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To Cure the E-Discovery Headache, Revamp the Rule 26(f) Discovery Conference

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Rule 26(f) Discovery Conference**

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By Matthew Young*

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INTRODUCTION

¶1 In 1938, the passage of the Federal Rules of Civil Procedure (FRCP) established discovery practice. Discovery was idealistically intended to be a cooperative and self-regulating process that would function largely free from judicial intervention.¹ But modern electronic-discovery (e-discovery) practice has strayed from these cooperative ideals, and discovery has instead come to rely on judicial intervention. Due to recent technological advances that were unforeseen when the FRCP were amended in 2006—such as predictive coding, metadata, and shadow copies—the FRCP cannot properly govern modern e-discovery. E-discovery practice’s status quo is plainly ineffective—it is hugely burdensome and expensive, and is an obstacle rather than a tool. E-discovery’s issues must be confronted head-on.

¶2 Many have requested that the Advisory Committee on the Rules of Civil Procedure (Advisory Committee) amend the FRCP in order to remedy these issues.² In response, the Advisory Committee is currently discussing the idea of limiting evidence spoliation by

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¹ See John S. Beckerman, *Confronting Civil Discovery’s Fatal Flaws*, 84 MINN. L. REV. 505, 513 (2000).

² See COMM. ON RULES OF PRACTICE & PROCEDURE, REPORT OF THE CIVIL RULES ADVISORY COMMITTEE 274 (2011) [hereinafter COMM. ON RULES OF PRACTICE & PROCEDURE REPORT], available at <http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/Agenda%20Books/Standing/ST2011-06.pdf>.

adding a data-preservation duty on potential litigants.³ But recent technological advances and judicial activity render this proposal insufficient—the FRCP must be amended to recognize that e-discovery will perpetually present novel threats. E-discovery’s modern threats require constant judicial intervention, so to maintain discovery’s cooperative spirit towards fact-finding, the court must be brought in at litigation’s earliest stages.

This Comment proposes that the Rule 26(f) discovery conference⁴ be amended to bring the court in at the earliest stage of discovery. Amending Rule 26(f) in this way recognizes that e-discovery is perpetually evolving, and would create a versatile

³ See *id.* (discussing preservation duty); Millberg LLP & Hausfeld LLP, *E-Discovery Today: The Fault Lies Not in Our Rules* . . . , 4 FED. CTS. L. REV. 131, 188–92 (2010–11), available at <http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/Duke%20Materials/Library/Milberg%20LLP,%20Hausfeld%20LLP,%20E-Discovery%20Today.pdf>.

⁴ In its entirety, Rule 26(f) reads as follows:

(f) Conference of the Parties; Planning for Discovery.

(1) Conference Timing. Except in a proceeding exempted from initial disclosure under Rule 26(a)(1)(B) or when the court orders otherwise, the parties must confer as soon as practicable—and in any event at least 21 days before a scheduling conference is to be held or a scheduling order is due under Rule 16(b).

(2) Conference Content; Parties’ Responsibilities. In conferring, the parties must consider the nature and basis of their claims and defenses and the possibilities for promptly settling or resolving the case; make or arrange for the disclosures required by Rule 26(a)(1); discuss any issues about preserving discoverable information; and develop a proposed discovery plan. The attorneys of record and all unrepresented parties that have appeared in the case are jointly responsible for arranging the conference, for attempting in good faith to agree on the proposed discovery plan, and for submitting to the court within 14 days after the conference a written report outlining the plan. The court may order the parties or attorneys to attend the conference in person.

(3) Discovery Plan. A discovery plan must state the parties’ views and proposals on:

(A) what changes should be made in the timing, form, or requirement for disclosures under Rule 26(a), including a statement of when initial disclosures were made or will be made;

(B) the subjects on which discovery may be needed, when discovery should be completed, and whether discovery should be conducted in phases or be limited to or focused on particular issues;

(C) any issues about disclosure or discovery of electronically stored information, including the form or forms in which it should be produced;

(D) any issues about claims of privilege or of protection as trial-preparation materials, including—if the parties agree on a procedure to assert these claims after production—whether to ask the court to include their agreement in an order;

(E) what changes should be made in the limitations on discovery imposed under these rules or by local rule, and what other limitations should be imposed; and

(F) any other orders that the court should issue under Rule 26(c) or under Rule 16(b) and (c).

