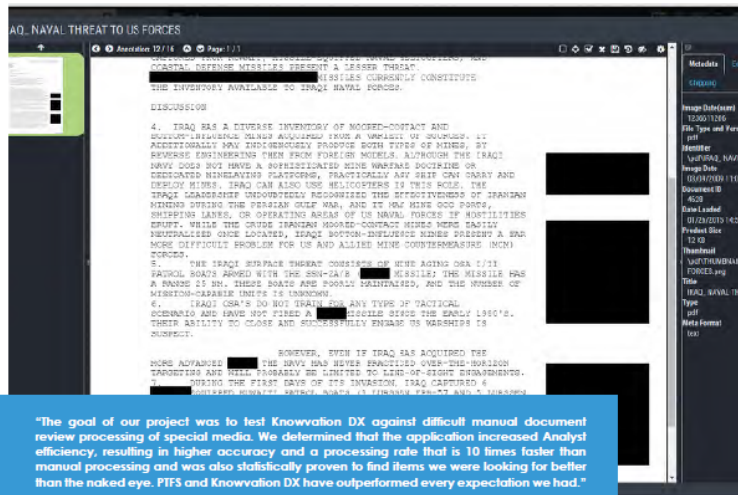




# PTFS Knowvation DX Technical Brochure

## Knowvation DX: Declassification Process



"The goal of our project was to test Knowvation DX against difficult manual document review processing of special media. We determined that the application increased Analyst efficiency, resulting in higher accuracy and a processing rate that is 10 times faster than manual processing and was also statistically proven to find items we were looking for better than the naked eye. PTFS and Knowvation DX have outperformed every expectation we had."

- Jim Neighbors, SES (retired) Formerly Director of Information Management and Headquarters Air Force, Chief Information Officer, U.S. Air Force

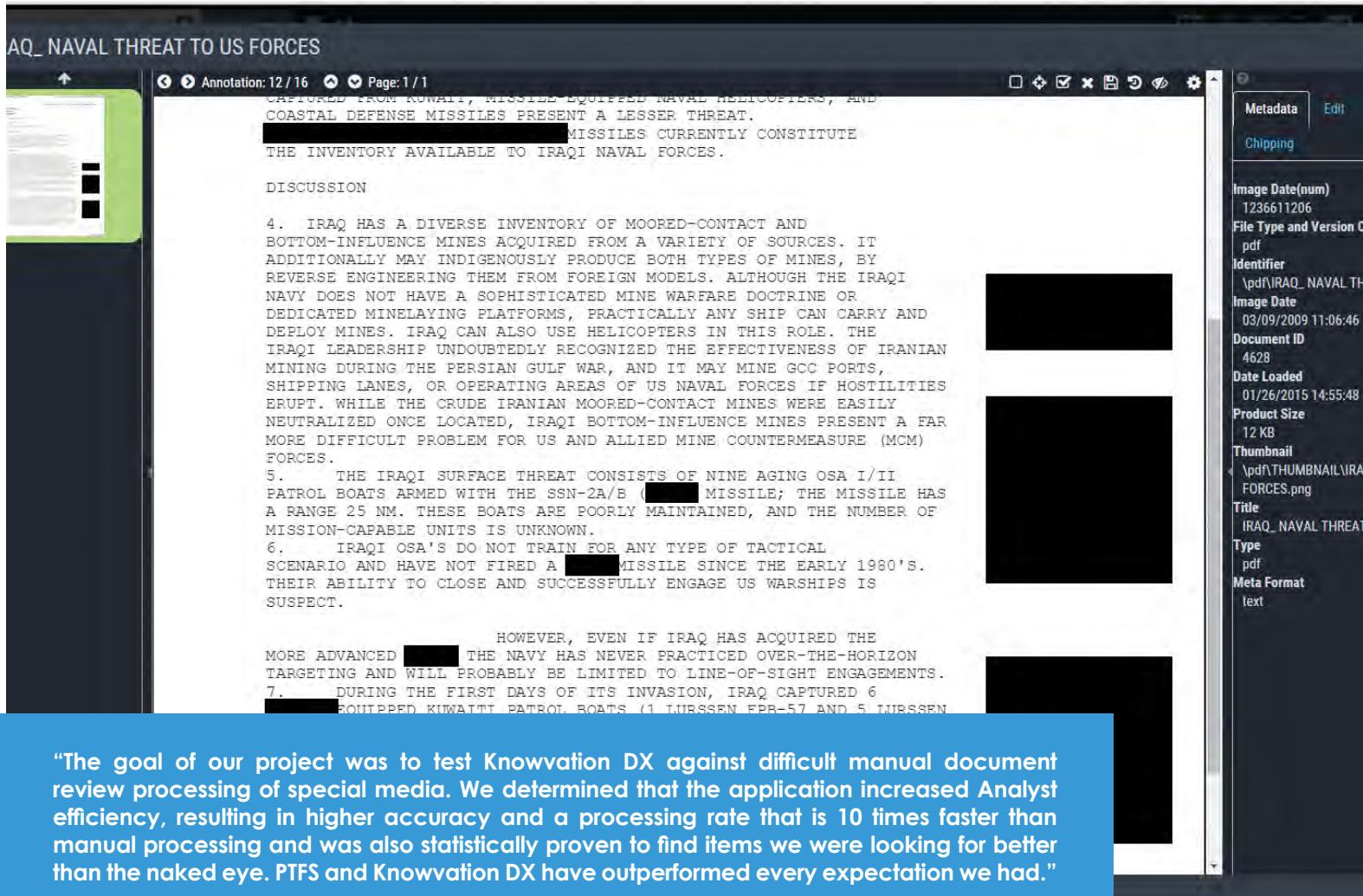
Knowvation DX™ is built on the Knowvation enterprise Content Services Platform (CSP) and is designed to semi-automate the declassification process. The development of Knowvation DX is a result of PTFS' extensive experience in successfully implementing, managing and supporting declassification, Privacy Act and FOIA operations for some of the most rigorous Civil, DoD and Intelligence Community agencies.



