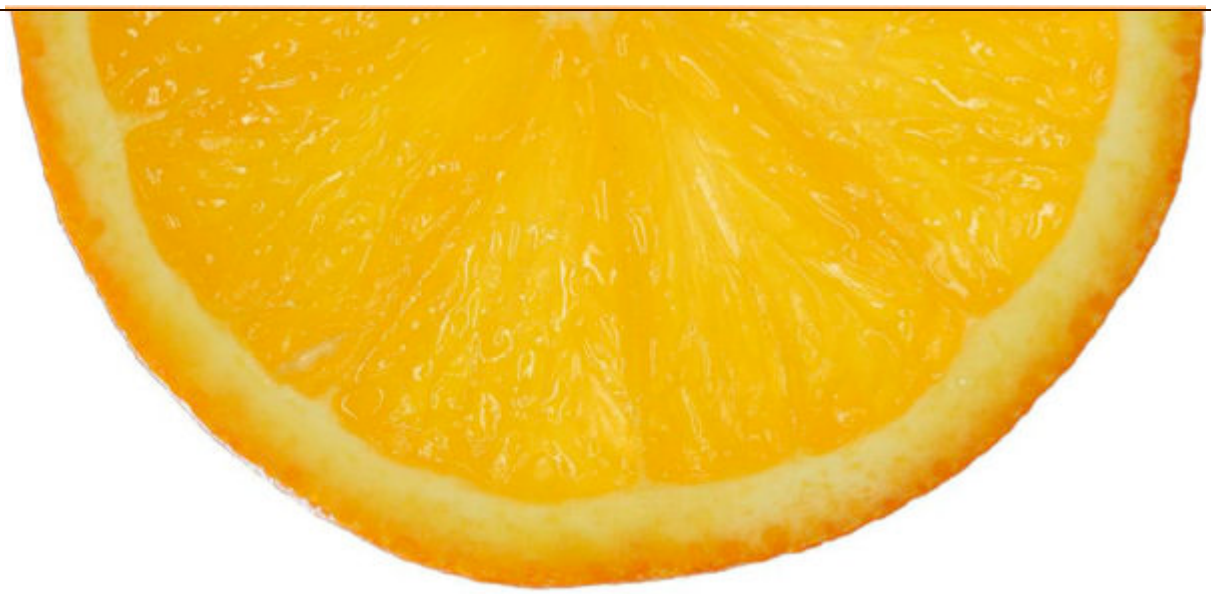

INTEGRITY
LEGAL CORP.

Integrity Legal Corp.

Electronic Discovery Information Guide

Fall 2010

Partnering with Orange Legal Technologies provides Integrity Legal Corp. with strong industry experience in large case, multi-terabyte inclusive electronic discovery tasks to include collection, analytics, processing, review, and production. With this industry experience in mind, and with the desire to ensure client understanding and confidence in the advanced approaches used by Orange Legal Technologies to maximize the efficiency of technology and client resources, this short information guide has been developed to serve as a planning and execution discussion guide to be considered jointly prior to the initiation of Integrity Legal Corp. service in support of our clients.

Seven Steps to Client Success

Step 1 – Client Data Inventory

As part of initiating a project with Integrity Legal Corp., a full inventory of potential client ESI is undertaken using the following framework from which Integrity Legal Corp. has both an understanding and experience in translating from client data stores into the OneO® Discovery Platform for the forensically sound conduct of electronic discovery.

This inventory includes the following items to ensure a complete assessment of potential client needs:

What is the scope of the client's data?

- **Entity Scope** - Entities that may have had individuals involved in the creation, review, and/or response of data that may contain relevant information for the matter at hand.
- **Custodian Scope** - Individuals who may have been involved in the creation, review, and/or response of data that may contain relevant information for the matter at hand.
- **Data Steward Scope -** Individuals who have Information Technology management responsibilities for the entities and individuals determined to be relevant to the matter at hand and/or individuals who maintain access rights to the applications and equipment used by these entities and organizations.
- **Geographical Scope -** The geographical locales of the entities and individuals that may have been involved in the creation, review, and/or response of communications and/or documents relevant to the matter at hand as well as the locales of the equipment used to support creation, transmission, review, and storage of these communications and/or documents.
- **Time Frame Scope** - The period of time in which relevant information may have been created, reviewed, and/or responded to for the matter at hand.
- **Volume Scope** - The estimated volume of data that may contain relevant information for the matter at hand.

What is the structure of the client's data?

- **Unstructured** - Unstructured data (or unstructured information) refers to masses of (usually) computerized information in which every bit of information does not have an assigned format and significance. Examples of "unstructured data" may include audio, video and

unstructured text such as the body of an email or word processor document. Unstructured data represents approximately 85% of enterprise data.

