

# Mandating Use of Predictive Coding in Electronic Discovery: An Ill-Advised Judicial Intrusion

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*But lo! Men have become the tools of their tools.*<sup>1</sup>

## INTRODUCTION

In twenty-first century civil litigation, discovery focuses on electronically stored information (ESI).<sup>2</sup> Lawsuits may be won or lost because of incriminating electronic documents.<sup>3</sup> Offices may generate fewer paper documents, but the amount of potentially discoverable ESI has proliferated.<sup>4</sup> Litigants in some cases face the task of searching many millions of electronic

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<sup>1</sup> HENRY DAVID THOREAU, *WALDEN* 25 (W.W. Norton & Co. 1966) (1854).

<sup>2</sup> The term “electronically stored information” is not defined in the Federal Rules of Civil Procedure, although it is used there. *See infra* notes 117–24. In the Notes accompanying the 2006 Amendments to those rules, the Judicial Conference Committee stated that the term “is expansive and includes any type of information that is stored electronically” and “is intended to be broad enough to cover all current types of computer-based information, and flexible enough to encompass future changes and developments.” FED. R. CIV. P. 34(a)(1) advisory committee's note.

<sup>3</sup> *See, e.g.*, Gretchen Morgenson, *Case on Mortgage Official Is Said to Be Dropped*, N.Y. TIMES, Feb. 20, 2011, at A20 (reporting closure of criminal case against Countrywide Financial's chief executive but noting that internal e-mails calling the company's loans “toxic” and “poison” were likely to be pivotal in civil cases against the company); Landon Thomas, Jr., *Prosecutors Build Bear Stearns Case on E-Mails*, N.Y. TIMES (June 20, 2008), <http://www.nytimes.com/2008/06/20/business/20bear.html?pagewanted=all> (describing prosecutors' use of hedge fund executive's internal e-mail stating “I think we should close the funds now,” while the firm “presented a sunny picture to worried investors”); Steve Lohr, *In an Antitrust Suit, a Tiny Ex-Partner Is Taking Aim at Microsoft*, N.Y. TIMES (May 31, 1999), <http://www.nytimes.com/1999/05/31/business/in-an-antitrust-suit-a-tiny-ex-partner-is-taking-aim-at-microsoft.html?pagewanted=all&src=pm> (noting that the antitrust case against Microsoft was largely built on internal e-mails sent by Bill Gates and other executives); Ravi Mandalia, *Google Denied Exclusion of Lindholm Email from Oracle Lawsuit*, ITPROPORTAL (Feb.

8, 2012), <http://www.itproportal.com/2012/02/08/google-denied-exclusion-of-lindholm-email-from-oracle-lawsuit> (reporting that the Federal Circuit's ruling to allow use of incriminating e-mail was “a potentially damaging blow” in a billion dollar patent lawsuit); “Smoking Gun” Emails Released in 2009 Buffalo Plane Crash, ABC NEWS (Oct. 21, 2011, 7:13 PM), <http://abcnews.go.com/blogs/headlines/2011/10/smoking-gun-emails-released-in-lawsuit-over-2009-buffalo-plane-crash> (noting the plaintiffs' use of internal airline e-mails that suggest airline officials' concern about the pilot's qualifications).

<sup>4</sup> *See* JOHN F. GANTZ ET AL., *INT'L DATA CORP., THE DIVERSE AND EXPLODING DIGITAL UNIVERSE: AN UPDATED FORECAST OF WORLDWIDE INFORMATION GROWTH THROUGH 2011*, at 3 (2008) (projecting a ten-fold increase in ESI from 2006-11). Documents responsive to discovery requests may be found in such locations as servers, desktop and laptop computers at work and at employees' homes, on cloud-based systems, on Voice Over Internet Protocol (VOIP) systems, on removable media such as flash drives, and on devices such as smart phones. This proliferation of technologies accounts in part for the proliferation of data and complicates the task of retrieving and evaluating ESI. *See, e.g.*, Mia Mazza et al., *In Pursuit of FRCP 1: Creative Approaches to Cutting and Shifting the Costs of Discovery of Electronically Stored Information*, 13 J. RICH. J.L. & TECH. 11, ¶ 1 (2007); Douglas Oard et al., *Evaluation of Information Retrieval for E-Discovery*, 18 ARTIFICIAL INTELL. L. 347, 350–51 (2010). Various laws compelling retention of data also contribute to the proliferation. *See, e.g.*, 17 C.F.R. § 210.2-06 (2003)

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records for those documents that are responsive to discovery requests.<sup>5</sup> That makes discovery a burdensome and expensive proposition.<sup>6</sup>

While production of documents may evoke images of young associates in dusty storerooms looking at thousands of individual paper documents stored in boxes or filing cabinets, discovery has changed with the burgeoning of ESI. Computers now do much of the work, culling from that vast body of ESI a smaller set of documents that may be responsive and relevant. For at least the past decade, most electronic discovery has been via keyword searching<sup>7</sup>—a great improvement over old-fashioned manual review, but presenting its own problems. A newer generation of search technology is “predictive coding.” Despite advocates’ claims of improved accuracy and lower costs, attorneys have been slow to transition to predictive coding methods. Moreover, there has been a lack of precedent indicating that judges regard predictive coding as sufficiently reliable and acceptable under the Federal Rules of Civil Procedure (FRCP). Adjustment to advances in technology often comes slowly, but good reasons may exist to proceed cautiously here, especially in lawsuits where large amounts of money or even the viability of a corporation may be at stake.

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(implementing Sarbanes-Oxley Act and requiring retention of audit-related records, including electronic records, for seven years); 45 C.F.R. §164.530(j)(2) (implementing Health Insurance Portability and Accountability Act of 1996 and requiring retention of medical records for six years).

<sup>5</sup> The Judicial Conference Advisory Committee, tasked with revising the Federal Rules of Civil Procedure to address electronic discovery, lists particular challenges:

Electronically stored information is characterized by exponentially greater volume than hard-copy documents. Commonly cited current examples of such volume include the capacity of large organizations’ computer networks to store information in terabytes, each of which represents the equivalent of 500 million typewritten pages of plain text, and to receive 250 to 300 million e-mail messages monthly. Computer information, unlike paper, is also dynamic; merely turning a computer on or off can change the information it stores. Computers operate by overwriting and deleting information, often without the operator’s specific direction or knowledge. A third important difference is that electronically stored information, unlike words on paper, may be incomprehensible when separated from the system that created it.

JUD. CONF. ADVISORY COMM., THE NEW E-DISCOVERY RULES 9 (2d ed. 2009), available at [http://www.legalpub.com/\\_images/sample-pages/2009-ediscovery.pdf](http://www.legalpub.com/_images/sample-pages/2009-ediscovery.pdf) (last visited Feb. 22, 2013). See also ROGER S. HAYDOCK & DAVID HERR, DISCOVERY PRACTICE, at 27-5 to 27-19 (5<sup>th</sup> ed. 2011) (describing challenges of accessing ESI).

<sup>6</sup> The costs of electronic discovery are generally borne by the producing party, but may be shifted at least in part to the requesting party when “good cause” is shown. See Hon. James C. Francis IV, *Cost Shifting in E-Discovery*, in MANAGING E-DISCOVERY AND ESI 591, 603–05 (Michael D. Berman et al. eds., 2011); Robert Hardaway et al., *E-Discovery’s Threat to Civil Litigation: Reevaluating Rule 26 for the Digital Age*, 63 RUTGERS L. REV. 521, 566–73 (2011). In addition to concerns about costs of discovery, there are issues of legal liability for improper handling of ESI, such as its improper destruction when litigation is anticipated, see Burke T. Ward et al., *Recognizing the Impact of E-Discovery Amendments on Electronic Records Management*, 26 INFO. RECS. MGMT. 350, 352 (2009), or improper disclosure of confidential information. See, e.g., Robert Peglar, *Evidence Management Solutions for Mitigating E-Records Risk*, 41 INFO. MGMT. J. 56, 57–58 (2007). Many sectors of society are dealing with challenges in connection with the growing amount of ESI. See *Data, Data Everywhere*, ECONOMIST, Feb. 25, 2010, at 53 (citing challenges for science, government, and the arts). For example, accountants conducting audits face challenges in culling critical e-mails, sometimes intended to deceive those who may later read them, from a large mass of information. See Roger S. Debreceny & Glen L. Gray, *Data Mining of Electronic Mail and Auditing: A Research Agenda*, 25 J. INFO. SYS. 195 (2011) (describing data mining tools used in auditing, including keyword searching).

<sup>7</sup> See *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 250 F.R.D. 251, 254–55, 260 n.9 (D. Md. 2008) (describing discovery protocols); Oard et al., *supra* note 4, at 350–53 (describing process of discovery employing keyword searches); The Sedona Conference Working Group, *Best Practices Commentary on the Use of Search and Information Retrieval Methods in E-Discovery*, 8 SEDONA CONF. J. 196, 200–02 (2007).

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Four cases brought predictive coding to the forefront in 2012. In *Da Silva Moore v. Publicis Groupe*,<sup>8</sup> a federal case, and *Global Aerospace, Inc. v. Landow Aviation, L.P.*, a Virginia state court case, judges permitted the use of predictive coding by defendants, despite some degree of objection by the plaintiffs.<sup>9</sup> In *Kleen Products, LLC v. Packaging Corporation of America*,<sup>10</sup> the plaintiffs requested that a federal judge order the defendants to redo discovery using predictive coding, after the defendants had already produced millions of documents culled by keyword searching. Finally, late in the year, in *EORHB, Inc. v. HOA Holdings, LLC*, a Delaware judge, unbidden by the parties, directed them to employ predictive coding or to show cause why it should not be used.<sup>11</sup> These cases have attracted considerable attention, with a *Wall Street Journal* article<sup>12</sup> and extensive coverage and commentary in law and technology blogs.<sup>13</sup>

This article undertakes a fuller analysis in order to provide guidance as other courts may grapple with the novel issues presented. Parts I and II examine in some detail available search technology and the facts and rulings of the four predictive coding cases. Part III reviews the fundamental roles of the parties and the court in discovery. Against this background, Part IV argues that judicial mandates of particular technologies for electronic discovery would be misguided because the parties may have legitimate, good-faith concerns that lead them to prefer keyword searching rather than predictive coding (or vice versa) and because judges do not have sufficient reasons to depart from the traditional judicial role to intervene in such decisions.

## I. TECHNOLOGY FOR ELECTRONIC DISCOVERY: KEYWORD SEARCHING TO PREDICTIVE CODING

Keyword searches used in discovery are akin to the keyword searches used to find relevant documents on LEXIS or Westlaw. In both contexts, Boolean logic is used to refine searches by the use of connectors, such as “and,” “but not,” and “within same sentence,” and wildcards (such as “transport\*” or “transport!”) may be used to recover words containing that particular stem (such as “transports” and “transportation”). Keyword searches in electronic discovery, however,

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<sup>8</sup> *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 23350 (S.D.N.Y. Feb. 24, 2012).

<sup>9</sup> See Order Approving the Use of Predictive Coding for Discovery, *Global Aerospace, Inc. v. Landow Aviation, L.P.*, Consolidated Case No. CL61040 (Loudoun Cnty., Va. April 23, 2012).

<sup>10</sup> *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. filed Sept. 9, 2010).

<sup>11</sup> Transcript of Record at 66, *EORHB, Inc. v. HOA Holdings, LLC*, Civil Action No. 7409-VCL (Del. Ch. Oct. 15, 2012).

<sup>12</sup> Joe Palazzolo, *Why Hire a Lawyer? Computers Are Cheaper*, WALL ST. J., June 18, 2012, at B1.

<sup>13</sup> See, e.g., William V. Essig & Lawrence J. Del Rossi, *Move Over Humans, 21<sup>st</sup> Century Document Review Has Arrived*, NAT'L L. REV. (May 6, 2012), <http://www.natlawreview.com/article/move-over-humans-21st-century-document-review-has-arrived>; Matthew Nelson, *Federal Judges Consider Important Issues that Could Shape the Future of Predictive Coding Technology*, FORBES (Feb. 20, 2012, 1:42PM), <http://www.forbes.com/sites/benkerschberg/2012/02/20/federal-judges-consider-important-issues-that-could-shape-the-future-of-predictive-coding-technology/>; Matthew Nelson, *Plaintiffs Ask Judge Nan R. Nolan to Go Out on a Limb in Kleen Products Predictive Coding Case*, E-DISCOVERY 2.0 (April 13, 2012, 8:58 AM), <http://electronicdiscovery.info/plaintiffs-ask-judge-nan-r-nolan-to-go-out-on-a-limb-in-kleen-products-predictive-coding-case-electronic-discovery/> (calling plaintiffs' request that the judge order defendant to use predictive coding “shocking to many observers”); Linda G. Sharp, *Mandatory Predictive Coding? What EORHB, Inc. v. HOA Holdings, LLC Could Mean for eDiscovery*, THE MODERN ARCHIVIST (Nov. 8, 2012, 12:47 PM), <http://blog.zlti.com/2012/11/mandatory-predictive-coding-ieorhb-hoa-holdings-llci-ediscovery/> (“Vice Chancellor Laster’s shocking order raises many issues.”); Dave Walton, *Technology: Da Silva Moore Sets Stage for Predictive Coding’s Advancement*, INSIDE COUNSEL (April 30, 2012), <http://www.insidecounsel.com/2012/04/30/da-silva-moore-sets-stage-for-predictive-codings-a>.

are typically much more complex. They may incorporate several advanced information retrieval methods.<sup>14</sup> Douglas Oard, Professor in the College of Information Studies at the University of Maryland, and his co-authors more precisely define the methods that may be employed in keyword searching:

The term “keyword searching” . . . has been used in the IR [Information Retrieval] literature to refer to any or all of exact string matching, substring matching, Boolean search, or statistical ranked retrieval, applied to any or all of free text terms (e.g., space-delimited tokens or character n-grams), manually or automatically assigned controlled vocabulary terms, with or without augmentation by any combination of stemming, wildcards, multi-word phrase formation, proximity and/or word order restrictions, field restrictions, and/or a variety of other operators.<sup>15</sup>

The parties work together to define appropriate search protocols and may also limit the universe of ESI to be searched.<sup>16</sup> Largely to control costs, document review may be outsourced to attorneys on the other side of the globe.<sup>17</sup> Figure 1 depicts the discovery process when keyword searching is employed.<sup>18</sup>

[insert Figure 1 about here]

Keyword searching is now the most widely used method of combing ESI for relevant documents,<sup>19</sup> but the method is not perfect. First, parties may disagree about appropriate search terms. In such a situation, the requesting party may ask for additional search terms<sup>20</sup> or request

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<sup>14</sup> See, e.g., *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 250 F.R.D. 251, 254–55 (D. Md. 2008) (noting that parties employed five pages of keyword search terms).

<sup>15</sup> Oard et al., *supra* note 4, at 359–60.

<sup>16</sup> See, e.g., *Osborne v. C.H. Robinson Co.*, 2011 U.S. Dist. LEXIS 123168 (N.D. Ill. Oct. 25, 2011). For example, they may decide to search only files of certain people or to search only files developed during certain time frames.

<sup>17</sup> See, e.g., Alexandra Hanson, *Legal Outsourcing to India: So Hot Right Now!*, 62 SMU L. REV. 1889 (2009) (discussing outsourcing of document review and legal research); Aaron R. Harmon, *The Ethics of Legal Process Outsourcing—Is the Practice of Law a “Noble Profession” or Is It Just Another Business?*, 13 J. TECH. L. & POL’Y 41 (2008); Brandon Robers, Current Development, *The Firm Is Flat: Ethical Implications of Legal Offshoring*, 23 GEO. J. LEGAL ETHICS 700 (2010). Outsourcing may provide cost savings and efficiency but present challenges of confidentiality and quality control. It may also be controversial at a time when U.S. law jobs are being eliminated. E.g., Hanson, *supra*, at 1897–907.

<sup>18</sup> The issue of clawback of inadvertently produced privileged documents, depicted as the last step in Figure 1, is discussed *infra*, text accompanying notes 171–188.

<sup>19</sup> See, e.g., *Custom Hardware Eng’g & Consulting, Inc. v. Dowell*, 2012 U.S. Dist. LEXIS 146, at \*6 (E.D. Mo. Jan. 3, 2012); Jason R. Baron & Michael D. Berman, *Designing a “Reasonable” E-Discovery Search: A Guide for the Perplexed*, in *MANAGING E-DISCOVERY AND ESI* 479, 482 (Michael D. Berman et al. eds., 2011) (“Automated methods of search, starting with applying more sophisticated approaches to keyword searching, are the wave of the future.”); Sedona Conf., *supra* note 7, at 200. Keyword searching has been shown to yield more complete and accurate production than old-fashioned, manual review of documents. See, e.g., Patrick Oot et al., *Practitioners’ View: Mandating Reasonableness in a Reasonable Inquiry*, 87 DENV. U. L. REV. 533, 548-52 (2010). In any event, manual searching of vast quantities of data would be impracticable.

