

CAPABILITIES

PTFS has provided digital archiving systems for more than 250 government, commercial, academic, union, association and not-for-profit clients.

Corporate Overview

Rapid advances in technology, including the exponential growth of the Internet, has caused a proliferation of digital information. According to a University of California, Berkeley study, in the year 2000, the world produced 2 exabytes (2 billion gigabytes) of digital information. Currently, 93% of all information is produced digitally. Organizations recognize the need and acknowledge the expectation, that their valuable information be easily accessible. However, they continue to struggle with the challenge of storing and retrieving effectively their ever-increasing electronic document collections.

PTFS' Digital Archiving Solutions offer advanced, affordable tools and services to manage and keep pace with valuable and rapidly expanding digital collections. PTFS is a leading provider of comprehensive archiving solutions that include digital archiving software systems, digitization and content conversion services, systems integration and staffing support services. With incomparable expertise in understanding client challenges and in developing client tailored solutions, PTFS has already provided valuable digital archiving systems for more than 250 government, commercial, academic, union, association and not-for-profit clients. PTFS specializes in:

- || Digital Archiving Software – ArchivalWare™
- || Digitization and Content Conversion
- || Library and Business Process Systems Integration
- || Library & Professional Staffing Services

DIGITAL ARCHIVING SOFTWARE

The PTFS ArchivalWare™ digital archiving system is designed to put complex searching tools in the hands of the end user through an easy-to-use Web interface. Archival Ware™ allows users to accurately search and retrieve any digital object including archived full-text materials by using the document's text content, metadata fields or a combination of both to find information quickly and with pinpoint accuracy. ArchivalWare™ seamlessly integrates with library and other business process systems to allow digital object and document libraries to be built and maintained more easily and cost-effectively than ever before.

DIGITIZATION & CONTENT CONVERSION

PTFS offers specialty and high volume digitization and content conversion services at affordable pricing. Our 10,000 square foot conversion service center provides a full range of digital image capture and services that includes digitization, metadata creation, and re-keying services from published, unpublished, digital, or non-digital materials. PTFS has extensive expertise in handling and digitizing rare, fragile and historic documents and the capability to create digital assets from a wide variety of source materials including:

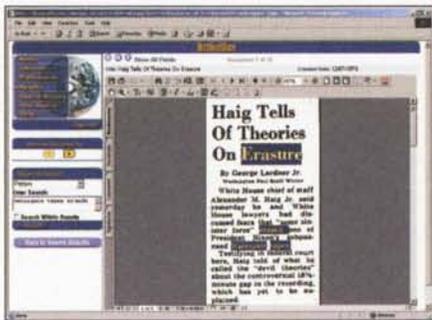
- || Books/Journals
- || 16mm and 35mm Microfilm
- || Microfiche
- || Engineering drawings
- || Photographs/Slides
- || Video/Audio



LIBRARY & BUSINESS PROCESS SYSTEMS INTEGRATION

PTFS is a leading provider of integrated library and business process/workflow systems, library consulting services and library portal solutions. Services include requirements analysis, library software selection, business process re-engineering, hardware and software installation, training, support and maintenance. ILS comparative analysis/consulting, systems migration planning, data conversion planning and ILS systems support are delivered by our team of experts, many of whom are highly experienced librarians. PTFS provides turnkey solutions to support the migration of existing digital information housed in legacy systems to ArchivalWare™ and other "open system" solutions.

PTFS provides tailored digital archiving solutions.



LIBRARY & PROFESSIONAL STAFFING SERVICES

PTFS provides professional and support staffing services to all types and sizes of libraries and corporate information resource centers. Services range from total management to staffing for both short-term projects and long-term positions. The PTFS staff is composed of highly qualified information specialists (e.g. reference and research, cataloging, acquisitions, serials control, document delivery, circulation) as well as technology positions (e.g. systems administrators, programmers, web designers and developers).