- **Structured** - Structured data (or structured information) refers to masses of (usually) computerized information in which every bit of information has an assigned format and significance. Examples of "structured data" may include databases such as SQL or Access. Structured data represents approximately 15% of enterprise data.

What is the data format of potential client data?

- **Still Image** - Images that convey their meaning in visual terms, e.g. pictorial images, photographs, posters, graphs, diagrams, documentary architectural drawings. Formats for such images may be bitmapped (sometimes called raster), vector, or some combination of the two. A bitmapped image is an array of dots (usually called pixels, from picture elements, when referring to screen display), the type of image produced by a digital camera or a scanner. Vector images are made up of scalable objects—lines, curves, and shapes—defined in mathematical terms, often with typographic insertions.

- **Sound** - Media-independent sound content that can be broken into two format sub-categories. The first sub-category consists of formats that represent recorded sound, often called waveform sound. Such formats are employed for applications like popular music recordings, recorded books, and digital oral histories. The second sub-category consists of formats that provide data to support dynamic construction of sound through combinations of software and hardware. Such software includes sequencers and trackers that use data that controls when individual sound elements should start and stop, attributes such as volume and pitch, and other effects that should be applied to the sound elements. The sound elements may be short sections of waveform sound (sometimes called samples or loops) or data elements that characterize a sound so that a synthesizer (which may be in software or hardware) or sound generator (usually hardware) can produce the actual sound. The data are brought together when the file is played, i.e., the sounds are generated in a dynamic manner at runtime. This second sub-category is sometimes called structured audio.

- **Moving Image** - A variety of media-independent digital moving image formats and their implementations. Some formats, e.g., QuickTime and MPEG-4, allow for a very wide range of implementations compared to, say, MPEG-2, an encoding format whose possible implementations are relatively more constrained.

- **Textual** - Content works consisting primarily of text.

- **Web Archive** - Content in formats that might hold the results of a crawl of a Web site or set of Web sites, a dynamic action resulting from the use of a software package that calls up Web pages and captures them in the form disseminated to users.

- **Generic** - Content in widely acceptable generic formats to include but not limited to specifications for wrappers (e.g., RIFF and ISO_BMFF), bundling formats (e.g., METS and AES-31), and encodings (e.g., UTF-8 and IEEE 754-1985).

What is data state of all potential client data?

- **Active State**: Active Data is information residing on the hard drives or optical drives of computer systems, that is readily visible to the operating system and/or application software with which it was created and is immediately accessible to users without deletion, modification or reconstruction.

- **Static State** - Static Data (or Archival Data) is information that is not directly accessible to the user of a computer system but that the organization maintains for long-term storage and record keeping purposes.

  Static data may be written to removable media such as a CD, magneto-optical media, tape or other electronic storage device, or may be maintained on system hard drives in compressed formats.

- **Residual State:** Residual Data (sometimes referred to as "Ambient Data") refers to data that is not active on a computer system. Residual data includes (1) data found on media free space; (2) data found in file slack space; and (3) data within files that has functionally been deleted in that it is not visible using the application with which the file was created, without use of undelete or special data recovery techniques.

How is the client's data "interconnected"?

- **Non-Networked**: Data is not interconnected to a group of computers.

- **Personal Area Network (PAN):** A personal area network (PAN) is a computer network used for communication among computer devices close to one person. Some examples of devices that may be used in a PAN are printers, fax machines, telephones, PDAs, or scanners. The reach of a PAN is typically within about 20-30 feet (approximately 4-6 Meters). PANs can be used for communication among the individual devices (intrapersonal communication), or for connecting to a higher level network and the Internet (an uplink).

- **Local Area Network (LAN):** A network covering a small geographic area, like a home, office, or building. Current LANs are most likely to be based on Ethernet technology.

- **Campus Area Network (CAN):** A network that connects two or more LANs but that is limited to a specific and contiguous geographical area such as a college campus, industrial complex, or a military base. A CAN, may be considered a type of MAN (metropolitan area network), but is generally limited to an area that is smaller than a typical MAN.

- **Metro Area Network (MAN):** A Metropolitan Area Network is a network that connects two or more Local Area Networks or Campus Area Networks together but does not extend beyond the boundaries of the immediate town, city, or metropolitan area. Multiple routers, switches & hubs are connected to create a MAN.

- **Wide Area Network (WAN):** A WAN is a data communications network that covers a relatively broad geographic area (i.e. one city to another and one country to another country) and that often uses transmission facilities provided by common carriers, such as telephone companies.