(4) Expedited Schedule. If necessary to comply with its expedited schedule for Rule 16(b) conferences, a court may by local rule:

(A) require the parties’ conference to occur less than 21 days before the scheduling conference is held or a scheduling order is due under Rule 16(b); and

(B) require the written report outlining the discovery plan to be filed less than 14 days after the parties’ conference, or excuse the parties from submitting a written report and permit them to report orally on their discovery plan at the Rule 16(b) conference.

discovery system that can efficiently react to novel issues that will inevitably arise. Part I of this Comment discusses the FRCP's current e-discovery framework and the mechanical evolution of the Rule 26(f) conference. Part II gives an overview and evaluation of the current dialogue on whether the FRCP should be amended in light of modern e-discovery law's shortcomings. Part III considers three contemporary developments in the e-discovery landscape—predictive coding, metadata, and shadow copies—and gives light to the FRCP's current failures in effectively managing e-discovery. Part IV proposes an amendment to the Rule 26(f) discovery conference, which would give the court an active managerial role at this early litigation stage. Finally, Part V demonstrates the benefits of this proposed amendment by applying it to a current issue—the federal circuit split on which costs relating to the production of electronically stored information (ESI) are recoverable by the prevailing party.

I. E-DISCOVERY UNDER THE FRCP

¶4 Discovery practice has long been a hotbed of controversy and unprofessionalism.⁵ The FRCP seek to “secure the just, speedy, and inexpensive determination of every action and proceeding.”⁶ Towards this end, discovery is meant to: (1) take the game out of pretrial practice while maintaining adversarial trials that focus on potentially dispositive issues, (2) disclose and make available all relevant evidence for trial, (3) expose fraudulent or meritless claims, and (4) optimize judicial economy by promoting just settlements.⁷ The FRCP's recent amendments demonstrate that these purposes have remained static.⁸

¶5 The FRCP enact a two-tiered approach⁹ for ESI discovery.¹⁰ First, Rule 26(b)(2)(C) imposes a proportionality principal, requiring the judiciary to balance a discovery request's potential benefits with the burden of producing the requested discovery.¹¹ Second, Rule 26(b)(2)(B) requires the requesting party to show good cause for its request.¹²

¶6 Under Rule 26(f), parties must meet and confer with each other in a discovery planning conference to discuss issues such as: (1) preservation of potentially relevant records, (2) ESI disclosure and how ESI will be produced, and (3) inadvertently produced privileged documents.¹³ The Advisory Committee added this meet-and-confer

⁵ Paul W. Grimm et al., *New Paradigm for Discovery Practice: Cooperation*, 43-DEC MD. B.J. 26, 27 (2010).

⁶ FED. R. CIV. P. 1.

⁷ *Developments in the Law—Discovery*, 74 HARV. L. REV. 940, 944–46 (1961).

⁸ See Burke T. Ward et al., *Electronic Discovery: Rules for a Digital Age*, 18 B.U. J. SCI. & TECH. L. 150, 181 (2012), for an overview of electronic discovery. For an analysis of the 2006 amendments, see Kenneth J. Withers, *Electronically Stored Information: The December 2006 Amendments to the Federal Rules of Civil Procedure*, 4 NW. J. TECH. & INTELL. PROP. 171 (2006).

⁹ See, e.g., Thomas Y. Allman, *The “Two-Tiered” Approach to E-Discovery: Has Rule 26(b)(2)(b) Fulfilled Its Promise?*, 14 RICH. J.L. & TECH. 7 (2008); Vlad Vainberg, *When Should Discovery Come with a Bill? Assessing Cost Shifting for Electronic Discovery*, 158 U. PA. L. REV. 1523, 1557 (2010).