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# Knowvation<sup>DX</sup><sup>TM</sup>

intelligence redacted



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# Knowviation DX at a Glance

## Overview

Knowviation DX enables agencies to improve declassification workflow, increase productivity, reduce costs, and increase accuracy. It uses a browser-based search interface to store, retain and modify a list or multiple lists of targeted words, concepts and phrases. The targeted information is automatically highlighted on any viewed document, notifying the appropriate staff of pending review. It can permanently remove targeted text along with associated metadata, including both image and hidden text. This ensures against any possibility of identifying or extracting the original word or phrase and substantially reduces the risk of releasing sensitive information.

## How Knowviation DX Works

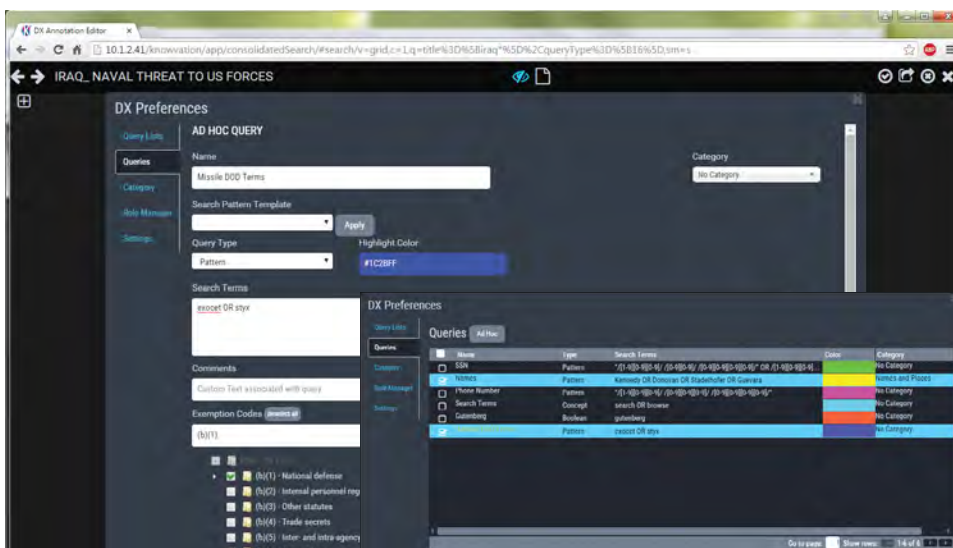
Knowviation DX is simple to install and easy to configure, making set up very straightforward. The core elements include the ability to electronically search across documents to locate "dirty" words, phrases and concepts using specially calibrated Pattern Recognition (fuzzy) search to avoid false negatives. The application also has a flexible workflow based on jBPM, an open source Java-based workflow tool, which enables system administrators to make workflow changes quickly rather than waiting for programmers to make hardcode changes. It is web-based and requires no client side software; a feature that facilitates efficient inter-agency and intra-agency declassification external review.

