

An essential tool in age of big data

Technology assisted review is providing a critical advantage in the search and analysis of large data volumes, says **Martin Bonney**, director, international consulting services, at Epiq Systems



We now live in an age of “big data”, where massive amounts of electronic information are exchanged daily. Data is erupting from e-mail accounts, smartphones, tablets, social communities and search engines; it crosses borders, takes new forms and is housed in virtual clouds.

To respond to legal requests for disclosure in this digital age, new technologies for searching and analysing large volumes of electronically stored information (ESI) are necessary. Typically, teams of lawyers are utilised to review documents for relevance, privilege, confidentiality, fact development and early-case assessment. Technology assisted review (TAR) is the latest revolution in ESI technology that is helping minimise the volume of data and intelligently analyse content.

TAR is a type of machine-learning technology that uses input from a human reviewer and analytics to help identify responsive or important documents. Using this technology, a case expert reviews a sample of documents and codes the documents as



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either relevant or not relevant. The software applies a principal known as statistical learning theory to recognise complex patterns in the data and actively learns from the reviewer’s coding decisions. Once the software is trained, it is able to identify the relevance of the documents.

This new technology offers several advantages over traditional approaches to document review. It provides metrics about a document population that a hit list from keyword-searching does not provide. This can be extremely valuable for early-case assessment, developing case strategy, and designing a more efficient and cost-effective review workflow. TAR removes human bias inherent in keyword searches as initial assumptions about the facts and evidence often change throughout the disclosure process. The software can also be used for reviewing document collections containing multiple languages consistently.

One of the biggest myths about TAR is that the technology is a threat to legal practice because machines are replacing lawyers. In fact, TAR is about injecting augmented intelligence into the legal process, and humans and machines working together. With the volume of data growing exponentially, human linear review of documents is difficult in legal cases without extreme cost, undue burden and lengthy timelines.

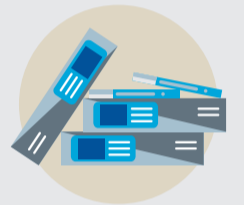
But machines alone are not the answer. The use, and the value, of the output are dependent on intelligent input and training from a human expert.

In this age of big data, understanding the technological tools available for analysing and reviewing large volumes of data is critical. The sheer volume of data, and the variety of ways in which that data can now be transferred and received, adds a complexity to the review process that challenges traditional practices.

While TAR may not be the appropriate tool in every case, knowing how and when to use TAR can provide a competitive advantage in this digital age for forward-thinking lawyers.

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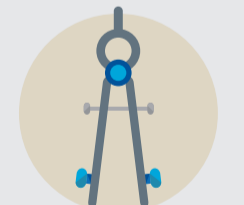
TECHNOLOGY ASSISTED REVIEW (TAR)



Using input from a human review to identify important documents, a case expert reviews a sample of documents and determines whether they are relevant or not



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TAR enables a more consistent and nuanced approach to measuring relevance than is feasible with legacy keyword search



TAR software enables accurate measurement of precision and recall in search results, which is key to any rigorous culling process

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