<sup>20</sup> See, e.g., DEFAULT STANDARD FOR DISCOVERY, INCLUDING DISCOVERY OF ELECTRONICALLY STORED INFORMATION (D. Del., Dec. 8, 2011), available at <http://www.ded.uscourts.gov/court-info/local-rules-and-orders/guidelines>. Regarding “Search Methodology,” this model standard provides in full:

If the producing party elects to use search terms to locate potentially responsive ESI, it shall disclose the search terms to the requesting party. Absent a showing of good cause, a requesting party may request no more than 10 additional terms to be used in connection with the electronic search.

that the producing party take steps to verify the completeness of production. Ideally, the parties will reach agreement. If they cannot, the court may become involved, issuing sanctions for lack of good-faith cooperation in the process<sup>21</sup> or even assisting in crafting search terms.<sup>22</sup> The major difficulty, however, is that parties may craft search terms that are over- or under-inclusive, either returning large amounts of irrelevant documents or failing to capture relevant ones.<sup>23</sup>

Appropriately inclusive results are more likely when technical experts are involved in developing search terms and when Boolean logic and other more advanced information retrieval methods are also employed.<sup>24</sup> Courts may require the testimony of experts on search terms and methods.<sup>25</sup>

And of course, the cost of the process is a concern.

The next generation of technology for electronic discovery is predictive coding. Predictive coding is a type of “concept searching.” Professor Oard and his co-authors describe the variety of methods that may be employed in concept searching:

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*Id.* at 5. The federal District Court of Delaware’s approach is noteworthy as that court has been hailed as “at the forefront of electronic discovery innovation.” See Mark Michaels, *The Story Behind Delaware’s Default E-Discovery Standard*, L. TECH. NEWS (Jan. 24, 2012, 1:55 PM), <http://www.edupdate.com/2012/01/the-story-behind-delawares-default-discovery-standard.html>.

<sup>21</sup> See, e.g., *Osborne*, 2011 U.S. Dist. LEXIS 123168, at \*12.

<sup>22</sup> See, e.g., *Custom Hardware*, 2012 U.S. Dist. LEXIS 146, at \*8–12; *Helmert v. Butterball, LLC*, 2010 U.S. Dist. LEXIS 60777 (E.D. Ark. May 27, 2010); *William A. Gross Constr. Assocs., Inc. v. Am. Mfrs. Mut. Ins. Co.*, 256 F.R.D. 134, 135 (S.D.N.Y. 2009); see also Jason R. Baron, *Law in the Age of Exabytes: Some Further Thoughts on “Information Inflation” and Current Issues in E-Discovery Search*, 17 J. RICH. J.L. & TECH. 9, ¶13–15 (2011) (describing “spectrum of activism” of judges in becoming involved in crafting search protocols). Whether judges are well-equipped to craft or evaluate particular search terms is questioned. See, e.g., *Eurand, Inc. v. Myland Pharm, Inc.*, 266 F.R.D. 79, 84 (D. Del. 2010) (“Neither lawyers nor judges are generally qualified to opine that certain search terms or files are more or less likely to produce information than those keywords or data actually used or reviewed.”); Baron, *supra*, at ¶15 (noting that prominent judge John Facciola, D.D.C., has “caution[ed] judges against venturing too far into the weeds in adjudicating search term disputes”); Marian Riedy et al., *Mediated Investigative E-Discovery*, 2010 FED. CTS. L. REV. 79, 84 (2010) (“Analyzing keyword searches is a strain on judicial resources, and may also be outside the ken of judicial abilities. Courts now evaluate keyword search proposals just as they would document requests . . .”).

<sup>23</sup> See, e.g., *Custom Hardware*, 2012 U.S. Dist. LEXIS 146, at \*6; *Osborne*, 2011 U.S. Dist. LEXIS 123168, at \*4; *William A. Gross*, 256 F.R.D. at 135; Baron & Berman, *supra* note 19, at 482; Maura R. Grossman & Gordon V. Cormack, *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient than Exhaustive Manual Review*, 17 RICH. J.L. & TECH. 11, ¶7–9 (2011) (describing Information Retrieval discipline’s goals of recall (completeness) and precision (accuracy)). Crafting effective search terms is challenging in part because it may be difficult to capture all synonyms that express a relevant idea, and also because ESI may include many informal documents such as e-mails or text messages, where misspellings, slang, or acronyms are often used. David D. Cross & Sanya Sarich Kerksiek, *Using Electronic Search Tools and Search Methodology Experts in E-Discovery: A Discussion of Recent Case Law and Other Authorities*, in *MANAGING E-DISCOVERY AND ESI* 439, 443–46 (Michael D. Berman et al. eds., 2011). In contrast, crafting effective keyword searches for LEXIS or Westlaw may be an easier task, as legal opinions and law review articles are more formal in nature and may employ more standard and predictable terminology.

<sup>24</sup> *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 250 F.R.D. 251, 262 (D. Md. 2008); Baron, *supra* note 22, at ¶14; Lauren Katz, *Current Development, A Balancing Act: Ethical Dilemmas in Retaining E-Discovery Consultants*, 22 GEO. J. LEGAL ETHICS 929 (2009) (noting that to fulfill ethical duties of diligence and competence, attorneys may need to obtain assistance of e-discovery expert).

<sup>25</sup> See, e.g., *Victor Stanley*, 250 F.R.D. at 262; *Equity Analytics, LLC v. Lundin*, 248 F.R.D. 331, 333 (D.D.C. 2008); Oard et al., *supra* note 4, at 351 (noting “emergence of a body of case law questioning the ad hoc, unexplained, and/or unilaterally deployed use of single keywords as search terms”); see also *Sedona Conf.*, *supra* note 7, at 212 (“Parties should expect that their choice of search methodologies will need to be explained . . .”).

Controlled vocabulary indexing (manual or automatic, with or without thesauri), multi-word phrase formation (by statistical and/or linguistic means), statistical query expansion methods, knowledge representation languages and inference systems from artificial intelligence, unsupervised learning approaches (including term clustering, document clustering, and factor analytic methods such as latent semantic indexing), as well as simple stemming, wildcards, spelling correction and string similarity measures.<sup>26</sup>

More accessibly, a recent *New York Times* article explains these latest technologies, which may employ either a “linguistic” or “sociological” approach, or both.<sup>27</sup> Under the linguistic approach, “programs filter documents through a large web of word or phrase definitions.” For example, a search for “dog” will retrieve documents mentioning related terms “man’s best friend” or “walk.”<sup>28</sup> Under the sociological approach, software

mine[s] documents for the activities and interactions of people—who did what when, and who talks to whom. The software seeks to visualize chains of events. It identifies discussions that might have taken place across e-mail, instant messages and telephone calls. Then the computer pounces, so to speak, capturing “digital anomalies” that white-collar criminals often create in trying to hide their activities. For example, it finds “call me” moments—those incidents when an employee decides to hide a particular action by having a private conversation. . . . The . . . software can also recognize the sentiment in an e-mail message—whether a person is positive or negative, or . . . unusual emphasis that might give hints that a document is about a stressful situation.<sup>29</sup>

The article states that the “inferential layer of analysis” added under the sociological approach “mimic[s] the deductive powers of a human Sherlock Holmes.”<sup>30</sup>

Attorneys, typically senior attorneys, work to train or calibrate the predictive coding software. The process begins either with attorneys selecting a “seed set” of responsive and non-responsive documents, or reviewing and coding a random sample of documents. These initial documents are then analyzed by the predictive coding software. The software begins to make judgments on probable relevance of other documents. The attorneys review further samples produced by the software, again applying their own judgment as to relevance, responsiveness, and privilege. The process continues until the attorneys are satisfied that the software is properly calibrated. At that point, the results are said to be “optimized,” and as a result “disagreement

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<sup>26</sup> Oard et al., *supra* note 4, at 360; *see also* Venkat Rangan, *Discovery of Related Terms in a Corpus Using Reflective Random Indexing* (July 28, 2011) (unpublished paper, presented at SIGIR 2011 Information Retrieval for E-Discovery Workshop, Beijing, China), *available at* <http://www.umiacs.umd.edu/~oard/desi4/papers/rangan.pdf> (last visited Feb. 22, 2013) (describing various concept searching methods).

<sup>27</sup> John Markoff, *Armies of Expensive Lawyers, Replaced by Cheaper Software*, *N.Y. TIMES*, March 5, 2011, at A1.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* The software referenced in the *NEW YORK TIMES* article was that of predictive coding provider Cataphora, Inc.

<sup>30</sup> *Id.* Similar techniques may be used outside litigation in the accounting audit process, *see* Debreceeny & Gray, *supra* note 6, at 195, or to filter e-mail spam or allow “Amazon [to] suggest . . . books you might want to buy based on those you’ve previously bought.” *See* Alison Frankel, *Another E-Discovery Milestone: State Judge Orders Predictive Coding*, *ON THE CASE BLOG* (April 25, 2012), [http://newsandinsight.thomsonreuters.com/Legal/News/2012/04\\_-\\_April/Another\\_e-discovery\\_milestone\\_\\_state\\_judge\\_orders\\_predictive\\_coding/](http://newsandinsight.thomsonreuters.com/Legal/News/2012/04_-_April/Another_e-discovery_milestone__state_judge_orders_predictive_coding/).

between the software's decisions and those of the human reviewers should be kept to a minimum."<sup>31</sup> Figure 2 depicts the discovery process when predictive coding is employed.<sup>32</sup>  
[insert Figure 2 about here]

Predictive coding brings cost savings primarily by avoiding or at least greatly limiting final, attorney review of the computer-generated set of responsive documents.<sup>33</sup> The patent application for one predictive coding method contemplates little or no human review of the documents produced by the software: "[T]he Invention can limit, or avoid altogether, the final human review of the computer files before production. This allows for very significant cost savings by responding parties by reduction of review times."<sup>34</sup> Alternatively, one predictive coding provider suggests, clients may incur lower costs because the predictive coding software produces fewer irrelevant documents—a smaller universe of documents to be reviewed by attorneys before producing to the requesting party.<sup>35</sup> Empirical data proving cost savings are scarce.<sup>36</sup> In assessing savings from use of predictive coding, one must account for vendor charges or licensing fees that may offset savings obtained due to fewer attorney hours.<sup>37</sup>

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<sup>31</sup> NICHOLAS M. PACE & LAURA ZAKARAS, RAND INST. FOR CIVIL JUSTICE, WHERE THE MONEY GOES: UNDERSTANDING LITIGANT EXPENDITURES FOR PRODUCING ELECTRONIC DISCOVERY 60 (2012) [hereinafter RAND REPORT] (noting that the software's assignment of "proximity score" for relevance "and the self-learning function are the two key characteristics that set predictive coding apart from less robust analytical techniques."). This monograph notes that "[T]he best results will be achieved if the attorneys most closely involved in the case select the seed documents and review sampled extracts . . . . Moreover, attorney judgment continues to loom large in the process after the application has completed its work, with eyes-on review required, for example, to check documents of unknown relevance and responsiveness or look for privileged communications." *Id.* at 61.

<sup>32</sup> The issue of clawback of inadvertently produced privileged documents, depicted as the last step in Figure 2, is discussed *infra* at text accompanying notes 171–188.

<sup>33</sup> RAND REPORT, *supra* note 31, at 60. Because attorney "review consumed at least 70 percent of the total costs of document production [in at least half of the studied cases], this single area, described by one participant in our study as the 'black hole' of the entire process, is an obvious target for reducing e-discovery expenditures." *Id.* at 41.

<sup>34</sup> System and Method for Establishing, Managing, and Controlling the Time, Cost, and Quality of Information Retrieval and Production in Electronic Discovery, U.S. Patent Application 20100205020 at [36] (filed Feb. 9, 2009) (published Aug. 12, 2010). The patent application notes that foregoing final human review is acceptable due to "protections from waiver of rights by inadvertent disclosure of confidential privileged [sic] provided by 'Confidentiality,' 'Clawback,' and/or 'Quickpeek' agreements, and the terms and protection offered by newly enacted Rule 26(b)(5)(B), Federal Rules of Civil Procedure, and newly enacted Rule 502, Federal Rules of Evidence, and orders entered there-under." *Id.* The issue of privilege protection is discussed *infra* text accompanying notes 174–188.

<sup>35</sup> Herbert S. Washer & Christopher R. Fenton, *Methods for Streamlining Complex Litigation*, in "BET THE COMPANY" LITIGATION 2011: BEST PRACTICES FOR COMPLEX LITIGATION 213, 216–17 (2011) (citing Equivio study). Scholars have noted the "burden of wading through the false positive noise of irrelevant documents" which may be returned using keyword searching methods. See Baron, *supra* note 22, at ¶10–11 (noting that "even one percent of a large quantity of data (a quantity measuring in terabytes, petabytes and beyond) that [may] . . . remain after automated keyword searching, is *still* too large a haystack for manual searches (even at contract attorney rates)"). The recent WALL STREET JOURNAL article notes the potential benefit of predictive coding producing fewer irrelevant documents but highlights disagreement about the need for attorneys to review the documents before producing to the other party. See Palazzolo, *supra* note 12 (quoting one lawyer who states, "If you're going to make the argument that it's more accurate than humans and that you should rely on it to reduce costs and time, then you should be relying on it fully" and foregoing final human review, and another opining that "lawyers are still needed to review the documents once they are sorted before turning them over to the other side.>").

<sup>36</sup> RAND REPORT, *supra* note 31, at 67 (noting difficulty of obtaining accurate information). There is anecdotal evidence of cost savings. The software of one provider reportedly allowed a company to analyze 1.5 million documents for less than \$100,000. Markoff, *supra* note 27.

<sup>37</sup> RAND REPORT, *supra* note 31, at 67.



Exact methods for predictive coding are proprietary and vary from one provider to another.<sup>38</sup> In fact, the approaches of various providers may vary considerably.<sup>39</sup> At least three companies have patents on technology or methods.<sup>40</sup> Other patent applications are pending.<sup>41</sup> Through published patent documents, details about such companies' particular methods are publicly available. For other companies, general information about methodologies is available, but precise details on techniques are protected as trade secrets.<sup>42</sup> One would expect that effectiveness will vary from one provider to another.

Note, too, that there may be considerable overlap in the "keyword searching" and "predictive coding" approaches.<sup>43</sup> Imagine a continuum of increasing sophistication. At the bottom would be simple keyword searches entered by the user, perhaps developed by the attorney without any assistance from experts. Progressing in sophistication, one could add Boolean logic and wildcards, which are user-controlled. Further along the continuum, one might bring in information retrieval experts and add such techniques as automatic stemming, which involves use of algorithms<sup>44</sup> and therefore is not entirely user-controlled. Still within the realm of "keyword searching" described by Professor Oard and his co-authors,<sup>45</sup> one might employ statistical ranking ("I will look at hits with rankings of at least *nn%*."),<sup>46</sup> which yields yet more judgment to the machine, with methodology perhaps not well understood by the user, certainly not by the

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<sup>38</sup> Washer & Fenton, *supra* note 35, at 216.

<sup>39</sup> See Evan Koblentz, *Training of Predictive Coding Systems Fosters Debate*, L. TECH. NEWS (March 27, 2012), (contrasting approaches of Recomind, Equivio, and three other providers); Karl Schieneman, *Kleen Products Predictive Coding Epitaph*, EDISCOVERY J. BLOG (Aug. 27, 2012, 11:17 AM), <http://ediscoveryjournal.com/2012/08/kleen-products-predictive-coding-epitaph/> ("[P]redictive coding means different things to different people."); *Predictive Coding Power User Panel from Carmel*, ESI BYTES (July 24, 2012), <http://www.esibytes.com/?p=2279> (podcast of discussion of various predictive coding methods and their use in various types of cases with panelists including experts Maura Grossman, Herbert Roitblat, and Bennett Borden).