¹⁰ See FED. R. CIV. P. 34.

¹¹ FED. R. CIV. P. 26(b)(2)(c).

¹² FED. R. CIV. P. 26(b)(2)(b).

¹³ See FED. R. CIV. P. 26(f); Moze Cowper & John Rosenthal, *Not Your Mother's Rule 26(f) Conference Anymore*, 8 SEDONA CONF. J. 261, 261–62 (2007) (discussing the role of the discovery conference).

requirement in 2006 to foster cooperation between parties.¹⁴ For all discovery requests, including ESI, a presumption exists that the responding party bears the cost of production, but a Rule 26(c) protective order can shift cost allocation.¹⁵ Often, attorneys fail to effectively utilize the conference, or fail to abide by the rule at all.¹⁶ These are the FRCP's only checks on a plaintiff's requests for discovery production.

¶7 This reinforces the need for parties to cooperate throughout the discovery process. E-discovery requests regularly call for terabytes of data,¹⁷ imposing massive time and financial costs on the producing party. To limit these costs and ensure an effective discovery process, litigants must cooperatively and immediately sculpt a discovery plan; "discovery now pivots on the Rule 26(f) conference."¹⁸

¶8 Yet recent scholarship discusses the failure of the 26(f) conference in fulfilling its intended purpose.¹⁹ In light of Rule 26(f)'s shortcomings and the deep uncertainty that shrouds e-discovery, Rule 37 becomes particularly troublesome. Under Rule 37(e), "[a]bsent exceptional circumstances, a court may not impose sanctions . . . on a party for failing to provide electronically stored information lost as a result of [a] routine, good-faith" data-retention policy.²⁰ Rule 37(f) allows a court to sanction parties by ordering payment of reasonable expenses for failing to formulate a discovery plan in good faith during the 26(f) conference.²¹ The varied issues and threats this Comment discusses should be viewed against the discretionary and value standards used when sanctions are imposed for breaches of the general duty to preserve ESI.

II. UNCERTAINTY SPAWNS DISCUSSION TO AMEND THE FRCP

¶9 Currently, rampant uncertainties in e-discovery law pose great threats. Data-retention requirements vary in each state, and there is no certainty regarding what ESI is discoverable and which costs of production are recoverable.²² Technological advances threaten privileged communication, e-discovery requests require substantial manpower, and litigants attempt to game the process. The modern e-discovery system has been

¹⁴ Cowper & Rosenthal, *supra* note 13, at 261–62.

¹⁵ FED. R. CIV. P. 26(f); *see* *Race Tires Am., Inc. v. Hoosier Racing Tire Corp.*, 674 F.3d 158, 170–71 (3d Cir. 2012), *cert. denied*, 133 S. Ct. 233, 233 (2012).

¹⁶ *Race Tires*, 674 F.3d at 170.

¹⁷ *See* Jason R. Baron, *Law in the Age of Exabytes: Some Further Thoughts on "Information Inflation" and Current Issues in E-Discovery Search*, 17 RICH. J.L. & TECH. 9, 30 (2011).

¹⁸ Steven S. Gensler, *Some Thoughts on the Lawyer's E-Volving Duties in Discovery*, 36 N. KY. L. REV. 521, 523 (2009).

¹⁹ *See, e.g.*, Scott E. Randolph & A. Dean Bennett, *Using the Mandatory Rule 26(f) Discovery Conference to Manage ESI Pays Dividends Throughout Litigation*, 54 ADVOCATE 34 (2011), available at <http://www.employerslawyersblog.com/2011/02/using-the-mandatory-rule-26f-discovery-conference-to-manage-esi-pays-dividends-throughout-litigation.html> (discussing the facial insufficiency of Rule 26(f) in providing attorneys with effective guidance to manage the e-discovery process).

²⁰ FED. R. CIV. P. 37(e).

²¹ FED. R. CIV. P. 37(f).