- **InterNetwork:** Two or more networks or network segments connected using devices that operate at layer 3 (the 'network' layer) of the OSI Basic Reference Model, such as a router. Any interconnection among or between public, private, commercial, industrial, or governmental networks may also be defined as an internetwork. In modern practice, the interconnected networks use the Internet Protocol. There are at least three variants of internetwork, depending on who administers and who participates in them:

    - **Intranet:** An **intranet** is a set of interconnected networks, using the Internet Protocol and uses IP-based tools such as web browsers, that are under the control of a single administrative entity. That administrative entity closes the intranet to the rest of the world, and allows only specific users. Most commonly, an intranet is the internal network of a company or other enterprise.

    - **Extranet:** An **extranet** is a network or internetwork that is limited in scope to a single organization or entity but which also has limited connections to the networks of one or more other usually, but not necessarily, trusted organizations or entities (e.g. a company's customers may be given access to some part of its intranet creating in this way an extranet, while at the same time the customers may not be considered 'trusted' from a security standpoint). Technically, an extranet may also be categorized as a CAN, MAN, WAN, or other type of network, although, by definition, an extranet cannot consist of a single LAN; it must have at least one connection with an external network.

    - "**The Internet":** A specific internetwork , consisting of a worldwide interconnection of governmental, academic, public, and private networks based upon the Advanced Research Projects Agency Network (ARPANET) developed by ARPA of the U.S. Department of Defense – also home to the World Wide Web (WWW) and referred to as the 'Internet' with a capital 'I' to distinguish it from other generic internetworks.

How does the client access active state data?

- **Direct Attached Storage (DAS):** Direct-attached storage (DAS) refers to a digital storage system directly attached to a server or workstation, without a storage network in between. It is a retronym, mainly used to differentiate non-networked storage from SAN and NAS.
- **Network-Attached Storage (NAS)** Network Attached Storage (NAS) is a file-level computer data storage connected to a computer network providing data access to heterogeneous network clients.
- **Storage Area Network (SAN):** A storage area network (SAN) is an architecture to attach remote computer storage devices (such as disk arrays, tape libraries and optical jukeboxes) to servers in such a way that, to the operating system, the devices appear as locally attached.

How does the client maintain the Static State data?

- **Semi Conductor Based Storage Media** (Memory Cards, USB Flash Drives, PDAs, Digital Audio Players, Digital Cameras, Mobile Phones, Copiers)
- **Magnetic Based Storage Media** (Floppy Disk, Hard Disk, Magnetic Tape)
- **Optical and Magneto Optical Storage Media** (CD, CD-ROM, DVD, BD-R, BL-RE, HD DVD, CD-R, DVD-R, DVD+R, CD-RW, DVD-RW, DVD+RW, DVD-RAM, UDO)

How much data will be acted upon?

- **Uncompressed -** Data not having undergone a process of transformation from one representation to another, smaller representation from which the original, or a close approximation to it, can be recovered.
- **Compressed** - Data having undergone a process of transformation from one representation to another, smaller representation from which the original, or a close approximation to it, can be recovered.

Is the data encrypted?

- **Data Not-Encrypted -** Data not having undergone a procedure that renders the contents of a computer message or file unintelligible to anyone not authorized to read it. The data is encoded mathematically with a string of characters called a data encryption key.
- **Data Encrypted** - Data having undergone a procedure that renders the contents of a computer message or file unintelligible to anyone not authorized to read it. The data is encoded mathematically with a string of characters called a data encryption key.

What electronic media may need to be examined and potentially collected by Orange Legal Technologies?

- Active, Online Data (Typically Accessible)
- Nearline Data (Typically Accessible)
- Offline Storage/Archives (Sometimes Accessible, Sometimes Unreasonably Accessible)
- Backup Tapes (Typically Unreasonably Accessible)
- Erased, Fragmented, or Damaged Data (Typically Unreasonably Accessible)

Step 2 – Data Collection

Upon completion of the data inventory and coupled with an understanding via client agreement on the scope of the data collection as it relates to electronic media, Integrity Legal Corp. then utilizes the best available collection methods to ensure a proper data collection process is followed. This collection process includes the use of Orange Legal Technologies capabilities that allow for:

- Fixed Storage Collection (Manual+Active Data Copy/Forensic Imaging)
- Portable Storage Collection (Manual Copy/Forensic Imaging)
- Back Up Tape Restoration
- Automated Network Discovery of Devices/Repositories and Data

Integrity Legal Corp. in partnership with Orange Legal Technologies supports these capabilities with expertise and experience that encompasses:

- Certified Collection Experts
- Collection and Planning Consulting
- Defensible Chain of Custody Procedures and Processes
- Best of Breed Partnerships

Once a data collection plan is approved and executed, Integrity Legal Corp. then conducts a data ingestion exercise to ensure all collected data is transferred in a chain-of-custody proven, forensically sound manner to Orange Legal Technologies for use in the OneO® Discovery Platform.

