

Advantage

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Welcome



Phil Beckett

*Managing Director of Forensic
Technology*

+44 (0)20 7469 1192

pbeckett@navigant.com

Welcome and Happy New Year!

This, our second edition of Forensic Advantage focuses on a growing area of the forensic technology business: managing structured data (i.e. databases). We were once overwhelmed by the amount of data produced by e-mails, yet this is dwarfed by the potential volumes involved with structured data, combined with the complicated nature of the information; at first glance it may appear to be numbers as opposed to readable text. The challenge facing the industry is the need for this new world of data to be managed with the same integrity, security and tool-functionality we are accustomed to when handling unstructured data such as e-mails and documents. Processing structured data is becoming increasingly important in a large range of cases; be it tracking communications or payments, or developing a solution that can track transactions, directly and indirectly, across a plethora of systems and databases. Structured data requires significant attention, not only so legal teams can read and interpret it but also, to model, trend and map the data to truly understand the hidden intelligence within.

This edition contains three articles that look at different aspects of the structured data solutions we are developing for our clients; starting with an explanation of how this type of data is managed, a look at how complex these scenarios can become, and finally the benefits of customisable applications to really unleash the power of the data.

I hope you enjoy our second issue. I welcome all feedback. If you've received this issue indirectly from someone else and would like to receive future newsletters directly, please click on the "Subscribe" feature and we will gladly add you to our distribution list.

Please let us know any comments

Kind regards,

A handwritten signature in black ink, appearing to read 'P. Beckett'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Phil Beckett

Harnessing the Power of Enterprise Databases for Investigation

When it comes to enterprise databases not only is the data you are specifically seeking in the system, but so is other ancillary data. This can add up to a lot of unintended information being contained within a structured data source. For a multi-billion pound, multi-national Corporation with hundreds of these systems across the globe; this is the future of big data. A future that promises both challenges in terms of managing information but advantages in terms of gaining important intelligence.

Recently, Navigant worked on an assignment that involved uncovering alleged payments made in connection with bribery and corruption. A simple extract from a transaction tracking database yielded 2.2 TB of data representing five years of transactions. The 88 Excel files with over 600 tabs of data, and over 8,000 columns contained a lot more than name, amount and date. In fact, it contained over 1.5 TB of commentary that was not found in email correspondence: including a messaging application embedded within the financial package for employees to note approvals, track reasons and justifications, and provide for notes to be aggregated into the general ledger accounting system. None of this information was duplicated in the email correspondence captured from the relevant parties. However, a simple process to pull relevant commentary from the database, convert it to a text file using various fields as “metadata” and load into a review tool, highlighted the complementary nature of the data in a proportional manner.

What this means is that information from enterprise databases is ever more important in conducting thorough investigations. It often falls outside personal data protection initiatives, since transactional systems either contain minimal personally identifiable information or can easily be anonymised as a result of the construct of the data sources. Of course, certain privileged and personal information may exist in the fields themselves, so every measure must be taken to understand and review the data appropriately prior to disclosure.

During the investigation, we were able to identify parties in relation to specific transactions (as noted in the comment logs, approval processes and those persons who submitted expenses). We were subsequently able to select specific individuals to have their emails and laptops imaged and reviewed.

The benefits certainly didn't stop there. With the plethora of information stored in the enterprise database system – which allowed for uploads of invoices, spreadsheets of analysis, memos and emails – we were able to create timelines of who knew what and when, which yielded results far beyond data available in emails. This same data was also used to evaluate and quantify the impact of the alleged issue and ensure that profiles of questionable transactions were applied across the population, to stratify the data into transactions of issue, possible transactions of concern and of course, valid transactions.



Jim Vint
Managing Director
+1.312.583.2703
jim.vint@navigant.com



Since enterprise database systems are dynamic in nature, they can also be culled on extract, thereby reducing volume from the outset. For example, extract queries can be developed to limit by date range, values, recipients, authorisers, country or region, or any combination of factors. Data isn't specifically "processed" for these data sources and is typically smaller in overall volume than document repositories. Additionally, custom tools exist for the review, redaction and production of this information; making the effort to obtain and review this information well within proportional means.

Improvements in accessibility and reliability, combined with the increased value placed on these systems by organisations around the world and the enhanced technical abilities and understanding of regulators and lawyers: ensure that these systems will be utilised more and more frequently in investigations. Understanding the use of these data sources in the normal course of business, the content of the databases and the applicability of the information contained therein to a specific case can make all the difference.

Setting the Stage

Important Considerations in Managing the Crucial First 30 Days with ESI

Whether it's in support of an investigation, within any type of litigation, or proactively working with a client; the first 30 days of obtaining any electronically stored information (ESI) is the most crucial as the choices made during this time will impact the life of the case. The expectations are always high and there is an urgency to get the data collected and loaded onto the review platform. Taking some time to properly evaluate key questions and employ the appropriate expertise will save time, money and mistakes down the line.