<sup>40</sup> See *Systems and Methods for Predictive Coding*, U.S. Patent No. 7933859 (filed May 25, 2010) (issued April 26, 2012) (assigned to Recomind, Inc.); *Identifying Related Objects Using Quantum Clustering*, U.S. Patent No. 8266121 (filed Aug. 8, 2011) (issued Sept. 11, 2012) (assigned to OrcaTec, LLC); *Identifying Related Objects Using Quantum Clustering*, U.S. Patent No. 8010534 (filed Aug. 31, 2007) (issued Aug. 30, 2011) (assigned to OrcaTec, LLC); *Method and Apparatus for Processing Electronically Stored Information for Electronic Discovery*, U.S. Patent 8090705 (filed Sept. 15, 2008) (issued Jan. 3, 2012) (assigned to Symantec Corp.).

<sup>41</sup> See, e.g., *Electronic Review of Documents*, U.S. Patent Application 20120278266 (filed April 27, 2012) (published Nov. 1, 2012); *System and Method for Establishing, Managing, and Controlling the Time, Cost, and Quality of Information Retrieval and Production in Electronic Discovery*, U.S. Patent Application 20100205020 (filed Feb. 9, 2009) (published Aug. 12, 2010); *Systems and Methods for Electronic Document Review*, U.S. Patent Application 20100077301 (filed Sept. 21, 2009) (published March 25, 2010).

<sup>42</sup> See, e.g., E-mail from Herbert L Roitblat, Chief Scientist and Chief Technology Officer, OrcaTec, LLC, to author (May 14, 2012, 10:12 AM EDT) (on file with author). Many companies purport to offer predictive coding services. In addition to Cataphora and Equivio and those companies mentioned, *supra* note 40, other providers include Clearwell Systems, Inc., Applied Discovery, Inc., and Oracle Corp., as well as law and accounting firms. See *supra* text accompanying note 26 for a listing of various concept searching technologies that might be employed. The author takes no position on the effectiveness of any particular provider's services or products, and certainly does not intend to denigrate any particular provider.

<sup>43</sup> See Oard et al., *supra* note 4, at 360. Interestingly, these authors observe that despite the widespread use of keyword searching techniques, the term "keyword searching" is "used almost exclusively in a derogatory fashion, to refer to any method which an author believes is inferior to their preferred technique," while "concept searching" is almost uniformly used with a positive connotation, in both technical and marketing literature." *Id.*

<sup>44</sup> See, e.g., Jinxu Xu & W. Bruce Croft, *Corpus-Based Stemming Using Cooccurrence of Word Variants*, 16 ACM TRANSACTIONS ON INFO. SYS. 61, 61-63 (1998).

<sup>45</sup> See *supra* text accompanying note 15.

<sup>46</sup> See, e.g., Donna Harman & Gerald Candela, *Retrieving Records from a Gigabyte of Text on a Minicomputer Using Statistical Ranking*, 41 J. AMER. SOC. INFO. SCI. 581, 581 (1990).



average lawyer or judge. Exactly where “predictive coding” fits in this continuum is difficult to say, especially because the services of various providers will differ and a particular predictive coding provider’s services may not be well explained.<sup>47</sup> And while the most sophisticated predictive coding algorithms would presumably return much more accurate results than the simplest keyword searching (and do better than pure human review), it is far less clear to what degree a particular predictive coding provider’s software is superior to keyword searching that includes the more advanced techniques.

Enthusiasm for predictive coding as a method for conducting electronic discovery runs high in some quarters,<sup>48</sup> but there are reasons to be cautious. First, there is a dearth of empirical evidence as to its effectiveness.<sup>49</sup> Developing such evidence is a daunting task, due to costs, difficulty in accessing documents and information, and other challenges.<sup>50</sup> As prominent information retrieval scholars have noted, “audacious claims [are] now being made in the E-discovery community regarding the efficacy of certain techniques.”<sup>51</sup> They cite “marketing claims that seem well beyond what we are presently able to measure, and perhaps even somewhat

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<sup>47</sup> See *supra* notes 39–42 and accompanying text.

<sup>48</sup> Recall the Sherlock Holmes reference in the NEW YORK TIMES article. See Markoff, *supra* note 27; see also Joe Dysart, *A New View of Review: Predictive Coding Vows to Cut E-Discovery Drudgery*, ABA J. (Oct. 1, 2011, 2:00 AM), [http://www.abajournal.com/magazine/article/a\\_new\\_view\\_of\\_review\\_predictive\\_coding\\_vows\\_to\\_cut\\_e-discovery\\_drudgery](http://www.abajournal.com/magazine/article/a_new_view_of_review_predictive_coding_vows_to_cut_e-discovery_drudgery); Matthew Nelson, *2012: Year of the Dragon – and Predictive Coding. Will the eDiscovery Landscape Be Forever Changed?*, E-DISCOVERY BLOG (Jan. 23, 2012, 5:00 AM), <http://www.clearwellsystems.com/e-discovery-blog/2012/01/23/year-of-the-dragon-and-ediscovery-predictive-coding/>. The Conclusion of the RAND REPORT is more measured, calling predictive coding “[t]he most promising alternative available today,” but noting numerous ongoing challenges. RAND REPORT, *supra* note 31, at 97.

<sup>49</sup> RAND REPORT, *supra* note 31, at xviii (“Because this is nascent technology, there is little research on how the accuracy of predictive coding compares with that of human review.”). One notable study was undertaken by TREC (Text Retrieval Conference) Legal Track in 2006–09, using tobacco litigation electronic documents released under the Tobacco Master Settlement Agreement as the test collection to compare “statistical ranked retrieval techniques” with methods based on “Boolean, proximity, and truncation operators.” See Oard et al., *supra* note 4, at 366–79. While the study concludes that the former techniques are promising, the authors note the need for much more empirical research. *Id.* at 377; see also Grossman & Cormack, *supra* note 23, at ¶61 (finding superior results from unspecified technology-assisted review methods that combine computer and human input over purely manual review, and noting that future work is needed to “address which technology-assisted review process[es] will improve most on manual review); Herbert L. Roitblat et al., *Document Classification in Legal Electronic Discovery: Computer Classification vs. Manual Review*, 6 J. AM. SOC. INFO. SCI. & TECH. 70 (2010) (finding superior results from unspecified “computer-aided systems” as compared with manual review of documents); Washer & Fenton, *supra* note 35, at 216 (citing Equivio study showing that “predictive technology can be as accurate, if not more so, than linear review by attorneys”). Note that the state of the art is no longer manual review. See *supra* text accompanying note 19. Also note that these studies do not specify precisely the computer-assisted methods that were employed, which further limits their usefulness.

<sup>50</sup> RAND REPORT, *supra* note 31, at 3–4. Efforts to develop data continue. For example, in August 2012, the Electronic Discovery Institute announced plans to undertake a new study, using 1.7 million electronic documents from an actual case to compare the services of multiple predictive coding vendors to human review. See Monica Bay, *EDI, Oracle Launch Computer-Aided Document Review Study*, L TECH. NEWS (Aug. 29, 2012), [http://www.law.com/jsp/lawtechnologynews/PubArticleLTN.jsp?id=1202569485387&EDI\\_Oracle\\_Launch\\_ComputerAided\\_Document\\_Review\\_Study=&et=editorial&bu=LTN&cn=eddalert0904&src=EMC-Email&pt=EDD&kw=EDI%2C%20Oracle%20Launch%20Computer-Aided%20Document%20Review%20Study](http://www.law.com/jsp/lawtechnologynews/PubArticleLTN.jsp?id=1202569485387&EDI_Oracle_Launch_ComputerAided_Document_Review_Study=&et=editorial&bu=LTN&cn=eddalert0904&src=EMC-Email&pt=EDD&kw=EDI%2C%20Oracle%20Launch%20Computer-Aided%20Document%20Review%20Study;); ELECTRONIC DISCOVERY INST., SECOND COMPUTER ASSISTED DOCUMENT REVIEW STUDY DRAFT MATERIALS, <http://commonscolld.typepad.com/files/edi-draft-protocol-to-participants.pdf> (last visited Feb. 22, 2013).

<sup>51</sup> See Oard et al., *supra* note 4, at 377. Judges have also noted this phenomenon. See, e.g., *Equity Analytics LLC v. Lundin*, 248 F.R.D. 331, 333 (D.D.C. 2008) (“[L]awyers state as facts what are actually highly debatable propositions as to the efficacy of various methods used to search electronically stored information.”).

beyond what is actually possible.”<sup>52</sup> Further, just as keyword searching may be limited by the abilities of humans to craft effective search terms, the accuracy of predictive coding may be limited due to human involvement in “training” the software.<sup>53</sup>

Indeed, while predictive coding technology may have great promise, it has not yet been widely used in electronic discovery.<sup>54</sup> Observers ascribe slow adoption of predictive coding to several factors, including lack of adequate technical understanding by lawyers,<sup>55</sup> lack of transparency of the process,<sup>56</sup> and concern about accuracy of results.<sup>57</sup> Attorneys have worried about “the uncertainty of judicial acceptance”<sup>58</sup> and whether privilege protection may be lost for documents produced through the predictive coding process.<sup>59</sup>

## II. PREDICTIVE CODING IN THE COURTS: MOVES TO MANDATE USE OF THAT TECHNOLOGY?

Even in the early months of 2012, there were serious questions as to whether predictive coding would gain judicial acceptance. Could a party wishing to use predictive coding to cull responsive documents convince the court that the method will be sufficiently accurate in finding responsive documents? The Sedona Conference research institution opined that “if human review or even keyword searching is the benchmark for accuracy and reliability, it arguably should not be difficult to compare the new [concept searching] technology favorably . . . . The discovery standard is, after all, reasonableness, not perfection.”<sup>60</sup> But the idea was untested in the courts.

On February 24, 2012, however, Magistrate Judge Andrew Peck of the Southern District of New York ruled in *Da Silva Moore v. Publicis Groupe* that predictive coding “is an acceptable

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<sup>52</sup> Oard et al., *supra* note 4, at 378.

<sup>53</sup> An executive at predictive coding provider Equivio cautioned:

[P]redictive coding systems are inherently a garbage in, garbage out operation. Essentially what the software’s doing is it’s encoding the identity of the person training it. If that person is training with intelligence and has provided consistent input, well then the software will be coded with intelligence and consistency. If not, it’ll be coded with ignorance and inconsistency.

Koblentz, *supra* note 39.

<sup>54</sup> RAND REPORT, *supra* note 31, at xviii (“[A]t the end of 2011, we could find no evidence in the published record that any vendor, law firm, or litigant had used predictive coding in a publicized case that named the parties and court jurisdiction.”).

<sup>55</sup> See, e.g., R. Eric Hutz, *E-Discovery: Using Predictive Coding to Manage E-Discovery Costs and Risks*, INSIDECOUNSEL (Feb. 23, 2012), <http://www.insidecounsel.com/2012/02/23/e-discovery-using-predictive-coding-to-manage-e-di> (noting that many lawyers view predictive coding as a “black box” process” using “complex computer algorithms . . . not easily understood or explainable by anyone other than a computer scientist”). More ominously, some have wondered whether resistance to predictive coding may stem in part from lawyers who would stand to lose revenue long derived from manual review of documents. RAND REPORT, *supra* note 31, at 76.

<sup>56</sup> See Nelson, *supra* note 48 (“[I]t is difficult to defend a technological process that isn’t always clear . . . . In short, using black box technology that is difficult to use and understand is perceived as risky, and many attorneys have taken a wait-and-see approach because they are unwilling to be the guinea pig.”).

<sup>57</sup> *Id.*; RAND REPORT, *supra* note 31, at 74–76 (noting a particular concern about under-inclusion—a failure to identify and produce responsive documents, especially highly technical or non-text documents); Hutz, *supra* note 55; see also generally Hardaway et al., *supra* note 6, at 551–64 (noting problems with both keyword searching and concept searching).

<sup>58</sup> See, e.g., RAND REPORT, *supra* note 31, at 77–79; Hutz, *supra* note 55 (“There is an open question whether predictive coding is sufficiently rigorous and transparent that a court would be satisfied that its use [meets reasonableness requirements of the FRCP].”).

<sup>59</sup> See Hutz, *supra* note 55. This concern is discussed at some length, *infra* notes 168–188 and accompanying text.

<sup>60</sup> Sedona Conf., *supra* note 7, at 204.

way to search for relevant ESI in appropriate cases.”<sup>61</sup> Judge Peck emphasized in the ruling itself, “[t]o correct the many blogs about this case, . . . the Court did not *order* the parties to use predictive coding.”<sup>62</sup> *Da Silva Moore* involves five female plaintiffs suing one of the world’s largest advertising firms and its public relations subsidiary for gender and pregnancy discrimination and various other claims.<sup>63</sup> Judge Peck observed, “The decision to allow computer-assisted review in this case was relatively easy – the parties agreed to its use (although disagreed about how best to implement such review).”<sup>64</sup>

That characterization is disputed by the plaintiffs. Judge Peck stated that the parties agreed at least initially on the defendants’ use of predictive coding in the case,<sup>65</sup> but the plaintiffs assert that their “acquiescence” was “overstated.”<sup>66</sup> Indeed, they say they were “steamrolled” by the judge.<sup>67</sup> Judge Peck noted in his opinion that “[t]he slightly more difficult case would be where the producing party wants to use computer-assisted review and the requesting party objects,”<sup>68</sup> but the opinion suggests that in this situation as well he would rule in favor of a party’s unilateral decision to use predictive coding, due to the technology’s “superiority.”<sup>69</sup>

The plaintiffs’ request for recusal of Judge Peck due to alleged appearance of partiality was denied.<sup>70</sup> As evidence of alleged appearance of partiality, the plaintiffs cited, among other things, certain comments by the magistrate judge (including an in-court comment by Judge Peck that defendants “must have thought they died and went to Heaven” to have him assigned to the case, due to his well-known support of predictive coding),<sup>71</sup> and his participation in educational forums with one of the defense lawyers in the case and trade shows sponsored by various predictive coding vendors.<sup>72</sup> These colorful allegations and exchanges have contributed to widespread coverage of this case.<sup>73</sup>

The plaintiffs appealed Magistrate Judge Peck’s February 24 ruling allowing use of predictive coding to District Judge Andrew L. Carter, Jr., arguing that the predictive coding method approved by Judge Peck was unreliable and unacceptable under the FRCP.<sup>74</sup> Applying a

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<sup>61</sup> *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 23350, at \*3 (S.D.N.Y. Feb. 24, 2012).

<sup>62</sup> *Id.* at n.1 (emphasis added).

<sup>63</sup> *Id.* at \*4.

<sup>64</sup> *Id.* at \*26–27.

<sup>65</sup> *Id.* at \*9–11.

<sup>66</sup> See Reply Memorandum of Law in Support of Plaintiff’s Motion for Recusal or Disqualification at 5–6, *Da Silva Moore v. Publicis Groupe*, Civ. No. 11-cv-1279 (S.D.N.Y. May 10, 2012).

<sup>67</sup> *Id.* (“Both in court conferences and letters to the Court, Plaintiffs indicated their genuine reluctance to agree to predictive coding. Judge Peck made it absolutely clear that Plaintiffs had no choice and should drop their protests. . . . Judge Peck steamrolled Plaintiffs’ concerns.”).

<sup>68</sup> *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 23350, at \*27–28 (S.D.N.Y. Feb. 24, 2012).

<sup>69</sup> *Id.* at \*35.

<sup>70</sup> *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 83659 (S.D.N.Y. June 15, 2012) (Peck, Mag. J.); *aff’d*, Civ. No. 11-cv-1279 (S.D.N.Y. Nov. 8, 2012) (Carter, J.). Judge Peck’s 56-page opinion focused solely on the recusal issue.

<sup>71</sup> See Reply Memorandum of Law in Support of Plaintiff’s Motion for Recusal or Disqualification, *supra* note 66, at 1 (citing discovery conference transcript). Judge Peck acknowledges having made and repeated this comment. See *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 83659 at \*14–15. (S.D.N.Y. June 15, 2012). In 2011, Judge Peck authored a two-page article for a widely read online publication, indicating his support for predictive coding. See Andrew Peck, *Search, Forward*, L. TECH NEWS (Oct. 1, 2011) (“Until there is a judicial opinion approving (or even critiquing) the use of predictive coding, counsel will just have to rely on this article as a sign of judicial approval.”).

<sup>72</sup> See Reply Memorandum of Law in Support of Plaintiff’s Motion for Recusal or Disqualification, *supra* note 66, at 1.

<sup>73</sup> See *supra* note 13 (citing sampling of blog coverage).

<sup>74</sup> *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 58742, at \*3 (S.D.N.Y. April 25, 2012).

