

Auditing Electronic Discovery Vendors for Quality

*Evaluating Vendor Quality & Accuracy in
Electronic Discovery Processing*



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Agenda

- The Problem
- What to Look For
- Where to Focus
- What to Know
- Questions to Ask
- How to Keep Score

The Problem



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Causal Factors of Electronic Discovery Processing Errors

Percentage of Incidents

Client data conflicts with discovery vendor capabilities:
75%



Vendor Software
Quality Issues
14%

Vendor Processing
Capability Gaps
11%

Source: CDI, 2005



Discovery Vendors and Complex Quality

- The 75% Problem: Client data/Vendor Conflicts
 - The content of Client data as a whole is getting more complex.
 - This is driven by two factors we now see as an industry:
 - Each Client has slightly different Enterprise IT Practices that effects the *content* of email, attachments, and native files.
 - Each Custodian has slightly different ways of using standard software programs that effects the *content* of their particular email and native files.
 - Content differences in client data led to discovery errors in all common file types, including MS Office, Outlook, Lotus Notes, and Adobe Acrobat.



The 75% Problem: How We Work with Clients

- Discovery vendors typically lack visibility into aspects of client data that can affect the quality and accuracy of electronic discovery processing.
- Up to 75% of problems have a root cause in conflicts between client data and discovery vendor processing capabilities.
 - Dozens of different issues have been identified so far .
 - Today, custodial collections simply “passes bad data along”.
- No two clients run their IT systems exactly the same way.
 - Small differences in data can make a big difference in the quality and accuracy of discovery processing.
 - Client *can* be part of solution: Advise clients to maintain accurate information about key IT practices prior to need to do collections.
- Differences between “best and worst” results .
 - It consistently costs ten times more to remediate errors identified during the review vs. those corrected before discovery processing.



The 25% Problem: The Way Vendors Work

- Software Quality is not a traditional discovery vendor strength
 - Much of the critical knowledge on how things “really work” lives in a few very busy minds.
 - Yet software quality is entirely in the control of the discovery vendor.
- Companies spend \$1,200 to \$2,600 per GB on electronic discovery only to experience accuracy and quality issues.
- Client benefits of vendor excellence in software quality assurance include:
 - Fewer errors, greater processing accuracy
 - Faster error remediation
 - Longer time between errors
- Vendor benefits include, among others:
 - Substantial improvements in client satisfaction
 - Substantial improvements in profitability

Auditing Discovery Vendor Software Quality Practices

What to Look For and Where to Focus



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What We're Looking For

- Outstanding Electronic Discovery Quality Assurance:
 - Software quality assurance is embedded in both the discovery vendors software development and processing operations.
 - Vendor is spending more time in “developing quality processing software” instead of “fixing software errors uncovered during processing”.
 - Vendor effectively uses its internal quality assurance staff to find software errors before processing errors occur.



Where to Focus

- Observations from dozens of large electronic discovery cases.
 - 50GB to 3TB, 1 month to 2 years duration
 - AMLAW 100 firms, Fortune 250 clients
 - Antitrust, Bankruptcy, Mass Tort, etc.
- You don't "do electronic discovery software quality," instead electronic discovery software quality must be integrated into both vendor software development and operational processes to be effective.
- We'll focus on 3 critical discovery vendor operations and software development processes:
 - Software Change Control Processes
 - Problem Resolution Processes
 - Software Release Processes



Software Change Control Processes

- Software Change Control
 - Is there a process to manage software changes from “requested or desired” to “approved and implemented”?
- Software Change Management integrity and accountability
 - Are there detective controls in place to ensure integrity of the software change management process?
- Software Release management integrity and accountability
 - Are there detective controls in place to ensure integrity of the software release management process?



Problem Resolution Processes

- Rollback Capabilities
 - Can the discovery processing team rapidly rollback to an older stable version of the processing software if the latest version contains critical errors?
- Service level stability
 - Does the time it takes to resolve software errors adequate for acceptable service delivery?



Software Release Processes

- Documented processes
 - Does the vendor use a documented build process to insure the integrity of new software releases deployed into processing operations?
- Acceptance processes
 - Has the software build process been adequately tested to insure it works?
- Quality assurance
 - Are all changes to software made through the release process and tested by the vendors quality assurance team?

Insights from Software Quality Assurance Audits

What to Know



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Qualitative Metric: A Vendor Risk Indicator

- “The most important leading indicator of discovery vendor software quality risk is an unusual volume and velocity of processing software defects.”
- Ineffective management of software quality assurance issues leads directly to client dissatisfaction with processing quality, accuracy, and service level.
 - Today’s electronic discovery processing environments are either highly or increasingly automated.
 - Managing software quality assurance goes to the heart of a vendors ability to assure quality, accuracy, and even basic data integrity.
 - Software quality assurance is not a traditional strength of electronic discovery vendors.