SOME OF OUR CLIENTS

Commercial Clients

- || Department of Commerce
- || Embry-Riddle Aeronautical University
- || George Washington University
- || Harris Corporation
- || Head Start Program
- || International Monetary Fund
- || International Society for Optical engineering
- || Library of Virginia
- || Lockheed/Martin
- || Maryland State Law Library
- || Northrop Grummon
- || National Geospatial Intelligence Agency (NGA)
- || Office of the Secretary of Defense (OSD)
- || Winchester Public Schools
- || Wyoming State Library

Government Clients

- || Amalgamated Transit Union
- || Commodity Futures Trading Commission
- || Department of Justice
- || Department of Labor
- || Government Printing Office (GPO)
- || Library of Congress
- || National Defense University
- || National Institutes of Health
- || National Labor Relation Board
- || National Library of Medicine
- || Naval Research Laboratory
- || Smithsonian Institution
- || US Army (Multiple)
- || US Marine Corps
- || US Military History Institute
- || Utah State Library
- || Whittier Public Library



PTFS, Inc.
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Digital Archiving Software

PTFS has developed a highly effective digital archiving system, which includes ArchivalWare software, a digital document repository and a cadre of applications for building, managing and integrating digital archives. ArchivalWare combines a suite of high-volume, digital capture and production tools with a sophisticated web-based retrieval engine.

ARCHIVALWARE

ArchivalWare allows organizations to store, search, retrieve, browse and manage digital archive collections within one system. ArchivalWare includes a web-based, full-text search and retrieval system. Source formats include digital documents, books, news clippings, photographs, video and audio collections and other electronically published material. Using ArchivalWare's full-featured interface, search queries can be conducted using Boolean, natural language (concept), and pattern matching (fuzzy logic) methodologies. Queries can be made against the full-text of digital documents, key metadata fields, or a combination of both. Retrieval of hits resulting from full text searches are highlighted directly on the document image for quick visual reference. Metadata or key-fields can also be used to limit the full-text search or retrieve non-text digital objects, (i.e., search by date, author, publisher, etc.). Supported ancillary software includes image capture and conversion (OCR, enhancement, etc.), forms processing, redaction tools, and workflow management. ArchivalWare provides rapid digital object distribution and re-purposing of digital assets using web-based technologies.

LANGUAGE TOOLS

ArchivalWare's baseline semantic network, created from complete dictionaries, thesauri and other semantic resources, gives searchers a built-in knowledge base of over 400,000 word meanings with more than 1.6 million word relationships. Semantic network technology guides researchers easily and automatically, by using all of the power and richness of their native language, including syntax, morphology and the word definitions. This easy-to-use, natural language search tool provides unprecedented levels of accuracy and flexibility for retrieving information from the digital archive. Numerous industry specific cartridges are available in more than 20 different domains including medical, legal, military and technology.

WEB EDITOR

The ArchivalWare Web Editor provides search and retrieval, database maintenance, and metadata editing. The editor uses a split-screen design, allowing staff to see the image as they key descriptive information into the metadata fields.

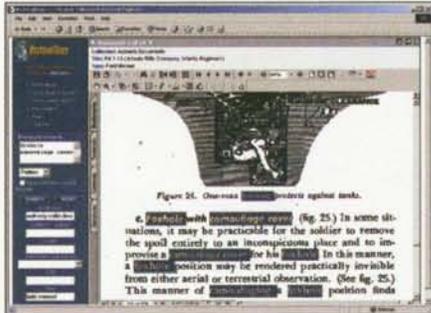
APPLICATION PROGRAMMING INTERFACE (API)

ArchivalWare's Application Programming Interface (API) allows for integration with existing and future third party applications. Using the API, integration with federated search solutions, Workflow and Business Process Management systems, and legacy systems is easily performed. ArchivalWare's is built using an open architecture with J2EE integration.

ArchivalWare
lets you store, access
and manage all your digital
information within one system.



ArchivalWare finds
the information you need
with pinpoint accuracy.



SCALABLE TECHNOLOGY

ArchivalWare's scalable client/server open systems software architecture is designed for fast response time over local and wide area networks. The software design of ArchivalWare supports a distributed system configuration, which can be tuned to maintain performance regardless of database size or concurrent usage, by using schedulers, query servers and client handlers. Queries over multiple digital library collections can be sent to a single software query server, or distributed over multiple software servers to take advantage of current multi-processor server hardware.