²² *See* 8 RICHARD L. MARCUS, FEDERAL PRACTICE AND PROCEDURE § 2008.2 (3d ed. 2007); *see also* Thomas Y. Allman, *Conducting E-Discovery After the Amendments: The Second Wave*, 10 SEDONA CONF. J. 215, 227 (2009) ("It has been argued that the 2006 Amendments are not sufficient to adequately address the rising cost of e-discovery. If this proves to be the case, there may be a need for further amendments to the Civil Rules of Procedure."); Survey, *Electronic Discovery*, 50 STATE STATUTORY SURVEYS (Apr. 2014).

widely scrutinized, and since the 2006 FRCP amendments, scholarship has largely revolved around the need for enhanced cooperation and proportionality in discovery.²³

¶10 Responding to these calls for reform, the Advisory Committee convened the first formal post-2006 examination of the FRCP's treatment of e-discovery, the 2010 Civil Litigation Conference at Duke University (Duke Conference).²⁴ In considering whether to amend the FRCP, the Duke Conference participants focused on data preservation and sanctions, and suggested proposing a rule that would

address[] preservation issues, such as what events should trigger preservation obligations, the scope and duration of the duty to preserve, litigation holds, the relationship between the work product doctrine and preservation activities, and the consequences of failures to preserve. Attendees also called for a nationwide rule establishing uniform standards for sanctions.²⁵

Further, participants advocated the importance of proportionality in ensuring that litigants do not abuse discovery by engaging in limitless discovery practice.²⁶ The participants also believed that Rule 26(d)'s bar on discovery before the conference deserved potential reconsideration. If "the parties and later the judge have a better idea of what the discovery issues may be," parties would be better equipped to independently resolve issues through the 26(f) conference.²⁷ However, participants apprehensively noted that more active judicial involvement might have to accompany any rule changes meant to solve e-discovery's issues.²⁸

¶11 The Advisory Committee continued the e-discovery dialogue in April 2011, but no steps were made towards resolution. The Advisory Committee stated that they "reached no conclusion on whether rule amendments would be a productive way of dealing with preservation/sanctions concerns, much less what amendment proposals would be useful."²⁹ The Committee chiefly proposed three potential amendments to resolve e-discovery issues.

²³ See generally ELECTRONIC DISCOVERY: LAW AND PRACTICE § 5.08 (2014); David F. Herr & Jolynn M. Markinson, *E-Discovery Under the Minnesota Rules: Where We've Been, Where We Might Be Headed*, 40 WM. MITCHELL L. REV. 390 (2014); Andrew J. Peck, John M. Facciola, & Steven Teppler, *E-Discovery: Where We've Been, Where We Are, Where We're Going*, 12 AVE MARIA L. REV. 1 (2014).

²⁴ GIBSON, DUNN & CRUTCHER LLP, 2011 MID-YEAR E-DISCOVERY UPDATE 20 (2011) [hereinafter GIBSON DUNN 2011 UPDATE], available at <http://www.gibsondunn.com/publications/Documents/2011Mid-YearE-DiscoveryUpdate.pdf>.

²⁵ GIBSON, DUNN & CRUTCHER LLP, 2010 YEAR-END ELECTRONIC DISCOVERY AND INFORMATION LAW UPDATE 2 (2011) [hereinafter GIBSON DUNN 2010 UPDATE], available at <http://www.gibsondunn.com/publications/Documents/2010YearEndE-Discovery-InformationLawUpdate.pdf>; see also COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2. See generally THOMAS Y. ALLMAN, PRESERVATION AND SPOILIATION REVISITED: IS IT TIME FOR ADDITIONAL RULEMAKING? (2010), available at <http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/Duke%20Materials/Library/Thomas%20Allman,%20Preservation%20and%20Spoliation%20Revisited.pdf>.

²⁶ Millberg LLP & Hausfeld LLP, *supra* note 3, at 152–53.

²⁷ See COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2, at 308.

²⁸ See GIBSON DUNN 2010 UPDATE, *supra* note 25.

²⁹ COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2, at 191.