## Knowviation DX

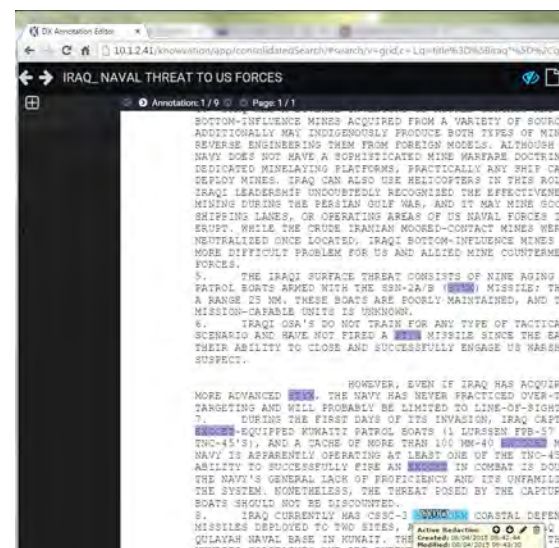
## Tools and Functionality

### Knowviation DX basic redaction process:

- An agency representative that knows classification guidelines identifies the sensitive "dirty" words and concepts that might be cause for exempting or referring documents.
- An agency supervisor assigns documents for review to teams or individuals.
- All documents follow a review and quality control process established by the individual agency.
- Using automated full text search algorithms, the Knowviation DX Redaction Editor highlights sensitive text and marks it with exemption codes.
- The identification of sensitive information can be used to exempt documents, or alternatively to redact areas for partial document release.
- An analyst reviews the highlighted text and makes additions, deletions and changes as required to the highlighted areas.
- A supervisor can track all documents throughout the review process lifecycle and run reports on productivity and accuracy metrics.
- Knowviation DX maintains the highlighted and redacted version instruction sets.



Identify "Dirty" Words and Concepts



Review Automated Search Hits

## Additional Knowviation DX features include:

### Powerful Search Options

- Powerful and effective search tools are provided for words, concepts and phrases
- Four search mode options: pattern (fuzzy text), concept, Boolean, and exact match
- Efficient method to limit full text search using metadata
- Integrated search/browse or browse/search bidirectional filter
- Web-based modules are Section 508-compliant

### OCR on Ingest

- Images can be OCR'd upon ingest
- Scanned PDFs are indexed, allowing text inside files to be queried
- Works with scanned images and photos captured with a mobile device

### Workflow Engine

- Enables users to rapidly replicate the business process in the application
- Administrators can easily revise the Java-based workflow engine, eliminating costly programming

### Metadata Editing

- Metadata records associated with each document can be enhanced by adding further detail and applicable information via a user-friendly GUI

### Technical Requirements

- Application Servers—JBoss
- Browsers—Internet Explorer 11 and later, Mozilla Firefox 50.0 and later, Google Chrome 48 and later
- Databases -- MS SQL Server 2012 R2, MS SQL Server Express 2012 R2, MS SQL Server 2016 R2, MS SQL Server Express 2008 R2 (packaged w/installation)

### Audits and Reports

- Standard and customizable audit reports provide detailed information on numerous metrics
- Reports can be created or modified to provide additional information as needed

### Records Management

- Built in version control capability
- Stores versions of both digital objects and metadata when modifications are performed

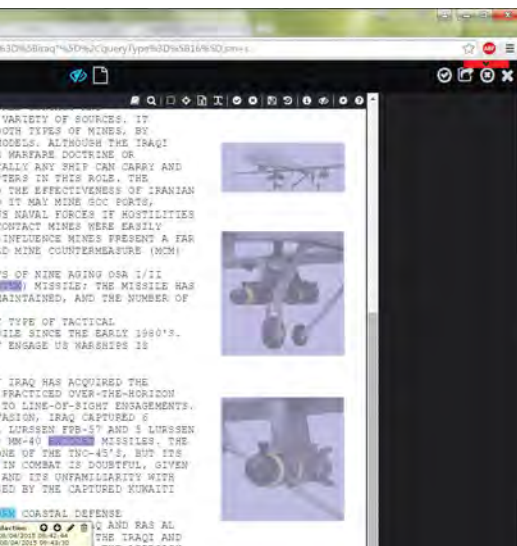
### Foreign Language Support

- Supports multiple foreign languages
- Supports cross lingual search (the ability to search in one language while retrieving the results in another)