ARCHIVALWARE™ QUICK GUIDE

- || Intuitive and easy to use
- || Includes a web-based metadata editor
- || Highlighted search "hits" show user each occurrence within a document
- || Links reference documents in metadata or from links in the document
- || Multiple search modes - Natural language, Concept, or Boolean - yield pinpoint results
- || Supports pre-programmed search button from web portal for quick access to high demand information
- || Supports 48 foreign languages
- || Provides an easy method to invoke collection security
- || Searches born digital and digitized full-text documents equally well
- || Stores data in XML format
- || Searches metadata, document full-text, or both
- || Runs on standards based n-tier architecture on J2EE application server
- || Searches across large document sets (millions of pages) on multiple servers, geographically dispersed, with several second response time
- || Permits flexibility in product delivery through web-based architecture
- || Integrates with Federated search solutions
- || Training and follow-on maintenance and support
- || Uses Dublin Core plus metadata schema
- || Interface, developed for French, Spanish, Anagie and Greek

Database: Microsoft SQL 2000 or 2005, Sybase or Oracle 8, 9, or 10 RDBMS

Server: SUN Solaris, 8, 9, or 10 Windows 2000 on 2003

Clients: Web Browsers for search and retrieval on any operating system platform

Pricing: Contact our sales team at sales@ptfs.com or call 1-888-654-8088

SOME OF OUR CLIENTS

- || Amalgamated Transit Union
- || Ouachita Parish Public Library
- || Department of Labor
- || San Leandro Public Library
- || Embry-Riddle Aeronautical University
- || Southern Oregon University
- || Government Printing Office (GPO)
- || Spokane Public Library
- || Maryland State Law Library
- || The Chicago Tribune
- || Military History Institute
- || Utah State Library
- || National Geospatial Intelligence Agency (NGA)
- || Whittier Public Library
- || National Labor Relations Board
- || Winchester Public Schools
- || Office of the Secretary of Defense (OSD)
- || Wyoming State Library

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Digitization and Content Conversion

“PTFS does first rate work, they are absolutely reliable and their prices are reasonable. We have the highest praise for their people and their work.”

– Marjorie Bloom
Law & Technology
Pension Benefit Guarantee Corporation



PTFS offers specialty and high volume digitization and content conversion services at affordable pricing using industry experts trained in all facets of imaging projects. PTFS markets a secure, state-of-the-art service center, with the capability to digitize a wide variety of source material/ types including paper, engineering drawings, 16mm and 35mm microfilm, slides, microfiche and video. Our patent-pending document conversion process includes: document preparation, scanning, OCR and image enhancement, indexing, quality control and packaging. PTFS has significant expertise in the handling and digitization of fragile and historic original materials and the capability to provide an archive quality original in addition to multiple client specified image resolutions. Digitization capabilities include bitonal, grayscale and color image capture. All projects incorporate a workflow quality control plan, based upon customer requirements.

DIGITIZATION CAPABILITIES

Paper Scanning PTFS carefully prepares each item for scanning by removing clips, staples and document fasteners, identifying page breaks, as well as other preparatory steps. Image type, resolution, and other digitization specifications are dictated by client requirements and adhered to rigorously by PTFS technicians.

Scanners include:

- || Vacuum-fed belt scanners (fragile and odd shaped material)
- || Platen-protected wide-angle scanners (book scanning)
- || High-volume scanners (standard paper)
- || Large-format scanners (architectural drawings and other oversize materials)
- || Flat-bed scanners (delicate and fragile materials)
- || Microfilm Scanners

Books & Journals PTFS has significant expertise digitizing books, journals, and other bound materials. Special handling procedures for page turning and to prevent binding stress are utilized following stringent client specifications. Specially designed overhead digital scanners allow digital images to be produced without touching the surface of rare materials and fragile paper.