¶12 First, it considered amending the FRCP to include detailed and specific data-preservation standards that would provide guidance as to the duty to preserve data.³⁰ This proposal delineated specific events that would trigger the duty to preserve data in anticipation of litigation. Examples included a person's receipt of a communication indicating intent to assert a claim and a person taking specified action in anticipation of litigation.³¹ The proposal also included a catchall-triggering standard that would put a reasonable person on notice of her need to preserve data.³² By focusing on a party's actual and constructive knowledge, this change would effectively maintain the current reasonableness-triggering standard while creating some clarity on the preservation duty.

¶13 Second, the Advisory Committee considered creating general preservation rules by inserting a general duty to preserve triggered by a generalized-reasonableness standard under Rule 26.³³ Under this proposal, the preservation duty would be triggered when a person should reasonably expect to be a party to a legal action,³⁴ and covers the ESI one would reasonably believe to be relevant to the anticipated legal action conditioned upon the Rule 26(b)(2)(C) proportionality criteria.³⁵ This proposal attempts to be more adaptable, with an eye towards the dynamic qualities of the e-discovery landscape, but adds very little substance in comparison to the first proposal's catchall provision.³⁶

¶14 Finally, the Advisory Committee's third contemplated proposal introduces "back end" sanctions for Rule 37(b),³⁷ while adding no specific directives regarding the duty to preserve.³⁸ This amendment would seek to indirectly regulate preservation by requiring that parties act reasonably in making preservation decisions.³⁹ In other words, a party that does not reasonably preserve data would face sanctions.⁴⁰

¶15 The Advisory Committee's focus on preservation and sanction issues was far too narrow—all three proposals are inadequate. Each proposal ignores the fundamental threats that arise when using e-discovery, namely, the enormous time and financial burdens, inadvertent breaches of confidentiality, and litigants' propensity to game the discovery process. Due to its narrow focus, the Advisory Committee overlooked the fact that large corporations currently employ conservative ESI-retention policies due to fears of sanctions, which courts have imposed more frequently each year.⁴¹ These proposals overlook e-discovery's macro-threats, and fail to confront the uncertainty underlying ESI discoverability.

³⁰ *Id.* at 192.

³¹ *See id.* at 192–95.

³² *Id.* at 195.

³³ *Id.* at 208.

³⁴ *Id.*

³⁵ *Id.* at 209.

³⁶ It is possible that there may be a difference in party expectations between the two proposals: the first proposal may in practice limit expectations to those categories whereas the second may create notice of a generalized duty to preserve. But substantively, under both proposed changes, a court would focus on someone's actual or constructive knowledge of pending litigation, and conduct a fact-based inquiry to determine whether someone breached the preservation duty.

³⁷ COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2, at 212.

³⁸ *Id.* at 190.

³⁹ *Id.*

⁴⁰ *Id.* at 212.

⁴¹ *See* Dan H. Willoughby, Jr. et al., *Sanctions for E-Discovery Violations: By the Numbers*, 60 DUKE L.J. 789 (2010).

¶16 The shortcomings of these proposals are even more apparent under individual scrutiny. The first proposal’s catchall effectively imposes a reasonableness standard on the duty to preserve data, which in practice would change nothing. Additionally, its detailed preservation provisions neglect to account for future technological change. Just as modern e-discovery issues were beyond the contemplation of the Committee in 2006,⁴² newly created data types will inevitably arise before the next FRCP amendment opportunity in 2017, and probably even before any amendments will take effect at the end of 2014.⁴³ The detailed provisions afford litigants legal refuge for disposing of ESI not explicitly listed. This undermines discovery’s purpose by promoting gamesmanship tactics and allowing litigants to hide potentially dispositive evidence.

¶17 The second proposal also fails to advance meaningful change because the generalized preservation duty fails to add clarity—it does not alter the current preservation and triggering standards. The Advisory Committee did not define “discoverable information,”⁴⁴ neglecting the enormous uncertainty that underlies what ESI is discoverable. Also, a defendant’s independent proportionality calculation inappropriately limits the preservation duty. This undercuts the judiciary’s authority to apply the Rule 26(b)(2)(C) proportionality requirement, and leaves open the possibility that a litigant may also be sanctioned for incorrectly deleting ESI on these grounds. As new ESI forms emerge—some of which may be unknown to litigants—this preservation duty affords litigants far too much power in sculpting their duty to preserve.

