible to the public and to USPTO users without work-at-home access, and operate on the UEA.

b. Commitments and Benefits

The Office of Legislative and International Affairs Document System allows the Office of Legislative and International Affairs to manage the storage and tracking of documents and provide for rapid and concurrent review by authorized users. The system will provide the following benefits:

- Accurate and rapid location of documents
- Automated tracking and safeguarding of documents
- Concurrent availability of documents
- Reduced storage space

2.5.11 Learning Management System (LMS)

a. Brief Description

This is an enterprise solution to support testing, training, and monitoring results of USPTO employees and external practitioners. The system provides Practitioner Recertification for OED/OGC. The LMS also provides Examiner Certification and Training for the Patent Corp and Examiner Pre-Employment Testing (on English Proficiency) for HR Training for Trademarks.

b. Commitments and Benefits

The LMS will provide and collect Performance Excellence evaluation and manage Knowledge Management. The system will provide a vehicle to monitor availability of training and testing. The LMS is used to record and report employee training and testing status and credentials, and allows for planning future training requirements.