“highly deferential standard of review”<sup>75</sup> and finding no basis to hold his conclusion clearly erroneous or contrary to law, Judge Carter affirmed Judge Peck’s discovery ruling that “under the circumstances of this particular case, the use of the predictive coding software as specified in the ESI protocol is more appropriate than keyword searching.”<sup>76</sup>

The District Court judge noted that while “the Plaintiffs and Judge Peck disagree about the scope of Plaintiffs’ acquiescence concerning the use of the [predictive coding] method . . . the confusion [as to whether the plaintiffs consented to predictive coding] is immaterial.”<sup>77</sup> Judge Carter ruled, “At this stage, there is insufficient evidence to conclude that the use of the predictive coding software will deny Plaintiffs access to liberal discovery.”<sup>78</sup> The plaintiffs’ ability to participate in the defendants’ development of precise search protocols and demand sampling for quality assurance provided an appropriate safeguard.<sup>79</sup> He further ruled that “upon receipt of the production, if Plaintiffs determine that they are missing relevant documents, they may revisit the issue of whether the software is the best method.”<sup>80</sup> Thus, disputes in this acrimonious case may continue.

Two months after Judge Peck’s ruling allowing use of predictive coding, a Virginia state court entered the fray in *Global Aerospace, Inc. v. Landow Aviation, L.P.*, also known as the *Dulles Jet Center Litigation*. After hangars collapsed under heavy snow, damaging several airplanes, two plaintiffs filed a lawsuit against fifty-one defendants, alleging negligence and breach of contract.<sup>81</sup> Certain defendants wished to use predictive coding to cull responsive documents, and the plaintiffs objected to use of that technology.<sup>82</sup> Citing an estimated 250 gigabytes (more than two million documents) of reviewable ESI,<sup>83</sup> the defendants asserted that predictive coding would yield more complete and accurate results than either manual review or keyword searching and could be conducted more quickly and less expensively.<sup>84</sup> They argued that “[t]here is no judicial or other legal mandate requiring, or even advocating, the use of one method of document retrieval over another,”<sup>85</sup> but that “[t]o the extent that judicial approval may be at issue, however, leading jurisprudence supports the use of predictive coding.”<sup>86</sup> The plaintiffs characterized the use of predictive coding as “a radical departure from the standard practice of human review of documents.”<sup>87</sup>

In a one-paragraph order, Judge James H. Chamblin ruled that the defendants “would be allowed to proceed with the use of predictive coding.”<sup>88</sup> He noted, however, that the plaintiffs

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<sup>75</sup> *Id.* at \*5–7.

<sup>76</sup> *Id.* at \*8–9.

<sup>77</sup> *Id.* at \*5–6.

<sup>78</sup> *Id.* at \*6–7.

<sup>79</sup> *Id.* at \*6.

<sup>80</sup> *Id.*

<sup>81</sup> Complaint, *Global Aerospace, Inc. v. Landow Aviation, L.P.*, Consolidated Case No. CL61040 (Loudoun Cnty. Va. April 7, 2010).

<sup>82</sup> See Brief in Opposition to Motion for Protective Order Regarding Electronic Documents and “Predictive Coding” at 2, *Global Aerospace, Inc. v. Landow Aviation, L.P.*, Consolidated Case No. CL61040 (Loudoun Cnty., Va. April 16, 2012).

<sup>83</sup> Memorandum in Support of Motion for Protective Order Approving the Use of Predictive Coding at 2, *Global Aerospace, Inc. v. Landow Aviation, L.P.*, Consolidated Case No. CL61040 (Loudoun Cnty., Va. April 9, 2012).

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 17.

<sup>86</sup> *Id.* (citing *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 23350 (S.D.N.Y. Feb. 24, 2012)).

<sup>87</sup> Brief in Opposition to Motion for Protective Order Regarding Electronic Documents and “Predictive Coding,” *supra* note 82, at 2.

<sup>88</sup> Order Approving the Use of Predictive Coding for Discovery, *Global Aerospace, Inc. v. Landow Aviation, L.P.*, Consolidated Case No. CL61040 (Loudoun Cnty. Va. April 23, 2012).

could challenge “completeness or the contents of the production or the ongoing use of predictive coding” once production was completed.<sup>89</sup> Shortly after the predictive coding ruling, several of the defendants settled before completing discovery.<sup>90</sup>

The *Global Aerospace* court applied the Virginia Supreme Court Rules,<sup>91</sup> which are modeled on the federal rules.<sup>92</sup> A large majority of states have ESI-specific rules that emulate the federal rules.<sup>93</sup> Treatment of predictive coding under each state’s rules is beyond the scope of this article, but to the degree that a particular state’s discovery rules are modeled on the FRCP, the same analysis and concerns would apply.

The other federal case of current interest and the case that sought the greatest judicial commitment to predictive coding is *Kleen Products, LLC v. Packaging Corporation of America*.<sup>94</sup> The case, pending in the Northern District of Illinois, is a class action antitrust claim, alleging price fixing in the containerboard industry by seven separate defendants.<sup>95</sup> District Judge Milton I. Shadur referred discovery to Magistrate Judge Nan R. Nolan. In their Joint Status Conference Report of May 17, 2012, the parties stated that the plaintiffs have produced 25,000 pages of documents to date and the defendants have produced more than three million pages of documents, including both hard copies and ESI. Both parties expected to produce further documents.<sup>96</sup>

Among the discovery issues was whether the keyword searching technology used by the defendants satisfies the FRCP. As argued in defendants’ brief,

Plaintiffs have not meaningfully challenged the specific ESI search methodology that Defendants implemented here. Rather, Plaintiffs challenge the use of search terms *per se* in this litigation. Plaintiffs argue that Defendants, notwithstanding

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<sup>89</sup> *Id.*

<sup>90</sup> Jonathan Berman, *A Dispatch from the Front Lines of E-Discovery*, LAW360 (Oct. 10, 2012, 12:50 PM EDT), <http://www.law360.com/articles/384125>; E-mail from Richard Gable, attorney for plaintiff Factory Mutual Ins. Co., to author (Sept. 5, 2012, 4:39 PM EDT) (on file with author). The blog post by Berman, attorney for one of the plaintiffs in *Global Aerospace*, recounts his version of the facts surrounding predictive coding issues in the case. Berman expresses support for predictive coding in principle: “[T]here is evidence that predictive coding—when used properly and in the right circumstances—may be more reliable than the more expensive methods it replaces.” Berman, *supra*. Berman states that his client opposed use of predictive coding because the defendants had not been forthcoming in providing assurances that predictive coding would be “the best method for locating responsive documents” in that case. *Id.* According to Berman, “We never received this comfort; many of our questions about the data went unanswered.” *Id.*

<sup>91</sup> See Order Approving the Use of Predictive Coding for Discovery, *supra* note 88. Under Virginia rules, attorneys must undertake a “reasonable inquiry” to ensure that responses to requests for production are appropriate. VA. SUP. CT. R. 4:1(g). This is the same duty imposed under FED. R. CIV. P. 26(g). See *infra* text accompanying notes 154–155.

<sup>92</sup> See *State Rules and Statutes*, KROLL ONTRACK, <https://www.krollontrack.com/resource-library/rules-and-statutes/> (last visited Feb. 22, 2013) (providing map depicting federal or other approaches and links to all states’ ESI-related rules).

<sup>93</sup> See Robert Dale Klein & Hon. Joseph F. Murphy, Jr., *The States: What Are the Laboratories of Federalism Doing?*, in MANAGING E-DISCOVERY AND ESI 49, 50 (Michael D. Berman et al. eds., 2011); KROLL ONTRACK, *supra* note 92.

<sup>94</sup> *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. filed Sept. 9, 2010).

<sup>95</sup> See *Kleen Prods., LLC v. Packaging Corp. of Am.*, 775 F. Supp. 2d 1071 (N.D. Ill. 2011) (denying motion to dismiss).

<sup>96</sup> Joint Status Conference Report No. 3 at 3, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. May 17, 2012).

their very substantial investment of time and resources, must abandon what they have done and instead use the methodology Plaintiffs prefer.<sup>97</sup>

The plaintiffs in *Kleen Products* called the defendants' search methodology "an antiquated Boolean keyword search" and requested the judge to order the defendants to employ predictive coding—to require the defendants to apply predictive coding technology to the body of ESI after already having conducted keyword searching and produced documents responsive to the keyword search.<sup>98</sup> Any order that a party must use predictive coding over its objections would be unprecedented. The judge presided over numerous days of evidentiary hearings and several status conferences on the issue.<sup>99</sup>

Finally, on August 21, 2012, after nine months of argument, the parties agreed to discontinue the dispute on search methods. The plaintiffs withdrew their demand that the defendants employ predictive coding for requests for production served on any defendant prior to October 1, 2013.<sup>100</sup> The court accordingly entered an order denying the plaintiffs' pending request as moot.<sup>101</sup> The parties left open the issue of the appropriate search methodologies to be employed after that date, noting that for requests after October 1, 2013, if the parties cannot agree on an appropriate search methodology, "either party may file a motion with the court seeking resolution."<sup>102</sup> At least one of the parties expressed frustration at the "detour into the methodology dispute . . . that has held everything up frankly."<sup>103</sup>

A prominent technology blog noted, "for now, *Kleen* is out of the running as a bellwether for predictive coding."<sup>104</sup> But the issue of whether predictive coding should—or must—be used will persist. It may reappear after October 1, 2013 in the *Kleen Products* case or a party in another case may similarly seek to dictate search methods to be used by its opponent.<sup>105</sup> Or a judge, unprompted by the parties, may order its use, as occurred on October 15, 2012 in *EORHB, Inc. v. HOA Holdings, LLC*, a commercial indemnity case concerning the sale of the Hooters restaurant chain. This case is pending in the Delaware Court of Chancery.<sup>106</sup>

In *EORHB*, Vice Chancellor J. Travis Laster ordered *sua sponte* that the parties should employ predictive coding in discovery or show cause why it should not be used.<sup>107</sup> Moreover,

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<sup>97</sup> Defendants' Brief on Discovery Issues at 1, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. Feb. 6, 2012).

<sup>98</sup> Plaintiffs' Statement of Position with Respect to Disputed Items at 4–5, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. Dec. 13, 2011).

<sup>99</sup> Joint Status Conference Report No. 3, *supra* note 96, at 2–3.

<sup>100</sup> Stipulation and Order Relating to ESI Search, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. Aug. 21, 2012).

<sup>101</sup> Docket Entry, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. Aug. 21, 2012).

<sup>102</sup> Stipulation and Order Relating to ESI Search, *supra* note 100, at 3.

<sup>103</sup> Transcript of Proceedings at 26, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. April 2, 2012) (comments of defense counsel James T. McKeown).

<sup>104</sup> Sean Doherty, "*Kleen*" Plaintiffs Withdraw Demand for Predictive Coding, L.TECH. NEWS (Aug. 22, 2012).

<sup>105</sup> See, e.g., Paul Carberry & Lilja Altman, *E-Discovery Update: Increasing Judicial Acceptance of Computer-Assisted Document Review 3*, WHITE & CASE (July 2012), <http://www.whitecase.com/files/Publication/fde5ec0a-a8e5-4312-ba01-42754c35ac47/Presentation/PublicationAttachment/a7905254-a0c4-4626-b23d-4b330ea14e89/alert-e-discovery-update-increasing-judicial-acceptance-of-computer-assisted-docum.pdf> (last visited Feb. 22, 2013) ("We have yet to see a court compel a producing party to utilize the [predictive coding] technology . . . [but] it is not hard to envision a scenario in the not-too-distant future where a court does just that.").

<sup>106</sup> *EORHB, Inc. v. HOA Holdings, LLC*, Civil Action No. 7409-VCL (Del. Ch. filed April 10, 2012).

<sup>107</sup> Transcript of Record at 66, *EORHB, Inc. v. HOA Holdings, LLC*, Civil Action No. 7409-VCL (Del. Ch. Oct. 15, 2012).

Chancellor Laster suggested that they should agree to use a single predictive coding provider. He directed, “[i]f you cannot agree on a suitable discovery vendor, you can submit names to me and I will pick one for you.”<sup>108</sup> As this article went to press, no discovery had yet been propounded, and the *EORHB* parties had not reached any agreement on search methods.<sup>109</sup> While at the beginning of 2012 there was uncertainty about whether courts would allow the use of predictive coding, this ruling in *EORHB* shows that some courts may now regard use of predictive coding as mandatory, or at least the default search method—a remarkable development.

*Da Silva Moore*, *Global Aerospace*, *Kleen Products*, and *EORHB* signal that predictive coding presents important, new issues, likely to arise in other courts and deserving of thorough attention. Should courts allow parties to use predictive coding? Should courts indeed *order* parties to use predictive coding? A starting point for analysis is a look at the traditional roles of the parties and the court in discovery.

### III. ROLES OF THE PARTIES AND THE COURT IN DISCOVERY UNDER THE FEDERAL RULES OF CIVIL PROCEDURE

Discovery is designed to be a cooperative process, run by the parties, as represented by counsel, largely without interference by the court.<sup>110</sup> The American system of discovery is distinctive:

Party-initiated discovery is in stark contrast to civil law countries where (although changing) it is the civilian law judge who decides what evidence is needed and proceeds to request documents and interrogate witnesses in person, summarizing the testimony in writing. In the United States, it is the lawyers who conduct pretrial discovery, albeit supervised in a general way by judges when there is active case management.<sup>111</sup>

Two influential sources on “best practices” for electronic discovery, the Seventh Circuit Electronic Discovery Pilot Program and the Sedona Conference, characterize discovery as a cooperative, party-driven process. Principle 1.01 of the Seventh Circuit Pilot Program’s *General Principles* directs parties to work toward “the early resolution of disputes regarding the discovery of electronically stored information (‘ESI’) without Court intervention,” and Principle 1.02 reminds counsel that “[a]n attorney’s zealous representation of a client is not compromised by conducting discovery in a cooperative manner.”<sup>112</sup> The Sedona Conference’s *Resources for the Judiciary* emphasize that “the Resources do not mean to imply that judges should be routinely making discovery decisions for the parties,” noting further that “[d]iscovery is designed to be,

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<sup>108</sup> *Id.* at 66–67.

<sup>109</sup> E-mail from Richard P. Rollo, attorney for plaintiffs, to author (Mar. 7, 2013), 2:36 PM EDT (on file with author).

<sup>110</sup> “[F]ederal courts have recently emphasized that [discovery is a party-driven process requiring efforts at cooperation of the parties between counsel before petitioning the trial court, while endeavoring to control abuses of the system.]” PAUL W. GRIMM ET AL., *DISCOVERY PROBLEMS AND THEIR SOLUTIONS* 292 (2d ed. 2009).

<sup>111</sup> STEPHEN N. SUBRIN & MARGARET Y.K. WOO, *LITIGATING IN AMERICA: CIVIL PROCEDURE IN CONTEXT* 131 (2006). These authors caution against “the specter of government intrusion,” emphasizing that the process is generally conducted by the parties themselves. *Id.* at 144.

<sup>112</sup> See SEVENTH CIR. ELECTRONIC DISCOVERY COMM., *PRINCIPLES RELATING TO THE DISCOVERY OF ELECTRONICALLY STORED INFORMATION* (Aug. 1, 2010), available at <http://www.discoverypilot.com/> (last visited Feb. 22, 2013).



and remains, party-driven. Active case management provides a strong framework in which the parties should develop and execute their own cooperative discovery plans.”<sup>113</sup>

Party-directed discovery, a hallmark of the American system, is thought to yield several benefits. First, the court’s limited involvement in the process conserves judicial resources. More importantly, parties who control aspects of the litigation process are more likely to accept the court’s ultimate decision.<sup>114</sup> Party-directed discovery evidences respect for individual rights and opinions.<sup>115</sup> Additionally, it fortifies society’s confidence in the fairness of the adversary system:

When litigants direct the proceedings, there is little opportunity for the judge to pursue her own agenda or to act on her own biases. Because the judge seldom takes the lead in conducting the proceedings, she is unlikely to appear to be partisan or to become embroiled in the contest. Her detachment preserves the appearance of fairness as well as fairness itself.<sup>116</sup>

The discovery process commences under the FRCP when the parties “meet and confer” at a planning conference under Rule 26(f) to develop in good faith a proposed discovery plan.<sup>117</sup> The plan shall address subjects for discovery and the timing of discovery.<sup>118</sup> The plan shall also address “issues about claims of privilege,” including whether the parties “agree on a procedure to assert these claims after production.”<sup>119</sup>

The parties submit the discovery plan to the court<sup>120</sup> for consideration and approval at a pre-trial conference. Rule 16 governs “Pre-Trial Conferences; Scheduling; [and] Management.”