¶18 It is also worth noting that the Advisory Committee recognizes that it may lack authority to impose preservation standards under the Rules Enabling Act.⁴⁵ These two proposals are therefore not only insufficient in substance, but also offer little-to-no promise for any textual changes to the FRCP in the near future.

¶19 The third “back end” sanctions proposal also ignores e-discovery’s pressing issues. It instructs courts to make decisions regarding sanctions using a reasonableness standard, and offers a nonexclusive list of factors relevant to reasonableness.⁴⁶ Not only does this proposal fail due to its narrow focus, it also ignores the substantial deterrent effect that sanctions provide. The proposal fails to address the unsettled ESI-discoverability standards, and does not alter the judicial-reasonableness standard for breach of the duty to preserve. None of these three proposals has been accepted, yet they remain the most formalized proposals to date.

¶20 During a November 23, 2011 conference call, the Advisory Committee disregarded a preservation rule and began favoring a sanctions rule.⁴⁷ The Advisory Committee maintained this focus on a January 26, 2012 call, and debated whether a sanctions rule

⁴² For instance, cloud data storage has since emerged as a major issue.

⁴³ See COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2, at 192 (noting that amendments will not be effective until the end of 2014, and that new rules cannot be amended for three years).

⁴⁴ *Id.* at 209.

⁴⁵ See *id.* at 31.

⁴⁶ See *id.* at 213.

⁴⁷ See ADVISORY COMM. ON CIVIL RULES, ADVISORY COMMITTEE ON CIVIL RULES REPORT 249–50 (2012) [hereinafter ADVISORY COMM. ON CIVIL RULES REPORT], available at <http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/Agenda%20Books/Civil/CV2012-03.pdf> ((discussing sanctions/preservation issues).

should distinguish ESI preservation from evidentiary preservation, generally.⁴⁸ This topic was also the focus of a formal committee meeting in March 2012.⁴⁹ The Advisory Committee mentioned the possibility of making rough amendments to other Rules,⁵⁰ yet was noncommittal in doing so, and remained explicitly focused on preservation issues.⁵¹ Some of these potential amendments are promising.⁵² Although the Advisory Committee's brief discussion on proportionality's importance in discovery is optimistic,⁵³ analysis of any non-sanction-based amendment is nascent and underdeveloped. These ancillary discussions appear to be more of an exercise in intellectual diligence than a legitimate topic for FRCP amendments. Considering the Committee's streamlined focus,⁵⁴ it is hard to see how any non-Rule 37 amendments can be reasonably anticipated. Respectfully, those with the power to effectuate meaningful change are off the mark, and must begin to consider e-discovery's broader issues.

III. A SLIGHT PARADIGM SHIFT REVEALED

¶21 Discovery practice must return to its collaborative and justice-seeking goals, from which e-discovery has retreated. E-discovery often requires the production of terabytes⁵⁵ of data, which imposes huge costs on the producing party, and threatens both strike suits⁵⁶ and Pyrrhic victories.⁵⁷ These costs cannot be ignored.

¶22 Scholars that advocate for amending the FRCP have come to a consensus that cooperation and an enhanced proportionality requirement will yield efficient discovery practice.⁵⁸ Both are crucial: cooperation underlies successful discovery practice and proportionality works to prevent abusive discovery requests. These positions, however, divorce the litigant's actions from judicial activity. Bolstering just these ideals may mitigate e-discovery's costs, but would accomplish little more. Complete cooperation and collaboration are idealistic notions that the FRCP have consistently failed to attain. Proportionality alone is insufficient as well. This standard is vague, and, even if it were

⁴⁸ *Id.*

⁴⁹ *Id.* at 250–51.

⁵⁰ *See id.* at 371–417.

⁵¹ *Id.* at 375.

