



Quality Control for Electronically Stored Information

All Valora projects follow a rigorous technical process workflow that ensures accuracy of work output, data flow control, optimal resource allocation and compliance with security requirements. Valora treats projects that include processing of Electronically Stored Information (ESI) in the same manner as other projects, but the ESI processing stage includes its own separate quality control.

Each project (Task Order) is divided into the following stages:

- ESI Receipt, acknowledgement and inventory
- ESI processing and conversion
- Indexing, Coding, Review & Analytics
- Export and shipment
- Confidentiality, Privacy & Conflicts of Interest

ESI Receipt, Acknowledgement and Inventory

Documents arriving at a Valora facility are handled by Valora's Technical Operations staff (TechOps), who

- Acknowledge receipt of the material with the shipping party and client (if different)
- Oversee the inventory process
- Supervise the labeling and storage of any physical media.

Valora receives ESI data either via physical media (hard drive, DVD, etc.) or via secure FTP. Valora stores client data on secure servers with partitioned client storage areas to ensure no co-mingling of data. Only authorized project personnel have access to the data. After copying to secure servers, physical media is either stored in a separately secured storage area, returned to the source, or destroyed, as per project instructions.

The TechOps staff and Project Manager verify the received media against its transmittal information and any information provided by the client about the expected content of the data.

ESI Processing and Conversion

ESI documents processed by Valora personnel undergo a multi-phase process:

- An operator prepares a Source Material Inventory (SMI), listing file-level information about all files received
- The operator processes the received files according to the specifications of the project. This phase typically includes:
 - Any necessary decompression

- Any project-specific filtering, such as by date, custodian or keyword, including de-NISTing (removal of common non-document files)
- Duplicate hash computation, text and meta-data extraction, image rendering, etc.
- The operator verifies the processing of the files, ensuring that each type of processing has occurred correctly and that all files have been processed. The operator checks the cause of any files flagged with errors and alerts the Project Manager, if appropriate
- The operator compares the set of resulting documents to the Source Material Inventory to ensure that all source files are properly accounted for in the results and prepares summary reports including information about decompression rates, culling rates, error rates, and result document/image counts
- A Team Leader or Project Manager audits these results and compares the result documents to the Source Material Inventory
- Any batch that does not meet or exceed 98% quality are returned for re-work and put through the entire process again, until the batch meets the required Audit performance levels

Valora internal systems track the success or failure of each processing stage as well as any error logging or failure mode information (e.g., corrupt source file). The system also includes a flexible report generation system that allows for a variety of customer-facing reporting and quality control cross checking.

Indexing, Coding, Review & Analytics

Valora uses a variety of Automated Indexing and Coding techniques, most of which were developed internally specifically for litigation support and back file conversion purposes. Valora processes ESI documents using the same processes and systems as for documents that originate in some other format (paper, microfiche, etc.): ESI documents that have images but no text undergo OCR; ESI documents that have insufficient meta-data undergo automated and/or manual indexing; etc.

In general documents are first automatically indexed by software. Next, the automated results are reviewed by an operator for accuracy and consistency. A Team Leader, specially trained in Auditing procedure, later audits all documents. Batches that do not meet or exceed 98% quality are returned for re-work and put through the entire process again, until the batch meets the required Audit performance levels.

Export and Shipment

When processing is complete and the batch has passed Audit, that batch is eligible for export. The export process (optionally) divides the data into chunks based on any requirements of the target shipping media or repository systems, copies all specified native, image and text files, creates all necessary load files, and outputs a corresponding export report.

The TechOps staff verify the configuration of the initial exports against the client's specifications and confirm that each export chunk is both internally consistent (all counts of exported files match all reports and load files) and that the total of the exported data matches the subset selected for export.