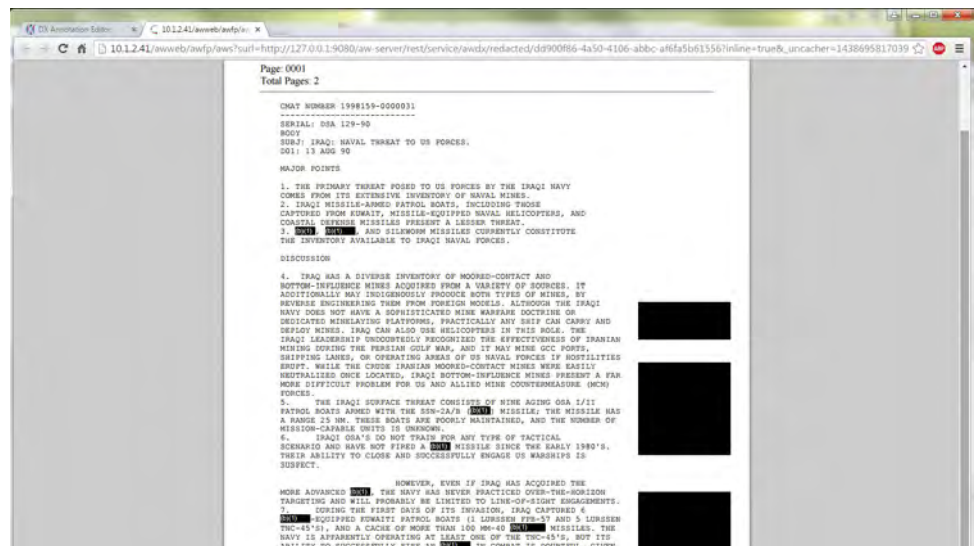
### Security

- Integrated with Active Directory to create groups with different levels of access
- Index Level Security: access control to full index of data supports multilevel network security
- Document Level Security: record level security supporting the "need-to-know" down to an individual digital object

- Server Operating Systems -- Windows Server 2012 Standard, Windows Server 2012 R2 Enterprise Edition, Windows Server 2016 Standard, Windows Server 2016 R2 Enterprise Edition



Review Automated Search Hits



Make Permanent Redactions



# Knowvation DX Capabilities

Knowvation DX provides enterprise declassification solutions to protect sensitive information and release content that is properly sanitized for mass consumption. Whether it's hardcopy or digitized, born digital or other forms of electronic content, PTFS can provide full life cycle support from secure digitization to declassification processing and redaction. Knowvation DX features and benefits below enable diverse content and media processing, increased process efficiency, minimized errors and cost reduction.

## Summary of features and benefits

- Automated Search: "dirty" word glossary is created and Knowvation DX locates and highlights hits
- Entity Search (proper names and places): allows for HUMINT searching
- Electronic Referral Process
- Pattern Recognition Processing Technology: overcomes OCR inaccuracies and "dirty" word misspellings
- Custom Semantic Directories: replicates SMEs and classification guides
- Supports PDF/A, PDF/A3 and XMP metadata
- Flexible/customizable workflow management
- Concept Search Capabilities: locate synonyms that could easily be overlooked
- Electronically categorizes for prioritization
- Eliminates duplicate document processing
- File Type Agnostic Platform: over 200 supported file types
- Numeric and Wildcard Searching: recognition of standard identification formats
- Optimal Speech to Text Functionality: declassification of audio files
- Effectively manages all digitized (color and grayscale) and born digital content

## About PTFS

With over twenty years of experience, PTFS offers customized and proven content management solutions. Our core products include Knowvation® and Bibliovention™. To help organizations focus on their missions, PTFS offers highly technical teams that streamline the process to implement and maintain custom solutions that best meet their needs.

## Get the Power.



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