⁵² *See id.* at 380 (suggesting holding a conference with a court before filing a discovery motion); *id.* at 390 (suggesting that Rule 1 should include a provision that “parties should cooperate” to achieve “just, speedy, and inexpensive” resolution).

⁵³ *See id.* at 388–89.

⁵⁴ All potential amendments are separated within the publication and noted as “sketches,” not proposals. In fact, these discussions seem reactionary to public complaints. *See, e.g., id.* at 388 (“[L]aments are often heard that although discovery in most cases is conducted in reasonable proportion to the nature of the case, discovery runs out of control in an important fraction of all cases.”).

⁵⁵ One terabyte equals 1000 gigabytes, or one trillion bytes. *See, e.g.,* Ben Kerschberg, *200 Terabytes of Government E-Discovery Abuse*, FORBES (Apr. 20, 2011, 8:50 AM), <http://www.forbes.com/sites/benkerschberg/2011/04/20/200-terabytes-of-government-e-discovery-abuse/>.

⁵⁶ *See* AM. BAR ASS'N, ABA SECTION OF LITIGATION MEMBER SURVEY ON CIVIL PRACTICE: FULL REPORT 68 (2009) [hereinafter ABA REPORT] (noting that almost 80% of defense attorneys and about 75% of mixed-practice attorneys that responded to the survey believe that discovery is commonly used to force settlement).

⁵⁷ For an overview of this issue, see Scott A. Moss, *Litigation Discovery Cannot Be Optimal but Could Be Better: The Economics of Improving Discovery Timing in a Digital Age*, 58 DUKE L.J. 889, 901 (2009).

⁵⁸ *See* ADVISORY COMM. ON CIVIL RULES REPORT, *supra* note 47 and accompanying text.

more specific, courts are not applying it often enough.⁵⁹ Proportionality alone does not contain costs, and must be discussed at a case's outset to have any effectiveness.⁶⁰

¶23 Aside from sky-high costs and uncertain preservation requirements, modern e-discovery imposes a host of additional threats. There is unpredictability in what ESI is currently discoverable and what discovery production costs are recoverable. There is also a risk that parties may inadvertently release confidential and privileged information. Coupled with litigants' propensity for gaming the system, all of these aspects of modern e-discovery threaten judicial economy. An examination of the mechanisms that guide three modern developments in ESI—predictive coding, metadata, and shadow copies—highlights these threats in practice.

¶24 The effects of these three developments illustrate why the judiciary must assume a far greater role in managing an efficient and cost-effective discovery process. Not only must litigants begin to both more effectively cooperate and better adhere to the proportionality requirement, but also the judiciary—in an effort to ensure the proper utilization of the FRCP's tools—must actively intervene to foster discovery's requisite cooperation. All litigants must expect the court to assume this role.

A. Predictive Coding

¶25 Predictive coding, or computer-assisted document review, has been at the forefront of legal technology since early 2012, and offers to substantially mitigate the costs of ESI-discovery review.⁶¹ The producing party's review of requested ESI for relevance, responsiveness, and privilege comprises approximately seventy-three percent of e-discovery's cost.⁶² Predictive coding demonstrates that just as increased cooperation is required to utilize technological advances, so is increased judicial intervention.

¶26 Fundamentally, predictive coding is an algorithm-based process that “classifies documents according to how well they match the concepts and terms in sample

⁵⁹ See John L. Carroll, *Proportionality in Discovery: A Cautionary Tale*, 32 CAMPBELL L. REV. 455, 460–64 (2010); Theodore C. Hirt, *The Quest for “Proportionality” in Electronic Discovery: Moving from Theory to Reality in Civil Litigation*, 5 FED. CTS. L. REV. 171, 176–78, 187 (2011); Gordon W. Netzorg & Tobin D. Kern, *Proportional Discovery: Making It the Norm, Rather than the Exception*, DENV. U. L. REV. 513, 537–42 (2010). The American Bar Association's most recent survey shows that discovery-producing parties do not believe courts are protecting them against unreasonably burdensome e-discovery demand. See ABA REPORT, *supra* note 56, at 109 (showing that 85.1% of defense attorney and 71.4% of mixed-practice lawyer survey respondents do not believe courts are protecting them against unreasonably burdensome e-discovery demands).