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<sup>113</sup> SEDONA CONF., COOPERATION PROCLAMATION: RESOURCES FOR THE JUDICIARY 4 (Public Comment Version, Aug. 2011), available at <http://www.thesedonaconference.org> (last visited Feb. 22, 2013). For a history of the Sedona Conference, which “convenes working groups of lawyers, judges, academics, and consultants to move the law and the practices of the courts and judges forward in a reasoned way that was both practical and pragmatic,” see Hon. John M. Facciola, *A History of Electronic Discovery*, in *MANAGING E-DISCOVERY AND ESI* 13, 23 (Michael D. Berman et al. eds., 2011).

<sup>114</sup> STEPHAN LANDSMAN, *READINGS ON ADVERSARIAL JUSTICE: THE AMERICAN APPROACH TO ADJUDICATION* 34 (1988).

<sup>115</sup> *Id.* at 35 (“Party control has another beneficial effect as well. It affirms human individuality. It mandates respect for the opinions of each party rather than those of his attorney, of the court, or of society at large.”).

<sup>116</sup> *Id.* at 34; see also generally Jordan M. Singer, *Proportionality’s Cultural Foundation*, 52 *SANTA CLARA L. REV.* 145, 162 (2012) (“We are willing to allow wide attorney discretion in conducting pretrial activities because such discretion is the best mechanism we have to promote the ultimate goals (the core values) of a predictable, efficient, and fair resolution on the merits.”).

<sup>117</sup> FED. R. CIV. P. 26(f)(2). Of course, the parties may not agree on every issue, and in that case, the discovery plan should note their respective positions. The parties are also obligated to discuss at this conference issues connected with preserving potentially relevant ESI, and to make disclosures of types and locations of ESI that are required by FED. R. CIV. P. 6(a)(1). *Id.* The FRCP were amended in 2006 specifically to address the special challenges of electronic discovery, including discovery of ESI from sources not readily available and format of production. See Bennett B. Borden et al., *Four Years Later: How the 2006 Amendments to the Federal Rules Have Reshaped the E-Discovery Landscape and Are Revitalizing the Civil Justice System*, 17 *J. RICH. J.L. & TECH.* 10, ¶16 (2011) (noting that under the Amendments, litigants must “consciously consider and disclose sources of potentially relevant ESI, and work with opposing counsel to target reasonably and proportionally those sources to develop legally significant facts. This cooperative approach to discovery is what the Amendments (and especially the case law interpreting them) are largely about.”).

<sup>118</sup> FED. R. CIV. P. 26(f)(3)(B).

<sup>119</sup> FED. R. CIV. P. 26(f)(3)(D). See *infra* notes 171–188 and accompanying text regarding clawback agreements.

<sup>120</sup> Often a federal magistrate judge, rather than an Article III district court judge, handles pre-trial discovery issues. See Stephen S. Gensler, *Judicial Case Management: Caught in the Crossfire*, 60 *DUKE L.J.* 669, at 694–97 (2010) (discussing role of magistrate judges).

A guide for judges published by the Federal Judicial Center explains its purpose: “The Rule 16 conference allows the judge to discuss and memorialize the agreements or shared understandings that the parties have reached . . . and to identify any disputes and to resolve them early in the case.”<sup>121</sup> The judge issues an appropriate order, setting deadlines for such activities as pre-trial motions and discovery, memorializing the court’s rulings on such things as the extent of discovery, and memorializing any agreement of the parties on privilege protection.<sup>122</sup> Rule 16 specifically notes that the order may “provide for . . . discovery of electronically stored information.”<sup>123</sup>

Appropriate pre-trial functions for the court include “expediting disposition of the action,”<sup>124</sup> “establishing early and continuing control so that the case will not be protracted because of lack of management,”<sup>125</sup> and “discouraging wasteful pretrial activities.”<sup>126</sup> These functions align with the overarching goal of the FRCP, set out in Rule 1: “[The FRCP] should be construed and administered to secure the just, speedy, and inexpensive determination of every action and proceeding.”<sup>127</sup> The goal is not *perfect* discovery, but rather *reasonable* discovery.<sup>128</sup> Courts generally push parties to come to agreement between themselves on discovery issues.<sup>129</sup> Consistent with the idea that the court is there to supervise and not to take on primary responsibility for discovery, the court is advised merely to grasp “the relevant technology at a level that allows effective communication with attorneys, parties, and experts.”<sup>130</sup>

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<sup>121</sup> BARBARA J. ROTHSTEIN ET AL., *MANAGING DISCOVERY OF ELECTRONIC INFORMATION: A POCKET GUIDE FOR JUDGES* 11 (2d ed. 2012). For example, the court may rule on disputes regarding scope of discovery, allocation of costs, form of production, preservation of data, and spoliation. *Id.* at 20–21. The Federal Judicial Center is the educational and research agency created by Congress to produce educational materials for judges. *See* FED. JUD. CTR., <http://www.fjc.gov/> (last visited Feb. 22, 2013). As such, its publications are influential.

<sup>122</sup> FED. R. CIV. P. 16(b).

<sup>123</sup> FED. R. CIV. P. 16(b)(3)(B)(iii).

<sup>124</sup> FED. R. CIV. P. 16(a)(1).

<sup>125</sup> FED. R. CIV. P. 16(a)(2).

<sup>126</sup> FED. R. CIV. P. 16(a)(3). Other listed pretrial functions are “improving the quality of the trial through more thorough preparation,” FED. R. CIV. P. 16(a)(4), and “facilitating settlement.” FED. R. CIV. P. 16(a)(5). The functions listed in FED. R. CIV. P. 16(a) are not exhaustive. *See* FED. R. CIV. P. 16(a) (indicating that the court may act “for such purposes as . . .”). Common, specific pretrial matters for consideration are listed in FED. R. CIV. P. 16(c)(2). These include such matters as considering the possibilities for summary judgment, FED. R. CIV. P. 16(c)(2)(E), and setting deadlines for discovery, FED. R. CIV. P. 16(c)(2)(F). The listed activities are not exclusive; other activities that go to “facilitating in other ways the just, speedy, and inexpensive disposition of the case” are also appropriate. FED. R. CIV. P. 16(c)(2)(P).

<sup>127</sup> FED. R. CIV. P. 1.

<sup>128</sup> Sedona Conf., *supra* note 7, at 204; *Chen-Oster v. Goldman, Sachs & Co.*, 2012 U.S. Dist. LEXIS 130123, at \*42 (S.D.N.Y. Sept. 10, 2012) (quoting and adopting Sedona principle that “the standard for the production of ESI is not *perfection*. Rather, “[a] responding party must use *reasonable* measures to validate ESI collected from database systems to ensure completeness and accuracy of the data acquisition.”); *Larsen v. Coldwell Banker Real Estate Corp.*, 2012 U.S. Dist. LEXIS 12901, at \*18–21 (C.D. Cal. Feb. 2, 2012) (noting party’s obligation to act “reasonably and in good faith” to produce requested documents and rejecting plaintiff’s request that defendant redo production due to “a few alleged discrepancies”). The burden is on the requesting party to show the producing party’s efforts were inadequate. *Larsen*, 2012 U.S. Dist. LEXIS at \*18.

<sup>129</sup> *See, e.g.*, *Patroski v. Pressley Ridge*, 2011 U.S. Dist. LEXIS 133290, \*8 (W.D. Pa. Nov. 17, 2011) (indicating court “does not referee discovery bouts between consenting adults”); *Murray v. Geithner*, 2010 U.S. Dist. LEXIS 33236, at \*2 (S.D.N.Y. March 25, 2010) (“It is not the Court’s task to do [a party’s] . . . job for him by redrafting his manifestly overbroad discovery requests.”); *Borden et al.*, *supra* note 117, at ¶22. “Parties now routinely reach agreements on such issues as the form in which ESI will be produced, which search terms will be used, which groups of custodians will have their ESI searched, what ESI will be sampled before broader searches are conducted, and various other aspects of search protocols.” *Id.* at ¶23.

<sup>130</sup> ROTHSTEIN ET AL., *supra* note 121, at 34.

The court's role is to supervise the discovery process and to intervene when it is abused by the parties.<sup>131</sup> Abuse occurs when parties violate the letter or spirit of the FRCP through gamesmanship,<sup>132</sup> discourtesy,<sup>133</sup> or inability or unwillingness to comply in an orderly fashion.<sup>134</sup> A general concern for fairness permeates the process.<sup>135</sup> Courts seek to balance the need to discover relevant, important information against the burdens of electronic discovery. Courts may be inclined to act especially when a party with fewer economic resources may be disadvantaged by the process.<sup>136</sup> Courts have the power under Rule 26(b) to "limit" discovery.<sup>137</sup> In the event of abuse, the court can exercise "more stringent control" over discovery<sup>138</sup> and can order

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<sup>131</sup> See generally Paul D. Carrington, *Recent Efforts to Change Discovery Rules: Do They Advance the Purposes of Discovery?* 51, 60, in ROSCOE POUND INST., *CONTROVERSIES SURROUNDING DISCOVERY AND ITS EFFECT ON THE COURTS* (1999), available at [www.roscoepound.org/images/1999ForumReport.pdf](http://www.roscoepound.org/images/1999ForumReport.pdf) (last visited Feb. 22, 2013) ("[C]ase management techniques should not be employed routinely in the absence of evidence that there are abuses to be prevented that cannot be controlled by other means and thus that real benefits can be secured. Judicial involvement in pretrial litigation should be the exception and not the rule."). Professor Carrington also notes that a move toward case management is a move away from the normal, party-driven process: "The hidden effect of case management is a transfer of power away from individual parties and their lawyers, and [because cases routinely settle rather than go to trial] also from juries or appellate courts who would review decisions on the merits when and if rendered." *Id.*

<sup>132</sup> For example, parties engage in gamesmanship when they adhere to form over substance in responding to discovery requests, construing requests narrowly to avoid producing "clearly discoverable material." See, e.g., *Georgacarakos v. Wiley*, 2011 U.S. Dist. LEXIS 26900, \*16–17 (D. Colo. March 16, 2011) (approving magistrate judge's *sua sponte* modification of document request, noting that producing party would suffer no prejudice and that "Constraining a Magistrate Judge's ability to overlook matters of form and cut to the substantive heart of a discovery dispute would needlessly encourage 'Gotcha!'-style litigation, where the slightest inaccuracy or deviation from form would allow parties to resist discovery requests"); *Lane v. Page*, 2011 U.S. Dist. LEXIS 21198, \*12 (D. N.M. Feb. 10, 2011) ("The Federal Rules of Civil Procedure embrace a policy of encouraging broad discovery, and exhibit little patience for gamesmanship and attempts to withhold discoverable materials and information. Such gamesmanship produces needless delay, wasting the Court's and the parties' time, contrary to the purpose of the Federal Rules of Civil Procedure.").

<sup>133</sup> *Patroski v. Pressley Ridge*, 2011 U.S. Dist. LEXIS 133290, \*7 (W.D. Pa. Nov. 17, 2011).

<sup>134</sup> *Id.*

<sup>135</sup> See *Jimena v. UBS AG Bank, Inc.*, 2010 U.S. Dist. LEXIS 119393, \*10 (E.D. Cal. Oct. 25, 2010) ("The Rules in place, and the various discretionary sanctions available to the Court to enforce the Rules, are meant to encourage fairness and to avoid obstructionism, gamesmanship, and tactical maneuvering intended to drive up the costs of litigation and unfairly harass the other party.").

<sup>136</sup> See *SUBRIN & WOO*, *supra* note 111, at 144. It has been noted that "[f]rom a purely adversarial perspective, an imbalance in litigation resources [may normally weigh] . . . strongly against cooperation for the party with the greater resources," which may pressure the other party to drop or settle the case. The situation in cases involving large amounts of ESI may be different: "When the party with the greater resources is a corporation, it also tends to have more information that is electronic and discoverable, and thus it potentially faces much greater expense in the discovery process. This has done much to balance the respective resources of the parties in asymmetric litigation . . . ." *Borden et al.*, *supra* note 117, at ¶24.

<sup>137</sup> FED. R. CIV. P. 26(b)(1).

<sup>138</sup> *Patroski*, 2011 U.S. Dist. LEXIS 133290, at \*8. One scholar encapsulates the judge's duties: "The judge will not run the discovery program but he will be there to provide guidance and to set limits of time, place, subject matter, and the like as may be appropriate." Singer, *supra* note 116, at 178. For example, the court can mandate periodic status conferences and specify the form in which electronic documents must be produced. See *Covad Commc'ns Co. v. Revonet, Inc.*, 267 F.R.D. 14 (D.D.C. 2010). The court can "limit the frequency or extent of use" of discovery methods. *Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, 2010 U.S. Dist. LEXIS 17857, at \*25 (D. Colo. Feb. 8, 2010). The court can order that questions be answered via interrogatories rather than deposition. *Georgacarakos v. Wiley*, 2011 U.S. Dist. LEXIS 26900, at \*17 (D. Colo. March 16, 2011) ("The Court would be inclined to find that the Magistrate Judge's decision to prefer one discovery mechanism [interrogatories versus depositions] would not be an abuse of his considerable discretion."). The court may phase discovery. *Tamburo v. Dworkin*, 2010 U.S. Dist.

sanctions.<sup>139</sup> Sanctions are appropriate when a party acts “in bad faith, vexatiously, wantonly, or for oppressive reasons.”<sup>140</sup>

Certainly, judges have wide discretion to act in managing cases,<sup>141</sup> and amendments to the federal discovery rules since 1983 have led toward greater exercise of judicial management and discretion with a particular goal of minimizing costs and delay.<sup>142</sup> Much scholarly debate focuses on the benefits and challenges associated with judicial discretion and the optimal level of such discretion in managing the pre-trial process.<sup>143</sup> Allowing judges some discretion in managing the pre-trial process is valuable, as it obviates the need for more detailed rules and allows for flexibility to tailor discovery to the needs and situation of each particular case.<sup>144</sup>

Excessive reliance on judicial discretion in managing discovery, however, can be problematic for several reasons. First, it can lead to disparate treatment of similarly situated parties,<sup>145</sup> despite the fact that the system seeks uniform treatment from one courtroom to the next. Second, it may provide opportunity for judges to pursue personal agendas.<sup>146</sup> Third, it provides parties additional issues to contest and further opportunities for gamesmanship.<sup>147</sup>

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LEXIS 121510, at \*9 (N.D. Ill. Nov. 17, 2010). The court may limit the number of custodians whose ESI is searched. Borden et al., *supra* note 117, at ¶35; *see also generally* ROTHSTEIN ET AL., *supra* note 121, at 13–20, 27–30 (describing appropriate tools for court in managing discovery); Milberg LLP & Hausfeld LLP, *E-Discovery Today: The Fault Lies Not in Our Rules . . .*, 4 FED. CTS. L. REV. 131, 158–59 (2011) (describing appropriate tools for court in managing discovery).

<sup>139</sup> For example, an award of attorneys’ fees may be appropriate if a party has “acted in bad faith, vexatiously, wantonly, or for oppressive reasons.” *See* Chambers v. NASCO, Inc., 501 U.S. 32, 45–46 (1991) (discussing inherent powers of federal courts and noting that these powers must be exercised with “restraint and discretion”).

<sup>140</sup> *Jimena*, 2010 U.S. Dist. LEXIS 119393, at \*10.

<sup>141</sup> *See* FED. R. CIV. P. 26(g) advisory committee’s note (“Concern about discovery abuse has led to widespread recognition that there is a need for more aggressive judicial control and supervision.”); Gensler, *supra* note 120, at 743 (“For nearly thirty years, the Civil Rules have looked to judicial case management as the principal means for controlling excessive cost and delay in civil cases”).

<sup>142</sup> *See* SUBRIN & WOO, *supra* note 111, at 141–43 (noting that 2006 amendments aimed to ensure discovery was proportionate and to avoid abuses by expanding role of judges in managing discovery); Gensler, *supra* note 120, at 674–85; Henry S. Noyes, *Good Cause Is Bad Medicine for the New E-Discovery Rules*, 21 HARV. J.L. & TECH. 49, 54–60 (2007) (citing 1983 amendments to Rule 26 allowing the court to limit “overly burdensome” or duplicative discovery and 2006 amendments requiring parties to show “good cause” before seeking certain discovery). Noyes criticizes the good cause requirement as overly flexible, inviting widely varying interpretations by judges.