IDENTIFICATION

The identification process of ESI must include the business, legal and information technology personnel. Engaging these constituencies brings the challenge of engaging in a collaborative dialogue with parties who don't often communicate with one another, let alone speak the same language. It's crucial to translate yet balance the goals of the engagement with specific ongoing business and IT practices. This could involve issues such as duplicative locations of accounting data, migration of legacy payroll systems for different time periods from different subsidiaries, or differing retention policies and backup formats. Also, within all issues that arise, you are continuously trying to determine the reality from the varying sources, as well as the appropriate facts so that a resolution can be determined. A proven approach is identifying with legal and/or business parties the appropriate scope and time period for the universe of ESI while distinguishing trustworthy personnel to 'own' each system of ESI. While both of these may evolve, the scope creates an immediate boundary for the identification process, and having responsible personnel on the client and consulting side allows for a continued mutually beneficial process.

EXTRACTION

Once a source of ESI has been identified, the extraction process may begin. A well-established method is to identify and extract ESI within its native format and respective language. It's important to determine this approach during the identification process and work with IT personnel to understand the requirements of extracting from this format, as it often involves a live and working environment. If it is a legacy system, one issue that can arise is the method of retention and level of effort required to extract the information, say for example from backup tapes at an off-site storage facility. Those responsible for the extraction should be prepared for the extraction of any native format from AS 400 to Oracle, as well as any native language from COBOL to SQL. They should also extract the date so that they maintain all relationships and



Kevin Blake

Director

+1 312 583 6933

kevin.blake@navigant.com

characteristics down to the metadata to ensure a lack of spoliation and corruption (both much larger topics for another day). The format chosen for extraction is the one area most open to discussion relative to legal and business strategy.

The identification of a set of criteria is important to maintain adherence to the defined scope of the engagement. Criteria does not just refer to a time period, but also the type of ESI, such as to extract only certain different lines of business, or only the Accounts Payable within an accounting system, etc. A full understanding of the native or extracted format and language will enhance the ability to apply the criteria.

The size of the applicable ESI can be a much more complicated issue than it appears. It can continually change as the criteria and format are established, and can be subject to available compression and encryption capabilities. The major issue that sometimes arises is time... time to properly create a forensic copy, time to migrate this information to a data environment for efficient extraction, time to transmit this information to the necessary hardware for receipt by the consultant... impacted by the size of ESI. The project lead should be involved in every single step of the extraction process as the size evolves in order to ensure its efficiency and continued responsiveness to the client.

TRANSFER

The grey area between the extraction and transfer processes should ideally be treated differently for every piece of ESI. For now, the line will be drawn where the ESI still exists within the client's data environment, thus creating potentially two distinct phases of information transfer. The first is the migration of information from the client's environment via either a connection or hardware, each having their own advantages and disadvantages, while subject to the above described Extraction issues. An increasingly preferred option is through an established connection (SFTP, trunk line, etc.) that allows more significant security, easily repetitive, one-step direct delivery to the end secure environment, unlimited size, and continually expanding capacity and flexibility. However, the establishment process can be cost and time prohibitive within a litigious setting and available capacity constraints could alter the preference. It's important to note that the cost and time prohibition can be multiplied by the business and IT personnel and any range of reservations over privilege, level of effort, necessity as well as just general company politics.

A more conventional approach is the transfer to a hardware device, such as a CD, DVD, external hard drive, NAS device, and others. This converts any time and cost issues into an advantage as a hardware's ease of immediate purchase and use can be combined with its inherent

flexibility to customise to the size of each ESI. The use of hardware does address issues with security that requires a consistent and unified encryption methodology between the client and consultant. This approach also requires the physical delivery of the hardware to the secure end environment that could be subject to standard client procedures as well as legal considerations.

While there is no perfected method, detailed knowledge of available methods and the associated technical components can be combined with the designated extraction process to customise a successful transfer process.

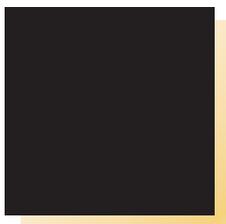
LOAD

Now that the ESI has been extracted and transferred, it almost appears that the clock is moving ever faster; creating even greater focus on loading the information. This process not only entails processing time to place the information on a secure hosting environment, but also validation and quality control of the ESI. The processing of the ESI should have been properly prepared since the Identification phase to maximise efficiency and security. The validation and quality control process is critical for this limited space as the variety of generally accepted industry and consulting principles can certainly demonstrate (including a prominent 'conference'). Deep experience and knowledge combined with a well-developed and standardised process for collaboration and agreement with all respective parties is crucial in this phase.

