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Technology and data as lawyers' allies – From data to insights

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Technology and Data as Lawyers' Allies – From Data to Insights

Legal Aid for Lawyers – Harnessing Technological Intelligence in a Data Driven World



“A lawyer’s tools of the trade were his law books. In those days, a firm’s library was very manageable. There were few commentaries and the text of the law – cases and legislation – were self-contained. Local case law that was reported took up only a volume each year in the Malayan Law Journal. Older firms may have had the early Kyshe’s law reports. Statutes were contained in four volumes – DK Walters, who had written the definitive commentary on Municipal Ordinances, was published in one volume. Roland Braddell’s ‘The Law of the Straits Settlements’ was another volume. For a litigator, there was the Penal Code, the Criminal Procedure Code and the Evidence Act, the same volumes used by lawyers.”

The First Chief – Wee Chong Jin by John Koh

Perhaps the greatest change in law practice between then and now is brought about by the explosion of information. A lawyer cannot just rely on the physical tomes stacked high in his library. What separates a prevailing party from the other may well come down to how many additional hours the former took when conducting research or looking up an obscure point of law. This would mean that a good lawyer must be able to harness and make use of information and data.

Information can be overwhelming. A poor search query entered into an electronic case database will throw out search results that run into the hundreds if not thousands. The lack of a systemic

way of sorting, cataloguing and filtering information can obstruct lawyers from their task at hand, ie, providing a solution or a resolution to their clients' problems. It is no longer the case where the more you have, the more you know. While technology is a great enabler, there is also an inconvenient truth – the more one can access, the more time one will need to separate the chaff from the wheat.

We have spoken to a large number of lawyers, and according to our estimates, about 30 per cent to 40 per cent of research time would eventually be written off and be unbillable, which means a loss of revenue for law firms. Speed and accuracy is of vital importance so lawyers can go through relevant information quickly and convert them into knowledge that can be easily consumed by clients or the court. The right knowledge, delivered at the right time separates good lawyers from the mediocre ones. Lawyers need smarter technologies and a better way to manage information is urgently needed.

A New and Improved Master's Method

“Without fail, David would set aside time each week to read through the numerous law reports and journals to which he subscribed. He would then summarise the relevant cases in his indices – his ‘bibles’ – which gave case authorities and citations for the various propositions of law, listed in alphabetical order.

And so, quite apart from what I carried in my memory, I looked up the index, ‘Provocation’, for example, and there would be whole reams of cases. Each one with its little sub-title about, first the name of the case and the reference where I can find it. And then what particular point was dealt with in respect of Provocation.

David had six sets of index books or legal bibles covering the various aspects of substantive law and legal procedure.”

The Master's Method from Marshall of Singapore: A Biography by Kevin Tan

Every law firm should be masters of valuable knowledge held in its repository; however, law firms have not yet found a way to effectively capitalise on their knowledge. It is a challenge for lawyers to retrieve what they need conveniently. Lawyers are also spending considerable amounts of time engaging in onerous information management work. A “living system” that automatically updates, categorises and indexes information is necessary for lawyers to generate, share and maintain the flow of information and knowledge easily. This enhances efficiency as technology can be leveraged to deliver the most relevant knowledge to lawyers instantaneously.

A good internal knowledge infrastructure enables law firms to meaningfully capture and register previous work done by lawyers, turning it into tangible assets that go towards building up institutional knowledge. An on-demand knowledge delivery system will free up time for lawyers to focus their energies on the more challenging aspects of legal practice, instead of ploughing through mountains of information.

Technology as an Ally – Data. Machine Learning. Artificial Intelligence.

Technology may one day forge ahead without man's help but, for now, remains a useful tool that can help lawyers do more for their clients faster. In particular, data modelling stands out

as having profound implications for our industry. Data modelling helps us summarise and draw deeper insights from vast amounts of legal data. After using computing power to identify patterns and relationships in legal data, we can map them out in powerful visualisations such as relational webs and time/space distributions. Such insights facilitate intelligent search, and allows us to zoom in on what's relevant in today's widening sea of legal information.

While the algorithms behind data modelling vary, most seek to elicit underlying "models" from observed data that best explain why we observe what we observe. This can be likened to the common law inductive reasoning process which seeks to distill underlying "principles" that best explain why cases turn out the way they do from the case authorities.

Thus, data modelling algorithms applicable to legal practice generally build on two philosophical premises. The first involves building a model that minimises the conceptual distance between the model and the data. Put simply, the algorithm tries to draw a best fit line, mirroring how we commonly argue that a legal principle is in line with the authorities.

A second involves building a model which maximises the likelihood of observing the observed data – just as how an advocate may argue that his principle better explains why previous courts decided one way or another.

These two methods are not mutually exclusive. In practice, many different models are tested and compared in order to identify the most suitable. These data models lie at the heart of machine learning and have been used, critiqued, and refined by statisticians, econometricians and computer scientists for decades.

The legal applications of data modelling are exciting. Data modelling can help us apply a quantitative version of the common law reasoning method to size up hundreds and thousands of cases quickly. We can then dive into the most relevant trends and cases, where lawyers' judgments are crucial. This reduces research turnaround time and widens the scope of analysis done.

The implications are clear: data modelling adds immense value to the work lawyers do. Legal advice to clients can be buttressed with quantified measures of risk; arguments run in court can be fortified with specific statistics on precedents.

Blazing a Trail for Our Profession

"Ongoing, pervasive changes in technology have impacted legal practice in Singapore. Singapore now has the most efficient justice delivery system. Our courts in Singapore are technologically so transformed that the next frontier has to be the application of [artificial intelligence] ... [e]mbarking upon an empirical programme of research requires a team of enthusiasts ... a collaborative enterprise comprising the software engineer, legal expert and judge."

*The Mind of Lord Denning by Dr Foo Chek Teck
Singapore Law Gazette, February 2002*

The time is ripe for the extension of artificial intelligence to the law. An increasing number of legal technology startups are working to blend computer algorithms, data analytics methods and legal reasoning. These companies can help lawyers and law firms extract more value from

the knowledge already in their possession. The application of artificial intelligence will result in an innovative information infrastructure, and free lawyers from having to comb through messy data and do tedious research. With reduced inefficiencies, lawyers and law firms can focus on their clients' needs and therefore create more value.

These are exciting times, and this new year presents an opportunity to leverage on technology to improve capabilities and bring down costs. There is no better time than now to reimagine the way law can be practised.

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About

INTELLEX

(www.intellex.com)

INTELLEX is founded for one single purpose – to help the legal fraternity (Lawyers, Law Courts and Law Students – hence the 3 ‘L’s in the company name) turn their knowledge into assets. Our mission is to solve the legal practice’s longstanding challenge of information overload through a productivity suite built upon a smart knowledge management system. This smart knowledge management system contains cases, statutes and commentaries, serving as a connective centre for lawyers to store, collaborate and share knowledge. INTELLEX creates a living information ecosystem within the firm that is easy to use and empowers users with knowledge that can be easily retrieved and applied.

About Lex Quanta

Lex Quanta combines legal domain knowledge with statistical and programming knowhow to build law-first data models sensitive to legal principles and tailored to industry requirements. We hope to equip lawyers with the analytics tools necessary to turn the legal information overload problem into an opportunity to provide deep legal insights grounded on all relevant data.

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