<sup>143</sup> *See, e.g.*, Gensler, *supra* note 120, at 720–26 (surveying the literature); Jonathan T. Molot, *An Old Judicial Role for a New Litigation Era*, 113 YALE L.J. 27 (2003); Singer, *supra* note 116; Jay Tidmarsh, *Pound’s Century, and Ours*, 81 NOTRE DAME L. REV. 514 (2006); *see also* JUD. CONF. ADVISORY COMM., *supra* note 5, at 22 (noting decades-long debate between those favoring “party-controlled discovery” and those favoring strengthening judges’ tools for managing and/or limiting discovery).

<sup>144</sup> *See, e.g.*, Gensler, *supra* note 120, at 723–25.

<sup>145</sup> Molot, *supra* note 143, at 89; Noyes, *supra* note 142, at 78 (“The phenomenon of case management, encouraged by recent amendments to the Rules, hinders the ability of appellate courts to foster uniformity in the law of discovery.”); Singer, *supra* note 116, at 185; Tidmarsh, *supra* note 143, at 558.

<sup>146</sup> Gensler, *supra* note 120, at 724 (noting “theoretical possibility that trial judges will use their discretion to promote individual substantive agendas”); Arthur R. Miller, *From Conley to Twombly to Iqbal: A Double Play on the Federal Rules of Civil Procedure*, 60 DUKE L.J. 1, 33 (2010) (cautioning that judicial discretion “threatens to become excessive” when it may lead to unpredictability and “reliance on individual predilections”); Noyes, *supra* note 142, at 79 (“Unfettered judicial discretion will further open the door to inconsistent, arbitrary, and biased decision-making.”).

<sup>147</sup> Tidmarsh, *supra* note 143, at 558–59. Professor Tidmarsh observes:

[Greater judicial discretion] means that, in every case, the issue of the procedures to be applied has the potential to become a contested matter. Expense and delay are inevitable consequences—especially in an adversarial system in which the litigants naturally strive to secure all possible

Finally, discovery rulings by judges are rarely appealed. When rulings are appealed, parties must show “abuse of discretion,” a standard which is rarely met.<sup>148</sup> Understanding that judges may have widely varying approaches to discovery, parties may engage in forum shopping, “as litigants seek districts that contain judges whose views on discovery suit their particular needs.”<sup>149</sup>

#### IV. WHY COURTS SHOULD NOT MANDATE USE OF PREDICTIVE CODING

The foregoing Parts of this article described predictive coding technology, introduced current cases that bring the issue to the fore, and discussed the respective roles of the parties and the court in discovery. This Part seeks to assimilate that information to address the ultimate question: should courts mandate the use of predictive coding in electronic discovery over a party’s objection? Analysis suggests that courts should not intrude in parties’ decisions on whether to employ predictive coding in electronic discovery, for two broad reasons. The first reason relates to legitimate concerns that parties and attorneys may have about predictive coding, including a concern about privilege protection. The second reason relates to respect for the traditional judicial role.

##### *A. Parties and Attorneys May Have Legitimate, Good-Faith Reasons to Prefer Keyword Searching*

Certain proffered reasons that parties and attorneys may be reluctant to adopt predictive coding—lack of transparency of the process, concern about accuracy of the results, and effect on privilege protection<sup>150</sup>—cannot be lightly dismissed. Keyword searching is an established, judicially recognized method.<sup>151</sup> Empirical data establishing the superiority of predictive coding is sparse.<sup>152</sup> These facts suggest that parties can in good faith choose keyword searching as a method of culling relevant documents, to fulfill their obligation to produce relevant, responsive documents, and to meet the overall goal of “just, speedy, and inexpensive” discovery set by Rule 1.<sup>153</sup>

Note that attorneys have a legal and ethical obligation to make sure that discovery is conducted properly. Rule 26(g) requires that an attorney responding to a discovery request must certify that he or she has made a “reasonable inquiry”<sup>154</sup> and that the response is “complete and correct.”<sup>155</sup> The attorney’s responsibility cannot be abrogated by judicial rulings. These obligations imply that attorneys have a level of comfort with and choice regarding methods used. They further presume party control of the process. For judges to mandate use of particular

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advantages. Pound’s discretionary approach did not curb the adversarial tendency toward gamesmanship, but rather gave it new meat on which to feed.

*Id.*

<sup>148</sup> Molot, *supra* note 143, at 89; *see also* Gensler, *supra* note 120, at 721.

<sup>149</sup> Noyes, *supra* note 142, at 79; *see also* Miller, *supra* note 146, at 83 (noting that “unbridled discretion” given judges by pleading standards undermines confidence in justice system and encourages “forum and judge shopping”).

<sup>150</sup> *See supra* notes 49–59 and accompanying text.

<sup>151</sup> *See supra* note 19 and accompanying text.

<sup>152</sup> *See supra* note 49 and accompanying text. Recall, too, that information about particular predictive coding methods may be sparse, leading to the “black box” reputation. *See supra* notes 38–42 and accompanying text.

<sup>153</sup> *See* FED. R. CIV. P. 1.

<sup>154</sup> FED. R. CIV. P. 26(g)(1).

<sup>155</sup> FED. R. CIV. P. 26(g)(1)(A).

technology in which the attorney does not have confidence would put attorneys in an untenable bind, inconsistent with the spirit of the system.

As the Advisory Committee observed, because the parties bear primary responsibility for conducting discovery, “they must be obliged to act responsibly.”<sup>156</sup> The American Bar Association recently revised its Model Rules of Professional Conduct to emphasize the lawyer’s responsibility to keep abreast of “the benefits and risks associated with relevant technology.”<sup>157</sup> The responsible attorney thus will become educated about available search technology. While some have attributed lawyers’ reluctance to adopt predictive coding to a lack of knowledge, analysis suggests that reasonable attorneys, fully advised of the benefits and limitations of predictive coding, could desire not to adopt that technology.<sup>158</sup> Arguments made by the lawyers in *Da Silva Moore*, *Global Aerospace*, and *Kleen Products* in general evidenced a high degree of understanding of the technology.

Parties have an obligation to avoid abusing the discovery process through such tactics as gamesmanship, discourtesy, or failure to participate in discovery in an orderly fashion.<sup>159</sup> But there is little indication that parties seek to employ keyword searching instead of predictive coding as a litigation tactic—to harass, delay, or impose costs on the other side. It appears, rather, that parties reasonably and in good faith disagree about the most appropriate technology to be employed.<sup>160</sup> In fact, if proponents’ assurances about the cost savings of predictive coding are accurate, parties choosing to employ keyword searching instead are imposing higher costs on themselves. Theoretically, at least, both parties have an incentive to make a complete and valid production that will enable them to make their case on the merits.<sup>161</sup> As one of plaintiffs’ lawyers remarked at a hearing in *Kleen Products*,

One of the things that seems to get lost in the discussion when the defendants talk about their efforts and their burden and their expense, it works two ways. It’s not as if I want an unlimited universe of documents for people to have to plow through. That just costs me time and money, and as a good plaintiff’s lawyer, I would just as soon get this case over sooner rather than later.<sup>162</sup>

One might debate the presence of abuse or failure to achieve “just” discovery if it could be shown that keyword searching were chosen by a producing party specifically out of a belief that the method would more likely return over- or under-inclusive results. Either extreme is a

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<sup>156</sup> FED. R. CIV. P. 26(g) advisory committee’s note; *see also* Katz, *supra* note 24, at 931-40 (regarding attorneys’ duties in discovery, including ethical duties of competence and diligence).

<sup>157</sup> Lawyers shall “keep abreast of changes in the law and its practice, *including the benefits and risks associated with relevant technology.*” *See* MODEL RULES OF PROF’L CONDUCT, R. 1.1, cmt. 8 (2012) (new language italicized); *ABA Adopts Changes to the Model Rules of Professional Conduct*, LEGAL ETHICS F. (Aug. 6, 2012), <http://www.legalethicsforum.com/blog/2012/08/ethics2020changes.html>. Advances in search technology may well have driven this revision.

<sup>158</sup> As noted *supra* notes 55–59 and accompanying text, attorneys may have, among other concerns, concerns about foregoing final privilege review, having limited information about a particular provider’s exact methods, and a dearth of empirical evidence about cost savings and efficacy.

<sup>159</sup> *See supra* notes 131–134 and accompanying text.

<sup>160</sup> *See supra* notes 54–59 and accompanying text.

<sup>161</sup> *But see* Baron, *supra* note 22, at ¶ 28–29 (noting that “because knowledge of the producing party’s data is usually asymmetrical, it is possible that refusing to ‘aid’ opposing counsel in designing an appropriate [keyword] search protocol that the party holding the data knows will produce responsive documents could be tantamount to concealing relevant evidence” and could present serious ethical issues).

<sup>162</sup> Transcript of Record at 36, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. April 19, 2012) (comment of Daniel J. Mogin).

problem. Excess production imposes a burden on the requesting party, as it increases the burdens of examining the documents; under-production means that relevant and important documents may not be produced.

But the empirical data, at this point, do not conclusively show that predictive coding is more accurate than keyword searching.<sup>163</sup> Moreover, the FRCP do not require that the parties choose a perfect search method, but rather only one that is “reasonable.”<sup>164</sup> If particular keyword searches are inadequate, the court can order that party to refine or expand the search as appropriate,<sup>165</sup> or issue sanctions for purposeful evasion. Such remedies are more appropriate than taking the extraordinary step of mandating use of predictive coding.

The approach of the FRCP is premised on the notion that each side is in the best position to make judgments about how effectively to search its own documents.<sup>166</sup> That includes freedom to use, or not use, predictive coding. That point leads to the conclusion that the rulings in *Da Silva Moore* and *Global Aerospace*, allowing use of predictive coding over an opponent’s objection, were correct. And while those were the first court rulings allowing predictive coding, other judges have indicated their willingness to allow it.<sup>167</sup> The corollary of these cases, however, should be freedom to use keyword searching if a party prefers. Although the court in *EORHB* indicated it would allow the parties to show cause why predictive coding should not be employed, the parties may perceive sufficient pressure to use that technology that they are effectively deprived of the appropriate freedom to select keyword searching. That result would contravene the normal approach of the FRCP.

Parties may also reasonably resist use of predictive coding methods due to concerns about protection of the attorney-client privilege. In cases involving discovery of ESI, regardless of the search method used, when enormous numbers of documents are produced, the inadvertent production of privileged documents is likely.<sup>168</sup> The FRCP so recognize and provide for mechanisms to handle this problem.<sup>169</sup> Ideally, in their pre-trial discovery plan, the parties will

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<sup>163</sup> See *supra* note 49 and accompanying text.

<sup>164</sup> Sedona Conf., *supra* note 7, at 204; *Chen-Oster v. Goldman, Sachs & Co.*, 2012 U.S. Dist. LEXIS 130123, at \*42 (S.D.N.Y. Sept. 10, 2012); *Larsen v. Coldwell Banker Real Estate Corp.*, 2012 U.S. Dist. LEXIS 12901, at \*18–21 (C.D. Cal. Feb. 2, 2012).

<sup>165</sup> See, e.g., *Custom Hardware Eng’g & Consulting, Inc. v. Dowell*, 2012 U.S. Dist. LEXIS 146 (E.D. Mo. Jan. 3, 2012); *Osborne v. C.H. Robinson Co.*, 2011 U.S. Dist. LEXIS 123168 (N.D. Ill. Oct. 25, 2011).

<sup>166</sup> Judge Nolan in *Kleen Products* so recognized: “I think the people who are producing the records, producing the documents, are in a better position to know [what search techniques should be employed], since they have to do the work, spend the money, spend the time, they know their people, they know their material, so as a basic premise, I think that’s a pretty fair premise here.” Transcript of Proceedings, at 297–98, *Kleen Prods., LLC v. Packaging Corp. of Am.*, Civil Case No. 1:10-cv-05711 (N.D. Ill. March 28, 2012).

<sup>167</sup> The court in *EORHB* indeed moved toward mandating its use. See, e.g., *Will Judges Think It Is Okay to Use Clustering and Suggestive Coding Tools?*, ESI BYTES (Dec. 20, 2010), <http://www.esibytes.com/?p=1572>. This podcast features a panel discussion with Judge Paul Grimm, D. Md., and Judge John Facciola, D.D.C. Judge Grimm notes (at 14:40) that “There are judges out there willing to make a principled ruling allowing” predictive coding. He indicates his own approval of predictive coding methods, used properly. Judge Facciola indicates similar approval. At 25:15, Judge Facciola notes that the test of any method is “reasonableness.” He suggests the judiciary be educated about predictive coding. See also Mary Odendahl, *Attorneys Discover Predictive Coding*, IND. LAW. (Oct. 10, 2012), <http://www.theindianlawyer.com/attorneys-discover-predictive-coding/PARAMS/article/29842> (quoting Magistrate Judge Mark J. Dinsmore, S.D. Ind., as perhaps not “comfortable” with the technology but “open-minded” about it, and stating “he could not imagine objecting to predictive coding if both sides agreed to its use.”).

<sup>168</sup> See, e.g., Elizabeth King, *Waving Goodbye to Waiver? Not So Fast: Inadvertent Disclosure, Waiver of the Attorney-Client Privilege, and Federal Rule of Evidence 502*, 32 CAMPBELL L. REV. 467, 467–68 (2010).

<sup>169</sup> On issues of privilege, waiver, and clawback, see generally ABA, *THE ATTORNEY-CLIENT PRIVILEGE IN CIVIL LITIGATION: PROTECTING AND DEFENDING CONFIDENTIALITY* 206–14 (Vincent S. Walkowiak et al. eds., 5<sup>th</sup> ed., 2012); DAVID J. LENDER, *PRIVILEGE ISSUES IN THE AGE OF ELECTRONIC DISCOVERY* A16–A37 (2011); John



address what should happen in the event of inadvertent production of privileged documents.<sup>170</sup> Parties may make the arrangement of their choosing, but typically will agree to a “clawback” arrangement.<sup>171</sup> This sort of agreement is codified in Rule 26(b)(5), which provides that if privileged information is inadvertently produced in discovery, then the producing party may notify the receiving party, who must “promptly return, sequester, or destroy the specified information and any copies that it has”; and “must not use or disclose the information until the claim is resolved.”<sup>172</sup>

Recall that one of the major arguments for use of predictive coding is the promise of cost savings, and that such cost savings are expected primarily because pre-production review for responsiveness and privilege is eliminated or greatly curtailed.<sup>173</sup> If a party thus hopes to achieve the cost benefits of this method, that party accepts a greater risk of inadvertent production of privileged documents. Privilege protection may not be lost, due to the availability of clawbacks and the provisions of Rule 26(b) of the FRCP and Rule 502 of the Federal Rules of Evidence (FRE).<sup>174</sup>

Under Rule 502(b), the producing party shall not have waived the attorney-client privilege in that proceeding so long as that party took “reasonable steps to prevent disclosure.”<sup>175</sup> Advisory Committee notes accompanying Rule 502(b) expressly state that use of predictive coding may be reasonable.<sup>176</sup> While courts’ interpretations of Rule 502(b) are not uniform,<sup>177</sup> prominent scholars

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Gallagher, *E-Ethics: The Ethical Dimensions of the Electronic Discovery Amendments to the Federal Rules of Civil Procedure*, 20 GEO. J. LEGAL ETHICS 613, 613–24 (2007).

<sup>170</sup> See FED. R. CIV. P. 26(f)(3)(D).

<sup>171</sup> Under a clawback arrangement, the parties agree that upon the producing party’s identification of privileged documents mistakenly produced, the receiving party shall return them; the producing party’s privilege has not necessarily been waived. See FED. R. CIV. P. 26(f) advisory committee’s note. Alternatively, the parties may make a “quick peek” agreement. Under this arrangement, all documents thought to be responsive are produced without any initial privilege review. The receiving party takes a “quick peek” to determine which documents it actually wishes to use; the producing party then screens that smaller set for privilege. *Id.* Clawback or quick peek arrangements may be advantageous because they “can facilitate prompt and economical discovery by reducing delay before the discovering party obtains access to the documents, and by reducing the cost and burden of review by the producing party.” *Id.*

<sup>172</sup> FED. R. CIV. P. 26(b)(5)(B).

<sup>173</sup> See *supra* notes 33–35 and accompanying text and Figure 2.

<sup>174</sup> Scholars have noted that while Rule 502 was enacted in 2008 “to provide a vehicle to reduce the anxiety and costs associated with privilege review, . . . to date it has not lived up to its promise.” Paul W. Grimm et al., *Federal Rule of Evidence 502: Has It Lived Up to Its Potential?*, 17 RICH. J.L. & TECH. 8, ¶2 (2011). This is in part because courts have not interpreted Rule 502 with sufficient consistency in reported decisions to enable practitioners and their clients to predict how they will fare if they attempt to take advantage of the rule to reduce the need for manual, document-by-document pre-production review by either employing electronic search and retrieval methodologies or entering into time and money saving non-waiver agreements.