Microfilm & Microfiche PTFS has film digitization capability for microfilm and microfiche. High-resolution microfilm and microfiche scanners capture images at a variety of DPI settings using sophisticated digital capture software. This software can obtain page and section break index data from small, medium and large blips on the microfilm.

Photographs & Slides PTFS provides services to convert black & white and color photograph collections into web-accessible digital archives. Digital photographs can be produced from prints, slides or negatives. Multiple digital versions of photos can be provided to include web-ready and high-resolution versions. Processing techniques include watermarking, copyright embossing and image enhancement.

PTFS offers specialty and high volume digitization and content conversion services at affordable pricing.

Scalable digitization solutions grow with your project needs.



Engineering drawings PTFS has experience in handling and scanning C, D & E size AEC documents. Our large format scanners are capable of handling a wide variety of engineering media types from standard blueprints to Mylar and Sepia, while optimizing the scanned image for the best possible result regardless of the quality of the original document.

Video & Audio PTFS produces digital video from analog source originals. Distance learning video libraries can be built by selection of pertinent clips from full-length sequences. The researcher can then view the clips and accompanying audio and access the full video upon demand.

C O N T E N T C O N V E R S I O N C A P A B I L I T I E S

Image Enhancement Image enhancement, which typically includes cropping, despeckle and deskewing is performed prior to Optical Character Recognition (OCR) processing. The results from the enhancement help provide a higher quality "clean" image, which is used during the OCR process to increase OCR accuracy. Image enhancement used on photographs can include color correction, contrast, sharpening etc.

Optical Character Recognition PTFS' OCR conversion technology is applied to complete the digitization process. Using a best practice OCR process, it is estimated that PTFS can increase OCR accuracy and reduce error rates by up to 80% over conventional OCR processes. Any image that fails to meet set parameters is auto-rejected and is sent for manual image repair.

Metadata & Re-Keying PTFS offers low-cost metadata creation and re-keying. Titles, authors, dates, and other pertinent metadata are either keyed from the image on the source material or extracted automatically from forms or from client legacy databases to create metadata. Small-point, cursive, or poor quality second-generation copies that cannot be OCR'd accurately may require re-keying. PTFS provides accurate, clean text for search and display as well as to create full-text documents or metadata records. Single or double-key services can be combined with customized spell checking, stop words, and special dictionaries for quality control purposes. Descriptive information can be captured during digitization to populate metadata fields.

Electronic Text Archives PTFS creates electronic archives using documents created from a wide variety of applications. Existing electronic documents (reports, theses, correspondence, etc.) can be indexed and added to a digital repository. This process allows searching across both newly digitized and born digital materials with a single search.

File Formats PTFS has extensive experience delivering numerous types of digital image file formats. These formats include JPEG 2000, TIFF, DjVu, PDF and many more. PTFS builds compound digital image with hidden text documents. When indexed with PTFS' ArchivalWare™, these document types (PDF, DjVu) allow the end-user to search on the full text and view the original image with graphics or embedded images. In addition, text "hits" are displayed on the image or in the electronic document text.

S O M E O F O U R C L I E N T S

- || Head Start Program
- || International Monetary Fund
- || Library of Virginia
- || Lockheed Martin
- || National Geospatial Intelligence Agency (NGA)
- || National Geographic Society
- || National Institutes of Health
- || Office of the Secretary of Defense (OSD)
- || Pension Benefit Guarantee Corporation
- || Smithsonian Institution
- || The Chicago Tribune
- || The International Society for Optical Engineering
- || Winchester Public Schools
- || Wyoming State Library

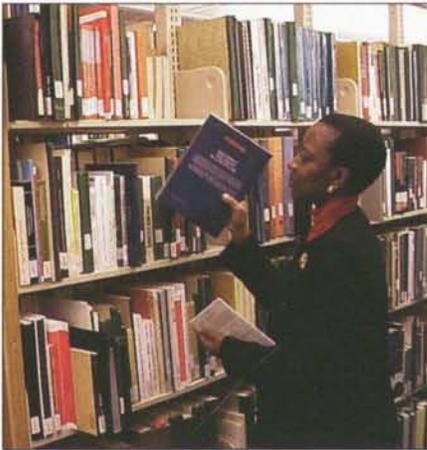
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Library Systems Integration and Support Services

PTFS' library consulting staff offers unsurpassed expertise in library systems design and development.