Quantitative Metrics

- Leading indicator: What percentage of the vendors software development budget was spent correcting software errors?
- Initial anecdotal survey results:
 - Best in class: 4.3-5.0% of development expenses
 - Average today: 25%-35% of development expenses
- According to a General Electric study, consider that:
 - A 4 Sigma company spends > 10% of revenue on rework
 - A 6 Sigma company spends < 1% of revenue on rework
- Most electronic discovery vendors operate at 4 sigma or less!

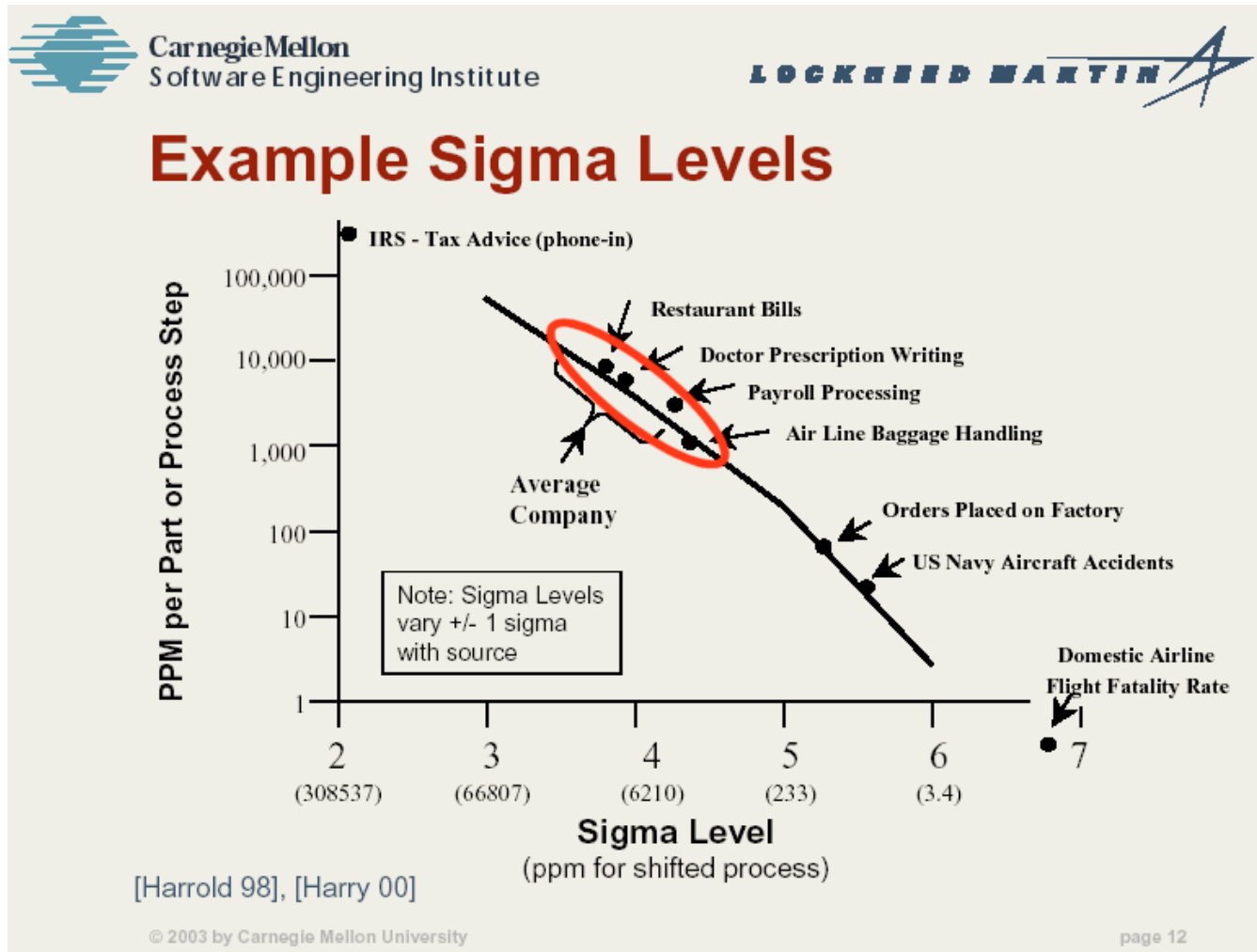


Quantitative Metrics

- Other Useful Indicators
 - How many software releases per Month/Quarter?
 - Change is both an opportunity for improvement and a risk
 - What is driving changes? Internal errors, errors in third-party software used by vendor, custom case/client requirements?
 - What is the average time between a report of a software error and release of a tested fix into processing operations?
 - No top-most severity error in vendors internal ranking should be older than 30 days.
 - All errors in the next-most severe category should be fixed in less than 90 days.