*Id.*

<sup>175</sup> Disclosure of attorney-client privileged information does not act as a waiver of the privilege so long as: “(1) the disclosure is inadvertent; (2) the holder of the privilege or protection took reasonable steps to prevent disclosure; and (3) the holder promptly took reasonable steps to rectify the error, including . . . following Federal Rule of Civil Procedure 26(b)(5)(B).” FED. R. EVID. 502(b). A large body of case law has developed concerning what sorts of behavior may be unreasonable so that the privilege would be waived. See Edwin M. Buffmire, *The (Unappreciated) Multidimensional Benefits of Rule 502(d): Why and How Litigants Should Better Utilize the New Federal Rule of Evidence*, 79 TENN. L. REV. 141, 167 (2011) (noting “structuring a privilege review that will be both cost-effective for a client and rigorous enough to concretely ensure protection remains a gamble”); David D. Cross et al., *Protection from ESI Waiver under FRE 502*, in *MANAGING E-DISCOVERY AND ESI* 387, 394–407 (Michael D. Berman et al. eds., 2011); King, *supra* note 168, at 470–501.

<sup>176</sup> The Advisory Committee states:

assert that “computer-based analytical methods” are “reasonable,” so that courts should not find waiver when parties have used these tools “properly.”<sup>178</sup> Indeed, they observe that a major aim of Rule 502 was to enable parties to employ predictive coding methods without fearing loss of the privilege.<sup>179</sup>

There is thus likely only minor risk that a court would find that a party using predictive coding without final pre-production privilege review has waived the privilege in that proceeding. Rule 502(e) provides that if the clawback agreement is incorporated into a federal court order, that privilege protection is extended to use by third parties in “other federal or state proceedings.”<sup>180</sup> Clawback agreements may not, however, protect from privilege waiver in subsequent federal *investigations*.<sup>181</sup>

Nonetheless, the primary problem with clawback arrangements remains: “the bell cannot be unringed.”<sup>182</sup> Even though the opponent cannot offer the privileged documents as evidence in the case, “it will have seen it, likely be unable to forget it, and be able to use the information to strategize for its case.”<sup>183</sup> Parties considering the use of predictive coding would do well to weigh these risks.

These significant risks give courts a further reason not to compel parties to employ predictive coding. The attorney-client privilege is “the oldest of privileges for confidential communications known to the common law” and serves the critical purpose of “encourag[ing] full and frank communication between attorneys and their clients and thereby promote[s] broader public interests in the observance of law and administration of justice.”<sup>184</sup> Federal Rule of Evidence 502 demonstrates a strong federal intent to protect the privilege.<sup>185</sup> The privilege is owned by the client, “who alone may waive it.”<sup>186</sup> While under Rule 502 privileged documents

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Depending on the circumstances, a party that uses advanced analytical applications and linguistic tools in screening for privilege and work product may be found to have taken “reasonable steps” to prevent inadvertent disclosure. . . . The Rule does not require the producing party to engage in a post-production review to determine whether any protected communication or information has been produced by mistake.

FED. R. EVID. 502(b) advisory committee’s note.

<sup>177</sup> Grimm et al., *supra* note 174, at ¶36–41.

<sup>178</sup> *Id.* at ¶45.

<sup>179</sup> *Id.* at ¶44.

<sup>180</sup> FED. R. EVID. 502(d)–(e). Care must be taken in drafting such an order: to be effective against third parties, the order must specifically cite to Rule 502(d) and indicate the order’s application to other litigation and non-parties. *See Buffmire, supra* note 175, at 157.

<sup>181</sup> F. Matthew Ralph & Caroline B. Sweeney, *E-Discovery and Antitrust Litigation*, 26 ANTITRUST ABA 58, 62 (Fall 2011).

<sup>182</sup> Cross et al., *supra* note 175, at 408 (“[W]hile an adversary can be barred under FRE from using the document containing that [privileged] information, nothing—not even FRE 502—can undo the potential harm of the privileged information itself having become known to an adversary.”).

<sup>183</sup> Jessica Wang, Comment, *Nonwaiver Agreements after Federal Rule of Evidence 502: A Glance at Quick-Peek and Clawback Agreements*, 56 UCLA L. REV. 1835, 1846 (2009) (suggesting that knowledge of the privileged information may lead to new witnesses, new topics for exploration, or new arguments for the receiving party, and noting that such illicit use would be difficult to detect or prove); *see also* Hopson v. Mayor of Balt., 232 F.R.D. 228, 241 (D. Md. 2005) (noting that rule excluding use as evidence “cannot undo the damage that inadvertent disclosure of privileged information causes, but it can contain it. ‘Confidentiality, once destroyed, is not susceptible of restoration, yet some measures of repair may be accomplished by preventing uses of the evidence against the holder of the privilege.’”).

<sup>184</sup> *Upjohn Co. v. United States*, 449 U.S. 383, 389 (1981); *see also* *In re Seagate Tech., LLC*, 497 F.3d 1360, 1372 (Fed. Cir. 2007).

<sup>185</sup> *See* King, *supra* note 168, at 505.

<sup>186</sup> *In re Seagate*, 497 F.3d at 1372.

could be clawed back,<sup>187</sup> clawback may provide insufficient protection. A party should be free to decide that protection of the attorney-client privilege outweighs possible cost savings and the potential for more accurate production of ESI. The client may rightly object to any method that contemplates foregoing a final, pre-production privilege review.<sup>188</sup>

### *B. Judges Do Not Have Sufficient Reason to Intervene in Parties' Decisions on Search Technology*

While Rule 26(b) explicitly grants courts the power to “limit” discovery, case law shows that courts have imposed “limitations” to address proportionality problems, in cases where the requested discovery was overly burdensome or costly, given the nature of the case or the value of the information likely to be gained.<sup>189</sup> This is consistent with the Advisory Committee notes accompanying this rule.<sup>190</sup> Orders to limit the number of interrogatories, limit the universe of ESI to be examined, or phase discovery<sup>191</sup> fit the plain meaning of the word “limit.”<sup>192</sup> Ordering a party to employ a *different* technology to search its own ESI would be unlike those sorts of limitations and does not go to a concern about proportionality. Such an order would not naturally be regarded as a “reduction” or “restriction” of discovery.

Certainly, courts have discretion to act, apart from the specific grants of power in the FRCP.<sup>193</sup> But courts generally have intervened in parties' discovery activities only in the case of abuse—gamesmanship, discourtesy, or failure to participate in discovery as required.<sup>194</sup> As noted above, parties' motivation to prefer keyword searching appears not to be for nefarious reasons. Absent a showing of abuse, therefore, courts should hesitate to intervene.

As one scholar bluntly and correctly notes, “[n]o matter how talented the judge, determinations about the proper use of discovery and specific tools are better left to the attorneys on the case, who are more familiar with the facts and needs of the case, and who are directly responsible to their clients.”<sup>195</sup> In 2008, asked to intervene in parties' selection of keyword search terms, widely-respected Judge John M. Facciola suggested:

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<sup>187</sup> See *supra* notes 131–179 and accompanying text.

<sup>188</sup> Parties could agree or a court could order the parties, theoretically, to employ predictive coding but also to do a final pre-production privilege review. Adding such a step, however, would likely eliminate much of the promised efficiency of predictive coding. See *supra* notes 33–35 and accompanying text. When adequate privilege protection would compel costly manual review, it would be an unfair burden and contrary to the FRCP's aim of efficiency to order a party opposed to predictive coding to use that method.

<sup>189</sup> See *supra* notes 137–138 and accompanying text.

<sup>190</sup> See FED. R. CIV. P. 26(b)(1) advisory committee's note (“Rule 26(b)(1) has been amended to add a sentence to deal with the problem of over-discovery. The objective is to guard against redundant or disproportionate discovery by giving the court authority to reduce the amount of discovery that may be directed to matters that are otherwise proper subjects of inquiry. The new sentence is intended to encourage judges to be more aggressive in identifying and discouraging discovery overuse.”).

<sup>191</sup> In phased discovery, the most easily retrieved documents are produced and examined first, to aid the parties in determining whether more burdensome discovery would be worthwhile.

<sup>192</sup> To “limit” is “to curtail or reduce in quantity or extent.” MERRIAM-WEBSTER ONLINE DICTIONARY, <http://www.merriam-webster.com/dictionary/limit?show=1&t=1337905506> (last visited Feb. 22, 2013). See also BLACK'S LAW DICTIONARY 834 (5<sup>th</sup> ed. 1979) (to “limit” is “to abridge, confine, restrain, and restrict,” or “to fix the extent of”).

<sup>193</sup> Robert G. Bone, *Who Decides? A Critical Look at Procedural Discretion*, 28 CARDOZO L. REV. 1961, 1967-74 (2007); see also *supra* notes 141–142 and accompanying text.

<sup>194</sup> See *supra* notes 131–140 and accompanying text.

<sup>195</sup> Singer, *supra* note 116, at 186.

Whether search terms or “keywords” will yield the information sought is a complicated question involving the interplay, at least, of the sciences of computer technology, statistics and linguistics. . . . Given this complexity, for lawyers and judges to dare opine that a certain search term or terms would be more likely to produce information than the terms used is truly to go where angels fear to tread.<sup>196</sup>

Surely this admonition would equally apply to a decision on whether to intervene in a party’s decision regarding advanced keyword searching techniques versus predictive coding.

While the attorneys bear primary responsibility for directing discovery, with judges in a supervisory role, judges play a different, more active role at trial. Judges rule on the admissibility of evidence and thereby function as gatekeepers to prevent unreliable testimony from being presented to the jury.<sup>197</sup> At trial, judges are required to rule on the admissibility of expert testimony that deals with complex scientific or technical information. Perhaps some lessons relevant to the predictive coding discovery debate can be drawn from that context.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,<sup>198</sup> the Supreme Court set the standard for admissibility of scientific expert testimony at trial. Noting the “liberal thrust” and “permissive backdrop” of the FRE,<sup>199</sup> the Court replaced the former standard that expert testimony be based on scientific methods that are “generally accepted”<sup>200</sup> with a more flexible standard. Under *Daubert*, expert testimony may be admissible if it “rests on a reliable foundation” and is “based on scientifically valid principles.”<sup>201</sup> It is thought that the *Daubert* approach may be particularly advantageous as it can ease introduction of evidence wrought by new scientific developments, such as DNA testing that was newly available in the late 1980s, but now ubiquitous and known to be invaluable.<sup>202</sup>

This case thus ushered in an era of *Daubert* challenges and hearings, and a rash of criticisms of the *Daubert* approach, including the criticism that judges may be ill-equipped to make such evaluations.<sup>203</sup> Further, as one scholar observed, “[t]he resultant challenge and hearing process – often time consuming and expensive – has provided defendants with another

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<sup>196</sup> United States v. O’Keefe, 537 F.Supp.2d 14, 24 (D.D.C. 2008).

<sup>197</sup> Judge Peck specifically noted this difference. Rejecting plaintiffs’ argument that defendants’ predictive coding protocol must meet the admissibility standards discussed *infra* notes 198–201, he ruled that these standards “simply are not applicable to how documents are searched for and found in discovery.” *Da Silva Moore v. Publicis Groupe*, 2012 U.S. Dist. LEXIS 23350, \*24 (S.D.N.Y. Feb. 24, 2012).

<sup>198</sup> *Daubert v. Merrell Dow Pharm., Inc.* 509 U.S. 579 (1993).

<sup>199</sup> *Id.* at 588.

<sup>200</sup> *See id.* at 585–87. The former standard was first articulated in *Frye v. United States*, 293 F. 1013 (1923).

<sup>201</sup> *Daubert*, 509 U.S. at 598. In a later case, the Court held that courts’ *Daubert* decisions on admissibility would be overturned only in the event of “abuse of discretion.” *See Gen. Elect. v. Joiner*, 522 U.S. 136, 143 (1997). Rule 702 was amended in 2000 to reflect the *Daubert* standard. FED. R. EVID. 702 advisory committee’s note.

<sup>202</sup> Susan Haack, *Conventions in Science and Law: Irreconcilable Differences? The Troubled Marriage of Science and Law*, 72 L. & CONTEMP. PROBS. 1, 20 (2009) (noting that under *Frye* standard, “even after the reliability of DNA analysis and its power to enable justice was acknowledged, prosecutors pushed back against requests for post-conviction testing.”).

<sup>203</sup> *See, e.g.,* Andrew W. Jurs, *Science Court: Past Proposals, Current Considerations, and a Suggested Structure*, 15 VA. J.L. & TECH. 1, 24 (2010) (“Review of the studies of empirical research on judicial capacity and case law interpreting complex science demonstrates that while judges have been granted gatekeeping powers with wide discretion by *Daubert* and *Joiner*, they may not have the technical background and skills to succeed at their assignment.”); William G. Childs, *The Overlapping Magisteria of Law and Science: When Litigation and Science Collide*, 85 NEB. L. REV. 643, 644–59 (2007); Haack, *supra* note 202, at 6–7.

opportunity to eviscerate cases that depend on experts and proliferate the pretrial process, thereby supporting strategies of attrition and delay.”<sup>204</sup>

The *Daubert* case and subsequent experience with the *Daubert* standard suggest two lessons relevant to the predictive coding debate. First, the case embraces science and technology that is “reliable,” even before it may reach “general acceptance.”<sup>205</sup> This suggests some degree of flexibility in accepting varying scientific approaches, leaving to the jury,<sup>206</sup> or the attorneys managing discovery, a significant role in evaluating the credibility or effectiveness of new science or technology. Both predictive coding, at least as practiced by the leading providers, and more sophisticated types of keyword searching would appear to meet the discovery standard of reasonableness.

Second, experience after *Daubert* demonstrates difficulties that may arise when judges venture into the details to evaluate science or technology. Parties may engage in battles not because of genuine concerns about the limitations of certain technology, but rather as an exercise in gamesmanship. At trial, a judge has no choice but to enter such disputes, as the judge must rule on the admissibility of evidence. In discovery, however, the judge can, and indeed should, defer to the judgment of the parties on suitable technology. If the judge refuses to enter the fray, much of the cost and delay associated with disputes on discovery techniques might be avoided. If judges indicate that they will entertain such disputes, one can expect more such disputes and the attendant increased costs and delay, with dubious discovery benefits.

The 2012 predictive coding cases suggest reason for concern about cost, delay, and gamesmanship.<sup>207</sup> Table 1 summarizes facts of the disputes in the three predictive coding cases in which a party sought use of predictive coding. *Da Silva Moore* and *Kleen Products*, in particular, with their many hearings and motions, consumed substantial attorney time and delayed actual conduct of discovery by many months. One can only speculate whether gamesmanship played a part in efforts to oppose another party’s use of predictive coding in *Da Silva Moore* and *Global Aerospace* and to compel another party to use predictive coding in *Kleen Products*. Did the

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<sup>204</sup> Miller, *supra* note 146, at 11. The FRCP seek to minimize occasion for such discovery fights. A prominent book on discovery practice, recounting the history of the development of the federal rules on discovery, observed that some changes were necessary because under older versions of the FRCP,

[t]he focus of dispute resolution shifted from resolving disputes to engaging in discovery fights.

Discovery disputes delayed the resolution of cases, misdirected lawyers efforts, forced parties to waste substantial amounts of time, and drained many clients of limited resources. . . . Discovery . . . too often forced party to settle cases – not on the merits, but to avoid the lengthy delays, the excessive direct and indirect costs, and the invasive intrusions caused by discovery.

HAYDOCK & HERR, *supra* note 5, at 1–7 (discussing need for 1993 and 2000 amendments to discovery rules to introduce “reasonable limits” on discovery and increase judicial role in monitoring and limiting discovery).

<sup>205</sup> *Daubert*, 509 U.S. at 598.

<sup>206</sup> *Olson v. Ford Motor Co.*, 481 F.3d 619 (8th Cir. 2007). The *Olson* court held:

Rule 702 does not permit a judge to weigh conflicting expert testimony, admit the testimony that he or she personally believes, and exclude the testimony that he or she does not personally believe. Nor does Rule 702 permit a judge to exclude expert testimony just because it seems doubtful or tenuous. The Supreme Court has been clear about how infirmities in expert testimony should be exposed: “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”

*Id.* at 626 (quoting *Daubert*, 509 U.S. at 596).