PTFS is a leading provider of integrated library systems, library consulting services, on-site staffing support and library portal solutions for government, corporate, and academic libraries. PTFS combines an experienced technical team with library and information professionals to deliver turnkey solutions with single-vendor accountability.



LIBRARY SYSTEMS INTEGRATION

PTFS has maintained working relationships with many top ILS developers, such as Dynix, Ex Libris, SIRSI and EOS, to provide the right product for your project. PTFS is also an authorized reseller for many other superior software, hardware, storage, networking, and telecommunications products that are used to develop and deliver turnkey solutions.

PTFS services include systems integration, system selection and design, installation, configuration, procurement, training, support and maintenance. Additionally, PTFS provides technical support for migration from legacy systems, whether manual or automated, as well as retrospective conversion services from non-MARC electronic files, card catalogs, and shelf lists. PTFS is skilled in phased implementation, allowing each library the ability to methodically develop a system, adding components and services as schedules or budgets permit.

LIBRARY CONSULTING SERVICES

PTFS offers ILS, portal systems design, management and network administration and help desk support for single and multiple library sites. PTFS also provides consulting services for planning or upgrading library automation systems and creating digital libraries. Additionally, PTFS provides requirements analysis and needs assessment for imaging system and digital conversion efforts. PTFS information systems planning services include software/hardware development, maintenance support, networking, and implementation.

ON-SITE STAFFING SERVICES

PTFS can provide professional and support staffing services to all types and sizes of libraries and corporate information resource centers. Services range from total library management to staffing for both short-term projects and long-term positions. PTFS also provides staff for specific projects such as collection inventory, weeding, collection bar coding, and retrospective conversion work. The PTFS library staff is composed of specialists in various library disciplines including:

- || Systems administration
- || Reference and research
- || Cataloging
- || Acquisitions
- || Serials control
- || Document delivery
- || Interlibrary loan
- || Shelving
- || Circulation and other library functions

PTFS provides turnkey digital archiving solutions that streamline your business process.



PTFS information technology staffing includes:

- || ILS systems management and administration
- || System design
- || Web development and support
- || Programming
- || Database development and administration
- || Document and records management
- || Network administration and help desk support
- || Expert scanner operators
- || Data entry specialists

LIBRARY PORTAL SOLUTIONS

PTFS builds library portals based on each client's unique requirements. PTFS-built portals can include federated search across disparate databases, plus personalized views and customizable interfaces based on user preferences and access rights. The portals can provide site searches, quick links to other pages, e-commerce, document delivery, special interest group discussions and list serves, on-line meetings, message centers and much more.

SOME OF OUR CLIENTS

- || Administrative Office of the U.S. Courts
- || Commodity Futures Trading Commission
- || Congressional Research Services
- || Federal Communications Commission Library
- || George Washington University Gelman Library
- || Hughes Aircraft Technical Library
- || International Monetary Fund, Joint Bank Fund Library
- || International Trade Commission Library
- || Library of Congress Law Library
- || Library of Congress Congressional Research Services
- || Mt. Vernon College of George Washington University Library
- || National Defense University Library
- || National Library of Medicine
- || Naval Research Laboratory Library
- || Travis AFB Mitchell Memorial Library
- || U.S. Air Force Eglin Medical Library
- || U.S. Army Ft. Drum Library
- || U.S. Army Ft. Polk Library
- || U.S. Army Ft. Stewart Library
- || U.S. Attorneys Office for D.C. Library
- || U.S. Customs Service and Border Protection Information Resource Center
- || U.S. Department of Justice and the Anti-Trust Library
- || U.S. Department of State Ralph J. Bunche Library
- || U.S. Geological Survey Library System
- || USMC MCCS Libraries
- || Washington Research Library Consortium



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