Step 3 – Data Ingestion

Integrity Legal Corp. has the capability to ingest data into the OneO® Discovery Platform from all major standard storage media formats, all common load file formats (examples: Encase Images, – whether proprietary or based on industry standard data transfer protocols (example – XML).

Ingestion of client data into the OneO® Discovery Platform begins with Data Staging. Data staging is the process by which original ESI files are copied, isolated, and stored in a forensically sound manner for future use.

This staging typically occurs in three phases:

1. Copying and storage of original ESI files on a closed and isolated network file server.
2. Storage of original media and ESI files in a forensically sound manner.
3. Storage of copied ESI files for use in further electronic discovery processing.

From this data staging, data is "pointed to" by the import utility and chain of custody information is entered into the OneO®Discovery Platform (date collected, date received, custodian, media id, processing technician, description, notes) so that the information can be associated with every document throughout all further stages of the electronic discovery process. **Historical experience shows that average expansion volume after further processing is approximately 125% for e-docs and 175% for e-mail.**

Step 4 – Data Analytics

Analytics/Filtering: OneO® Discovery Platform Analytics is fully accessible by the client and any number of key word searches, date filters, metadata filters, or full inclusions/exclusions may be performed. **Ideal volume reduction rates through Analytics are 50% - 80%, though naturally the actual rates vary from 0% – 99% depending on the nature of the case and the amount of filtering desired.**

Note: After completion of data analytics, filtered data can be directly exported for any non- OneO® Discovery Platform review tool at this phase. Alternatively the data can immediately be made available for further processing within the OneO® Discovery Platform.

Key characteristics of OneO® Discovery Platform Data Analytics Includes:

- **Data Indexing** provides a comprehensive index that includes full text and metadata attributes and can quickly be queried online to organize, understand, and assess available data.
- **Data Reduction and Organization** is accomplished through the combined used of culling and filtering technologies that provide system file, data range, extension, custodian, and key word filtering as well as the application of near duplicate identification.

- **Data Understanding** is facilitated with unique features to include interesting phrase finder and conversation thread linking technologies allowing for analysis of data within context of its use.
- **Early Case Assessment** is the combined leveraging of the preparation, indexing, organization, and understanding capabilities of Orange Legal Technologies Analytics to provide users with the ability to balance opportunities, risks, and costs in preparation for litigation, audits, and investigations.

Step 5 – Data Processing

The post analytics data set can be further processed as - determined by client needs - within the OneO® Discovery Platform. Key processing characteristics and procedures within this processing stage include but are not limited to:

- **Data Filtering** provides the capability to filter data by date ranges, extensions, custodians, and key words as well as allows for system file filtering against the NIST database using the MD5 hashing algorithm.
- **Data Deduplication** is provided using the MD5 hashing standard and can be accomplished throughout processing at both the global and/or the document family group level.
- **Metadata Extraction** allows for the efficient capture of system, file, and field metadata for most unstructured data formats.
- **Full Text Extraction** is conducted automatically in OneO® Discovery Platform Processing and is augmented as required by streamlined exception handling procedures to support secondary extractions via OCR and print driver text recognition.
- **Data Conversion** allows for the full conversion of native file formats into high quality TIFF images and PDF documents while also supporting native file linking.
- **Load File Preparation** allows for the seamless production of standard output files based on XML, Pass Through, Image, Native, and Proprietary Database Load Formats to ensure ease of use with industry standard review tools to include OneO® Discovery Platform Review.
- **Custom Database Development** allows for the proactive development of custom databases that enable the usage of non-standard review tools and technologies with OneO® Discovery Platform Processing.

When used in conjunction with OneO® Analytics, clients may experience additional data reduction rates of up to 15% - however, the actual rates may vary depending on the nature of the case and the processing procedures used in this stage.

Additional considerations that provide for client ease and efficiency in processing include:

- **Attachment Handling –** Integrity Legal Corp. and Orange Legal Technologies handle attachments using industry-standard methods, extracting them from their parent e-mails and utilizing database field values to maintain the parent/child relationship. One unique feature of OneO® Discovery Platform Review is the ability to "tag family summaries", which will automatically apply tags to all family members upon the application of a tag to a document within the family. This option can be disabled.