<sup>207</sup> These cases support Professor Tidmarsh’s argument that increased judicial discretion leads to further contested matters and accompanying expense and delay. *See supra* note 143.

plaintiffs in the former cases have real concerns that led them to oppose predictive coding?<sup>208</sup> Did the plaintiffs in the latter case really believe that, although the defendants had produced over three million pages of documents culled via keyword searching, responsive documents had been missed so that the judge should order the defendants to redo discovery? Or was it rather a tactic to increase defendants' costs, in the hope that settlement would result? Regardless, were courts to refuse to engage such disputes about a producing party's choice to employ predictive coding or not, opportunities for such gamesmanship would be avoided.

[insert Table 1 about here.]

Certain judges may have a keen interest in, and deep understanding of, predictive coding. Perhaps understandably, they may wish to use their rulings to further acceptance of a nascent, promising technology. This, however, gives rise to a serious concern about disparate treatment from one court to the next as well as the possibility of forum shopping.<sup>209</sup> Judge Peck's comment that the party wishing to use predictive coding "must have thought they died and went to Heaven" to have ended up in his court and the subsequent move for recusal suggest the reality of such possibilities.<sup>210</sup> While surely most judges practice restraint in exercising their discretion, *Da Silva Moore* perhaps serves as a cautionary tale.

Moreover, even if predictive coding has the potential to be more effective than keyword searching and will be widely used and acclaimed in the future, is it the place of a judge to foster use of particular technology through court rulings? Parties still would have reason for concern about privilege protection.<sup>211</sup> Mandating particular technology still would be a departure from the long-standing tradition of party-controlled discovery.<sup>212</sup> And there would be yet another issue: which provider's "predictive coding"? As previously discussed,<sup>213</sup> methods for predictive coding may vary considerably from one provider to another, and exact methods and effectiveness of a particular provider may be unknown. Chancellor Laster's proposal in *EORHB* that he would select a particular company's predictive coding product<sup>214</sup> is surprising and problematic. Apart from the fact that most judges would not have the technical training or time to make such judgments, selecting a particular company's product would be unseemly, giving rise to at least the appearance of impropriety.<sup>215</sup> These concerns should override any incremental benefits of predictive coding over keyword searching.<sup>216</sup>

A broader question may be whether a judge or indeed any government actor should or can effectively promote public acceptance of new technology. Government efforts to promote such

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<sup>208</sup> An attorney for a plaintiff in *Global Aerospace* maintains that the plaintiffs were not opposed to predictive coding in principle, but rather its use in that case. His version of the facts of that case suggests the possibility of gamesmanship by defendants. See Berman, *supra* note 90.

<sup>209</sup> See *supra* notes 145–149 and accompanying text.

<sup>210</sup> See *supra* notes 71–73 and accompanying text.

<sup>211</sup> See *supra* notes 168–188 and accompanying text.

<sup>212</sup> See *supra* notes 189–196 and accompanying text.

<sup>213</sup> See *supra* notes 38–42 and accompanying text.

<sup>214</sup> See *supra* note 108 and accompanying text.

<sup>215</sup> Judge Grimm has suggested that it would be desirable to set minimum performance standards for predictive coding providers, with providers meeting these standards given a sort of "Underwriters Laboratory" seal of approval. Litigants might be encouraged, then, to choose from among providers with such certification. See *ESI BYTES*, *supra* note 167, at 28:20. Baron has suggested aspiring to quality standards for e-discovery providers akin to auditing standards in the accounting field or ISO 9000 international quality management system standards. Baron, *supra* note 22, at ¶41.

<sup>216</sup> Note that the FRCP do not mandate a perfect search method or the best search method, but rather only a reasonable one. Sedona Conf., *supra* note 7, at 204; *Chen-Oster v. Goldman, Sachs & Co.*, 2012 U.S. Dist. LEXIS 130123, at \*42 (S.D.N.Y. Sept. 10, 2012); *Larsen v. Coldwell Banker Real Estate Corp.*, 2012 U.S. Dist. LEXIS 12901, at \*18–21 (C.D. Cal. Feb. 2, 2012).

technologies as electric cars and compact fluorescent light bulbs are well known.<sup>217</sup> The analogy is imperfect: a judge's effort to mandate use of predictive coding in discovery because the technology is thought to be more efficient and effective differs in important ways from legislative or executive attempts to support technology because it is thought to be more environmentally friendly.<sup>218</sup> But the literature assessing the latter type of government efforts may offer some relevant lessons.

Most obviously, that literature emphasizes the difficulty of such endeavors and the complexity of issues involved.<sup>219</sup> The literature also notes potential obstacles to technological change, among them "industry opposition, consumer reluctance to purchase unfamiliar new technologies . . . [and] the rapidly changing technology landscape that may cause frequent rethinking of the optimal technology pathways."<sup>220</sup> The literature notes government's limited success in identifying the best technology.<sup>221</sup> Finally and most importantly, there is the following conclusion: "The consumer is the ultimate arbiter of most technological changes. If consumers are unwilling to accept or pay for a new technology, that technology is unlikely to prosper. Therefore, policies that attempt to 'push' a technology onto unreceptive or even uninterested consumers are particularly prone to fail."<sup>222</sup> Surely a corollary of this last point is that truly effective and useful new technologies which are readily available are likely to be accepted by consumers, without the need for government mandates.

One scholar recommends that rather than mandating new technologies, government "should identify what are the key goals or problems it is trying to address and then not discriminate against any technologies that can help achieve those stated objectives."<sup>223</sup> This approach, in essence, would align with the traditional approach of the FRCP—allowing parties to direct discovery, including selecting search technologies.

A case in early pretrial stages in the Western District of Louisiana may become the next case in which predictive coding is used and thus could become a better model than the earlier predictive coding cases. Judge Rebecca Doherty is presiding over *In re Actos (Pioglitazone) Products Liability Litigation*, which consolidates all federal Actos-related bladder cancer cases.<sup>224</sup> On July 27, 2012, the judge entered a Case Management Order memorializing the

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<sup>217</sup> See, e.g., Gary E. Marchant, *Sustainable Energy Technologies: Ten Lessons from the History of Technology Regulation*, 18 WIDENER L.J. 831 (2009) (recounting legislative and executive efforts to foster use of electric cars and compact fluorescent bulbs); Stephen Bates, *Digital Debacle? Lessons from the History of Technical Standards*, 10 MINN. J.L. SCI. & TECH. 441 (2009) (discussing government efforts regarding compact fluorescent light bulbs and switch to digital television).

<sup>218</sup> Among significant factual differences that limit the analogy include the differing governmental roles of judges as compared with legislators or administrators; the types of harm that improved technology is thought to prevent (less accurate or costlier discovery as compared with environmental harm); and the type of "consumer" (attorneys and their clients conducting discovery in large-scale litigation as compared with individuals buying light bulbs or cars).

<sup>219</sup> E.g., Marchant, *supra* note 217, at 834–35.

<sup>220</sup> *Id.* at 835.

<sup>221</sup> *Id.* at 836 ("The historical record is that governments . . . have a relatively poor record in picking which future technologies will best succeed in achieving a particular objective."); see also Bates, *supra* note 217, at 448 ("The 'best' standard can be difficult to identify."); Daniel R. Cahoy, *Inverse Enclosure: Abdicating the Green Technology Landscape*, 49 AM. BUS. L.J. 805, 814–15 (2012).

<sup>222</sup> Marchant, *supra* note 217, at 845. Government intervention in the market may be desirable when there exist intractable entry barriers for new technology, such as prohibitive startup costs. Cahoy, *supra* note 221, at 805–06. No such barriers would appear to apply in connection with predictive coding.

<sup>223</sup> Marchant, *supra* note 217, at 855.

<sup>224</sup> See WEB SITE FOR MDL NO. 2299, IN RE ACTOS (PIOGLITAZONE) PRODS. LIAB. LITIG., <http://www.lawd.uscourts.gov/welcome-web-site-mdl-no-2299> (last visited Feb. 22, 2013). The complaint was filed on September 16, 2012. *Id.* The case may ultimately consolidate up to 10,000 claims against two pharmaceutical companies, Takeda Pharmaceuticals, Inc., and Eli Lilly and Company. Jef Feeley & Margaret Cronin Fisk, *Takeda*



parties' agreement to "evaluate the potential utility of advanced analytics" for ESI production.<sup>225</sup> The parties contemplate use of a particular software provider (Equivio).<sup>226</sup> The twenty-six page Order describes the parties' detailed, agreed-upon discovery protocol. The protocol provides procedures by which the parties will assess accuracy of production by the software.<sup>227</sup> The protocol also describes the anticipated role that the court will play in resolving disputes.<sup>228</sup>

At this point, *In re Actos* suggests that both judges and parties are growing more open to use of predictive coding. The case may ultimately provide evidence that parties can *agree* on use of that technology, that judges can shepherd such disputes effectively, without overtaking party control of the process, and that parties thereby can avoid the lengthy and expensive disputes on choice of technology that have plagued earlier cases. It bears watching whether the *Actos* parties maintain their cooperative stance, whether they in fact ultimately choose to employ predictive coding, and what disputes arise. It also bears watching whether predictive coding, if ultimately employed by the *Actos* parties, results in more "just, speedy, and inexpensive" discovery.

## CONCLUSION

Cases discussed in this article demonstrate judges' willingness to approve the use of predictive coding; the issue of whether predictive coding *can* be employed in ESI production is all but settled. In fact, attorneys owe it to their clients to become familiar with this newer technology and to consider whether it should be used. It is likely that predictive coding will become more widely used in the near future as parties gain confidence in its accuracy and as evidence shows that it truly reduces costs. As a consequence, discovery may become less burdensome. Attorneys may be grateful to find they can concentrate on the substantive issues of a case rather than the dreary task of reviewing documents. More cases may proceed to trial for a decision on the merits, rather than settling. That perhaps will exert a different stress on the system.

While judges' acceptance of predictive coding is an appropriate development, moves to *mandate* its use are improper. Such actions by judges implicate important policy considerations that go to the heart of the American adversarial system. This article offers a reminder of the time-tested underpinnings of the discovery process under the FRCP. While judges in recent years have taken a more aggressive approach to case management, stepping too far outside the traditional judicial role can lead to increased costs and delay and even the appearance of unfairness and charges of bias that undermine the system. Predictive coding technology, if truly superior to older search methods, will come to wider use without judicial intervention. For the reasons discussed in this article, mandating use of predictive coding in electronic discovery would be an ill-advised judicial intrusion.

Rather, challenges presented by predictive coding technology are best addressed simply. No changes in the FRCP are necessary. Judges should merely indicate that they will not mandate

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*Actos Judge Names Lead Attorneys in Cancer Suits*, BLOOMBERG.COM (March 13, 2012, 4:24 PM), <http://www.bloomberg.com/news/2012-03-13/takeda-actos-judge-names-lead-attorneys-in-u-s-bladder-cancer-lawsuits.html>. The scheduling order for the case indicates, among other deadlines, that "core discovery" shall be completed by September 30, 2013. Scheduling Order at 2, *In re Actos* (Pioglitazone) Prods. Liab. Litig., MDL No. 6:11-md-2299 (W.D. La. July 13, 2012).

<sup>225</sup> See Case Management Order: Protocol Relating to the Production of Electronically Stored Information at 6, *In re Actos* (Pioglitazone) Prods. Liab. Litig., MDL No. 6:11-md-2299 (W.D. La. July 27, 2012).

<sup>226</sup> *Id.* at 7.

<sup>227</sup> *Id.* at 13–15.

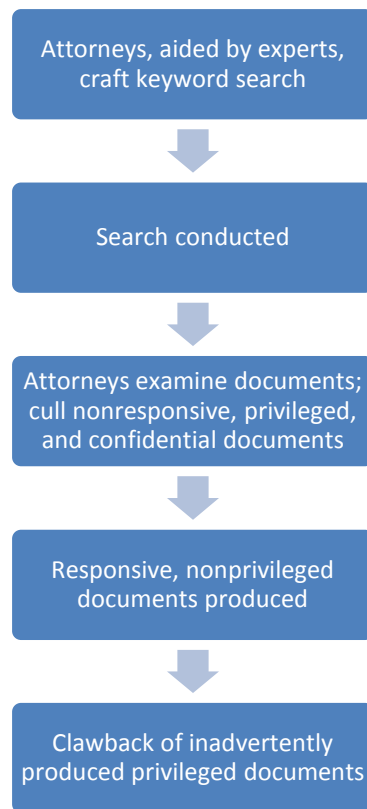
<sup>228</sup> *Id.* at 15–16. For example, the court could be called upon to rule upon disputes regarding privilege of a particular document, or upon a party's request for cost-shifting.

use of a particular technology and will not entertain motions seeking such mandates. Groups such as the Sedona Conference and the Seventh Circuit Electronic Discovery Program could provide welcome leadership in advocating this sort of judicial restraint. These groups might also encourage greater transparency regarding predictive coding products and services, development of empirical data regarding its effectiveness, and further improvement in predictive coding technology, which may lead to wider voluntary use of that technology and perhaps more “just, speedy, and inexpensive discovery.”<sup>229</sup>

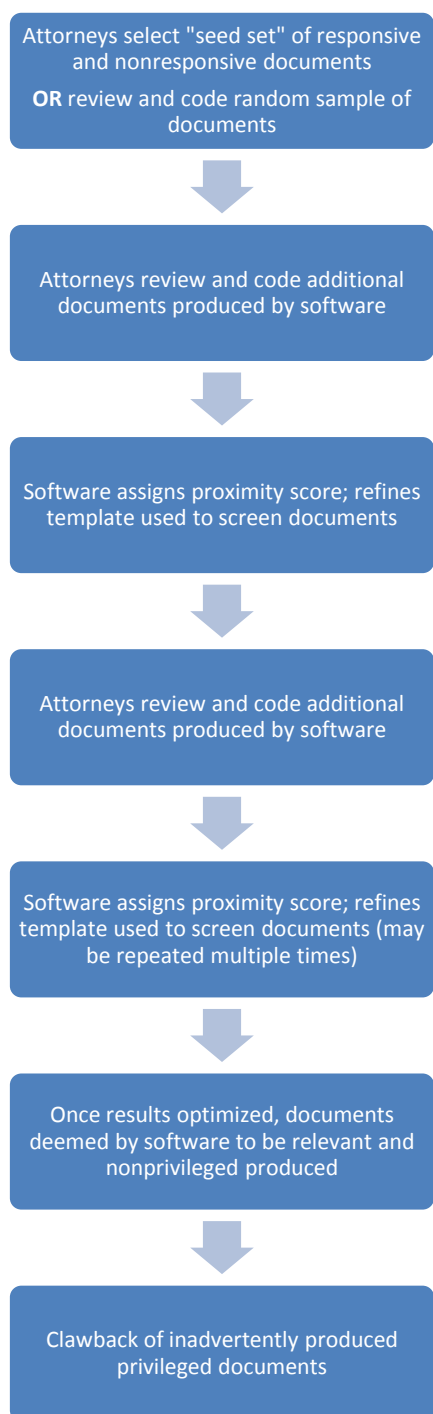
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<sup>229</sup> FED. R. CIV. P. 1.

**Figure 1. Keyword Searching Process.**



**Figure 2. Predictive Coding Process.**



**Table 1. Disputes in Predictive Coding Cases**

<b>Case</b>	<b>Substantive legal issue</b>	<b>Party seeking use of predictive coding</b>	<b>Procedural Posture</b>	<b>Resolution</b>
<i>Da Silva Moore</i>	Employment discrimination	Defendants	Parties agree to “joint” discovery protocol allowing defendants to use predictive coding; plaintiffs subsequently state they reluctantly assented under compulsion by judge. Plaintiffs challenge defendants’ use of predictive coding and request recusal of magistrate judge for alleged bias.	District court judge affirms decision of magistrate allowing defendants to use predictive coding, indicating plaintiffs’ consent was immaterial. Court rules that plaintiffs may again challenge use of predictive coding after documents produced if they allege a problem with completeness. Recusal motion denied.
<i>Global Aerospace</i>	Negligence and breach of contract	Defendants	Defendants seek protective order allowing their own use of predictive coding; plaintiffs oppose.	Court issues order permitting defendants to use predictive coding but will allow plaintiffs to challenge completeness of discovery after documents produced. Several defendants settle before discovery completed.
<i>Kleen Products</i>	Antitrust	Plaintiffs	Plaintiffs request that court order defendants to redo certain discovery using predictive coding after documents responsive to keyword search already produced.	After disputing issue for 9 months, plaintiffs abandon request. Parties’ agreement leaves open possibility for revisiting issue for discovery requests after Oct. 1, 2013.