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How Data Analytics Can Drive Damages Calculations

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Big data can provide a strategic boost for counsel and experts when calculating damages. By presenting strong, evidence-based numbers, they can increase the likelihood that their theory and calculation of damages will be accepted by judges and arbitrators.

The question is: How do lawyers and experts get at the data? And when they obtain it, how do they extract evidence from it? A single case may involve terabytes of electronic information stored in a seemingly random array of electronic databases. Unstructured data, such as individual emails or company invoices, may need to be collected and examined. Even old, paper files can require scanning and scrutiny.

Increasingly, those problems are being addressed with data analytics, the use of sophisticated software and data science to mine, organize and analyze large sets of information. A data analytics approach can yield far more granular information, bolstering calculations and even providing evidence that can affect the outcome of cases.

In this article, we review three real-world examples of data analytics in action, showing how mining structured or unstructured information can be essential in helping lawyers and experts build their damages calculations and in gathering critical evidence to support claims.


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Losing Patients

One of the most common applications of data analytics is in corralling several seemingly distinct sets of data to gather evidence.

Consider this case: A hospital in a small community had a loose agreement with two clinics to refer cases equally to each practice when patients needed consultations. Over time, however, one of the clinics felt the hospital was favoring its competitor and complained about the issue to administrators.

In response, the hospital agreed to create a rotating schedule of patient referrals: One clinic would receive referrals on one day; the other would receive referrals on the next. Three years passed. In spite of the agreement, the clinic was convinced that patient referrals were not occurring in an equitable fashion. And as a result, it filed suit.

Two questions had to be answered in the case: Was the hospital referring patients on an unequal basis, and if it was, what damages were owed to the clinic? To answer these questions required

a mountain of information from three separate sources.

Hospital records were gathered regarding referrals to the two clinics. They resided in a patient management system, and billing codes were used to determine which patients were referred and to whom. Complicating matters, however, was a unique aspect of the agreement. If a patient had an existing relationship with one of the clinics, the hospital was not obligated to follow the rotating schedule.

To assess these relationships, patient records were needed from both clinics. Gaining full access to records from the clinic bringing suit posed no problem. The competing clinic, on the other hand, was not a party to the lawsuit and was less inclined to cooperate. It turned over limited information about new patients that had been referred by the hospital.

Overcoming Challenges

Data analytics proved decisive in overcoming the challenge of determining whether the patient relationship occurred before or after the hospital's referrals. Information identifying specific patients was culled from the three data sets and was cross-referenced against transactions and referrals.

In the end, the data proved that the hospital was referring more patients to the competitor—and was doing so even when the patient had an existing relationship with the plaintiff's clinic. Patient-level transaction histories also helped show which referrals should or should not be part of a damage calculation. (The data analysis was so thorough, in fact, that even opposing experts said they agreed with it.)

Further, the data analysis validated whether the hospital and clinics had been responsive to the requests for information and helped uncover inconsistencies and omissions in the data. Whether an opposing party—or in this case, the competing clinic, a nonparty—has been responsive is a key point for counsel in helping support a damages calculation.

Data analytics can also allow for a deeper analysis of the financial impact of a loss. In the case of the clinic, the data sets were mined to create metrics on the number of visits a typical patient would have paid to the clinic and the dollars they would have been billed. Those metrics could then be applied to the universe of improperly referred patients to help determine damages.

With stronger data analysis, counsel and damages experts can calculate with greater precision. Often, attorneys and experts are forced to rely upon broad industry or regional averages to determine the financial impact of a loss. Data

analytics allow them to create a calculation that paints a more detailed picture of a client's losses.

Class Concerns

Data analytics also can serve as an effective tool in assisting counsel in complex class actions. Take, for instance, a recent class action involving several enterprises and a vendor whose product failed to deliver for their customers.

Counsel needed to identify class members and calculate their potential share of a settlement. This required compiling the names of customers during a specified time frame, their contact information, whether they had paid their bills and for how much.

Though transaction-level detail was available, it was housed in distinct billing systems at each of the enterprises, and the systems relied upon relational databases that separately logged the names of customers, billing information, and payments. Further complicating matters, customers often switched addresses. New customers moved into service areas; other moved out. A

customer might move within the boundaries of service area or between service areas. Forwarding addresses, when available in the records, were occasionally in the form of handwritten notes from customers.

All of the data sets had to be brought together, translated into useable forms, and analyzed. Customer billing information was gathered and examined to determine the amount of time they used services and to help confirm that they were part of the class. Current contact information was extracted from the data to allow counsel to notify class members about the case. And an analysis of payment histories helped provide more specific loss calculations.

Unstructured Data

While complex, the data at the six enterprises described above was located primarily in existing databases that could be lashed together and then analyzed as a whole. At times, though, data is "unstructured" and must be gathered into a database to pinpoint evidence and determine the value of any identified claims.

In a recent qui tam case, a whistleblower alleged that their employer violated the Anti-Kickback Statute and submitted a number of false claims to the government. The company was accused of paying a third-party organization in exchange for referrals for services that were payable via a federal program.

Evidence was buried in several hard-to-reach locations. It consisted of transactional data from two billing systems that detailed claims submitted to the government. Purchase records showed the sale of goods by the third-party organization to vendors. And emails from the company, the third-party organization, and customers requested goods and acknowledged their receipt.

Data analytics were used to gather all of the threads, identify evidence of false claims and calculate their potential value. A new database was developed to capture the unstructured information (such as the purchasing records and email references) and the material in structured databases (such as billings). Structured data was used to establish that the claims were submitted to the government. Unstructured data was compared against it.

When taken together, the information revealed a sophisticated scheme. Goods provided to customers served as an incentivized referral; claims from the company were submitted to and reimbursed by the government; and a "commission payment" was actually a kickback to the third-party organization.

The evidence developed and identified via these advanced data analytics revealed more than $10 million worth of reimbursements by the government for thousands of false claims by the company.

The Human Factor

Data analytics, by definition, deploy mathematics, statistics, and computer software to arrive at solutions to complex problems. Sophisticated forensic tools are required to combine distinct data sets, financial records and unstructured data into a single platform for investigation and analysis.

The human touch is critical as well. An experienced data analyst will know how to ask questions, search for hidden data sources, deal with the people who control information in organizations, and deploy the right technology tools to do the job. Using advanced data analytics, they can identify trends, relationships, unexpected patterns, inconsistencies and irregularities—and help counsel craft a winning damages strategy.

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