Discovery Vendor Quality Comparables



Our data suggests that the quality of electronic discovery vendors range somewhere between “restaurant billing” and “airline baggage handling”.

Software Quality Assurance

Audit Questions

Questions to Ask



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The Interview and Questions: Intent

- Questions are intended to uncover pain and provoke thought
- Create appropriate “tone from the top” to get candid answers and collective problem-solving
- With the right people in the room, questions generate:
 - Nervous laughter
 - Outright hilarity
 - Uncomfortable Partners



Example Questions: General

- Uncover pain
 - Our lit support staff spends too much time fire fighting.
 - Our litigation support department is understaffed to support existing workloads.
 - We do not have a vendor quality management policy.
 - We have not calculated the cost of review downtime.
- Uncover new anxieties
 - We need to identify the electronic discovery errors that are recurring most frequently across the firm or with certain vendors.
 - We need to better understand our clients data to help avoid discovery processing errors.



Example Questions: Problem Resolution

- Uncover pain
 - The longest part of our corrective cycle is diagnosing what's wrong.
 - We can quickly detect errors in case data during problem resolution.
 - We can track what data/deliveries led to a specific error.
- Uncover new anxieties
 - We track the remediation success rate.
 - We have a process that tracks all errors by the responsible electronic discovery vendor.



Example Questions: Software Release

- Uncover pain
 - We can enforce a standard configuration build across all of our devices.
 - We know precisely how many different configurations we have in our environment.
 - We capture the known good state or "golden build" as part of the release management process.
 - We have confidence that the deployed systems match the golden build.
- Uncover new anxieties
 - We can reliably re-build cases that are in production (bare-metal build).
 - Production and development systems are clearly separated.
 - We ensure that the staging environment matches the pre-production environment before deploying into production.



Example Questions: Software Change Control

- Uncover pain
 - We have regularly scheduled change control meetings.
 - When making changes, we schedule them during pre-defined maintenance windows.
 - Before making changes, changes must be authorized via the change management process.
 - We have technology in place to track and enforce the change control policy .
- Uncover new anxieties
 - We have a clearly defined change request process.
 - We can quickly discover unauthorized or undocumented changes.
 - We review change control, release management and problem resolution processes regularly for operational relevance.

Software Quality Assurance Assessment Metrics

How to Keep Score



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Release Management: Issues

- Problem: Lack of repeatable and approvable builds
- Consequence: Long remediation times when forced to rebuild “next release” software from scratch
- Causes
 - Uncontrolled and undocumented software changes
 - Lack of continuity caused by “tribal” or individual knowledge
 - Urgent software \changes made during fire-fighting
 - Post-deployment changes never get integrated back into release engineering processes



Release Management: Metrics

- Total Time required to create a known, good build
- Number of attempts required to create a known, good build



Control Processes: Issues

- Problems
 - Unauthorized changes cause a high percentage of software errors
 - Uncontrolled software changes diffuses operations accountability and defeats Release Management efforts
 - Quality can't identify or keep track of all the times, places, and people making changes, and so can't begin to assure the quality of critical processing software.
- Causes
 - Software change management systems are viewed as “optional”.
 - Quality operates on the “sidelines”, i.e. not well integrated into vendor software development or processing operations



Control Processes: Metrics

- Number of changes made in discovery operations
- Number of changes made for authorized business reasons
- Number of times change management system was circumvented
- % of data delivery delays caused by change
- Number of changes that obsolete build process
- Success rate across shifts in operations i.e. “clean shift handover” success rate



Resolution Processes: Issues

- Problems
 - High percentage of remediation effort spent in “discovery” and “diagnosis”
 - Inappropriate and costly escalations, increasing fire-fighting and staffing loads
- Consequences
 - Longer mean time to resolve (MTTR)
 - Reduced review efficiency and productivity
 - Potential for case delays
- Causes
 - Lack of awareness of uncontrolled and undocumented changes



Resolution Processes: Metrics

- Issue Mean Time To Resolve (MTTR)
- Aggregate review downtime
- Number of inappropriate escalations
- Increased change “success rate”



Contact Us

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“Control Discovery offers a wide range of electronic discovery services designed to help law firms and enterprise clients control the cost, quality, and accuracy of electronic discovery.”