- **Exception Reporting –** Integrity Legal Corp. **and** Orange Legal Technologies allow the client to generate numerous reports on the fly through the OneO® Discovery Platform. In addition, Project Managers can generate fully customized reports with the assistance of database technicians. Finally, Integrity Legal Corp. and Orange Legal Technologies take a consultative approach with every report and explains in detail all types of exceptions encountered, what causes them, why they occur, what can be done to remedy them, and what can be done to prevent them in the future. There are standard processes in place to re-process exceptions in place after they have been repaired, decrypted or otherwise remedied.

- **Justifying Procedures in a Court of Law –** Integrity Legal Corp. leverages certified technicians that are familiar with its electronic discovery processes that can and have explained processes in detail and in layman's terms to stand up in a Court of Law via verbal testimony, affidavit or declaration. Absent the need for specific testimony, standard project documentation can be provided to explain the processes and methodologies used throughout all phases of a project.

Upon completion of either the analytics or processing stage of OneO® Discovery Platform Discovery, client data can be made available to client specified reviewers for the conduct of legal review activities.

Step 6 – Data Review

Key review characteristics of OneO® Discovery Platform Review includes:

- **Foreign Language Support** is enabled through integrated Unicode Consortium standards and covers 52 worldwide writing systems allowing for the scoping, searching, and review of data sets without the requirement for additional translation modules or services.

- **Web Based User Access** allows for secure access of data sets and the full conduct of review from any geographical location with Internet access without the requirement for additional client-side applications or programs. This capability allows for the use of geographically

dispersed review teams that can be quickly pulled together virtually to manage and complete time-sensitive, coordination-intensive review requirements.

- **Integrated Collaboration** between reviewers increases the collective experience and knowledge of legal review teams while decreasing the time it takes to communicate and coordinate review issues.

- **Integrated Workflow** allows for the proper coordination of documents, reviewers, and technology by allowing for the automation of review processes to include reviewer roles, responsibilities, tasks and timelines.

- **Audit and Reporting** features allow users to customize and automate review reports to support both scheduled and real-time status updates.

In addition to the individual attributes of *Analytics, Processing, and Review,* the OneO® Discovery Platform provides users with increased efficiency and decreased risk based on the following benefits:

- **Implementation:** Quickly deploy, customize, and securely access a hosted data repository that may immediately be used by multiple individuals from multiple locations to analyze and review data.

- **Centralization:** Allows for time efficient complex searches against large volumes of documents from a centralized electronic discovery platform architecture.

- **Defensibility:** Chain of Custody tracking down to the file level, to include extracted compound files and embedded files, throughout the discovery process ensures that both the discovery process and the data are defensible.

- **Scalability:** Provides capability to take full advantage of all available processing power regardless of the size of the data set being reviewed or the complexity of the review queries. The investment protection provided by scalable and centralized server architecture ensures that growing capacity requirements do not adversely affect electronic discovery capability.

- **Security:** Provides for secure online access to a centralized hosted and secure data repository with forensically sound processes and protocols to ensure both physical and digital security.

- **Usability:** Developed using industry accepted and user understood graphical user interface metaphors to ensure easy and intuitive use by end users.

Step 7 – Data Production

In moving data from review into production, Integrity Legal Corp. and Orange Legal Technologies have project managers available to assist with the creation of production sets when review has been completed. Productions can involve the burning-in of redactions, bates numbering of documents, application of confidentiality designations, and export of the data in TIFF, native, near-native, or any other format per the production specifications.

Tying the Seven Steps Together

The Integrity Legal Corp. Advanced Approach to Electronic Discovery - In order to maximize the intrinsic benefits of our discovery capability, clients typically employ an advanced electronic discovery approach consisting of the following seven key actions – all conducted from within the OneO® Discovery Platform:

1. Client and Integrity Legal Corp.Team conduct a joint inventory of ESI.
2. Litigation Support Manager provides ESI to the team/organization handling ESI analytics, processing and review. (Collection)
3. ESI is indexed, culled in preparation for a 1st pass, high-level, issue-based review. (Analytics)
4. 1st pass, high-level, issued based review is conducted by legal team. (Review)
5. Remaining ESI is processed in preparation for final review by the legal team. (Processing)
6. Processed ESI is provided to clients for hosted review, full linear review (Review).
7. Client ESI is produced to client specification. (Production)

Learn More

Integrity Legal Corp. is a market-leading provider of Litigation Support Services. The company currently operates 3 locations throughout Southern California. Its services allow law firms, government organizations and corporate customers to solve their time sensitive document needs in electronic and paper formats while ensuring the highest quality and security standards

To learn more about how Integrity Legal Corp. can support your electronic discovery requirements, visit our website at: http://www.integritylegalcorp.com or via phone at: 949.296.1243.