CONCLUSION

The first 30 days can be a time of extreme stress and pressure. It is critical not to trade discussion and documentation for responsiveness. To do so would not only fail the client but weaken the success of the process. The key is a proactive awareness of these issues and their successful resolution. It can and should allow for a successful survival of the first 30 days with ESI.

The New Frontier of Structured Data Review



Matt Kunkel

Associate Director

+1 312 252 3316

matt.kunkel@navigant.com

Regulatory authorities have created an increased demand in the market for custom review software applications that process structured data, in response to regulatory inquiries, litigation, compliance matters, risk mitigation and work flow issues. As a result, companies and lawyers have been forced to become familiar with the differences between custom developed applications and “out of the box” software solutions.

Introduction to Technology Solutions Applications

Over the past several years, there has been an increasing demand for customised applications in response to regulatory inquiries, compliance requirements, litigation discovery and other unique data collection issues facing a myriad of businesses. Applications are used to address problems impacting a variety of industries, markets and uses, with the common thread being rapid development and deployment, typically utilising web-based solutions and secure portals. This scenario plays well to customised solutions over traditional “out of the box” software. Due to the clear value these solutions provide clients and an ever increasing demand, professional services groups have begun to develop a unique standardised methodology for creating these programs.

Custom Application Development vs. “Out of the Box” Software

As stated above, a significant difference between traditional “out of the box” software applications and the customised solution, is the unique ability to address and support specific client requirements, including: problems, data, specifications, workflow, and scope.

Structured data review applications have been implemented in a variety of cases, from large multinational engagements involving product recall, to global compliance matters in the consumer goods and financial services industries, as well as many regional engagements.

One advantage custom applications provide is the ability for end users and business decision makers to be involved from the outset in designing a framework that will accomplish exactly what they want from the end product, and to determine specifically how they want the review to be conducted.

With custom applications, specialists work with the end users and business decision makers to develop design, functionality, data requirements, access security, and user preferences to meet the needs of that particular engagement.

The move toward custom application solutions has not been immediate for several key reasons. However as users realise the benefits, the momentum has and will continue to increase. A few of these benefits are:

- » **Scalability** - A significant advantage of custom applications is that these products can be scaled relative to the amount of data being processed in a way that few off the shelf tools can. Because these applications leverage internet capabilities, they can handle data sets from one gigabyte to many terabytes, and have an extremely high threshold for concurrent users.
- » **Ease of use** – As these applications are bespoke, the end users have significant involvement in designing the user interface to their liking and specifications. Additionally, firms continue to develop these applications for; client review and redaction, compliance and risk management .Experiences and best practices are applied to processes and user friendly interfaces are created based on specific uses.
- » **Cost efficiency** – Leveraging storage cost commoditisation over the past several years, these solutions have been able to be implemented in an extremely cost effective manner when considering the additional benefits offered. This is in part due to advancing technology and the design platform utilised in creating these applications now allowing for a much faster build and customisation process.
- » **Work Flow** –The most significant reason clients are using custom application solutions is the desire for a custom workflow. It is clear that no two clients or litigations are the same. Working directly with the client to design an application based on specific parameters allows for a final product that will meet the client’s need for a specific issue.

Attorney Review, Coding, and Redaction of Structured Data

A recent case that demonstrates the value of custom developed software involved an attorney that needed to review and produce a client’s customer call logs to plaintiffs in a timely and cost effective manner. This involved millions of call logs which needed to be reviewed by a team of hundreds of contract attorneys. The main issue we faced was that the attorneys did not have a structured data review platform and the production and review deadline was imminent.

The challenge was to provide the attorneys with a web-based review application to facilitate the review, coding, and redaction of all client call logs. This involved creating a web-based review application that allowed hundreds of users to review, code, and redact call logs, which were then supplied to plaintiffs. As the application was bespoke, it allowed for custom coding which was able to allow for redaction of client information and took into account privilege, responsiveness and other issue categories. A reporting process was also integrated, which pro-

vided tracking information of the review progress and process. An “out of the box” solution would not have provided for these unique client needs.

The Future of Structured Data and Structured Data Review

The amount of electronic data in the world is constantly growing. With government requirements and advancements in technology, data will only continue to grow exponentially. But few people truly grasp exactly what this represents. To illustrate: 15 petabytes of new information is created every day. That’s equal to 15,000 gigabytes.

This increase in the amount of electronic data means the amount of structured data and, as a result, structured data review in response to regulatory inquiries, compliance requirements, and litigation discovery, will only increase by a comparable exponential rate.

The use of customised applications for review, coding and redaction of structured data will, in turn, expand at this same exponential rate over the coming years. Clearly, the need for using such applications for the review of structured data is present today and will only increase in the future.





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