⁶⁰ See AM. COLLEGE OF TRIAL LAWYERS TASK FORCE ON DISCOVERY & INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., FINAL REPORT ON THE JOINT PROJECT OF THE AMERICAN COLLEGE OF TRIAL LAWYERS TASK FORCE ON DISCOVERY AND THE INSTITUTE FOR THE ADVANCEMENT OF THE AMERICAN LEGAL SYSTEM 2 (2009), available at <http://www.actl.com/AM/Template.cfm?Section=Home&template=/CM/ContentDisplay.cfm&ContentID=4008> (finding that judges currently do not effectively enforce the proportionality requirement, and need to hold an active, managerial role from a case's beginning and help set the scope of a discovery process in order to prevent discovery abuses).

⁶¹ Scott Vernick, *Predictive Coding: Three Things You Need to Know About this Year's Biggest Legal Tech Trend*, HUFFINGTON POST (Aug. 15, 2012, 6:36 PM), http://www.huffingtonpost.com/scott-vernick/three-things-you-need-to-_b_1773959.html.

⁶² NICHOLAS M. PACE & LAURA ZAKARAS, RAND INST. FOR CIVIL JUSTICE, WHERE THE MONEY GOES: UNDERSTANDING LITIGANT EXPENDITURES FOR PRODUCING ELECTRONIC DISCOVERY xiv (2012), available at http://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND_MG1208.pdf.

documents.”⁶³ In response to a discovery request, the responding party must first identify a “seed set”⁶⁴ from the universe of all searchable ESI, and the parties must agree on the size of the seed set and how it should be selected.⁶⁵ Next, the responding party manually views the seed set, and codes the documents as relevant, responsive, or privileged.⁶⁶ This coding directly impacts predictive coding’s effectiveness.⁶⁷ Then, the computer relies on probability⁶⁸ to predict how the rest of the ESI would be coded,⁶⁹ and produces a sample of its predictions.⁷⁰ Before running the process, parties must agree what degree of inaccuracy, if any, should prompt corrective action. Another iterative round follows if the sample is determined to be insufficiently accurate.⁷¹ Finally, the producing party must manually review the documents classified as relevant to make sure they only turn over responsive, non-privileged documents.⁷²

¶127 In February 2012, Judge Andrew Peck of the Southern District of New York held in *Moore v. Publicis Groupe* that predictive coding “now can be considered judicially-approved for use in appropriate cases.”⁷³ Even so, predictive coding has not reached the mainstream. A survey taken at the 2012 New York LegalTech Conference found that although 97% of respondents were familiar with predictive coding, only 31% have adopted or are considering adopting the technology.⁷⁴ Respondents felt that concerns about accuracy, defensibility, cost, privilege/confidentiality rules, and difficulty understanding the process have prevented predictive coding from going mainstream.⁷⁵ Predictive coding’s current role in discovery review is uncertain, but whether or not litigants eventually utilize predictive coding, the mere consideration of its use thrusts judges into larger managerial roles. Three pivotal predictive-coding cases confirm this inevitably enhanced role.

⁶³ *Id.* at xvii.

⁶⁴ A seed set is a sample from the universe of discoverable ESI, which informs the computer on the relevancy of the discoverable ESI.

⁶⁵ There are various ways to select the seed set, e.g., keyword searching, judgmental sampling, and statistical sampling. See ROBERT M. ABRAHAMS ET AL., COMMERCIAL LITIGATION IN N.Y. STATE COURTS § 25:39 (N.Y. Prac. Series 3d ed. 2014).

⁶⁶ *Id.*

⁶⁷ See *id.* (“[O]ne of the more common concerns with this phase is the ‘garbage-in equals garbage out’ phenomenon and how one may control it . . . a small mistake at the beginning of the process can cause big problems down the road: for example, there may be many false positives, or, even more troubling, many relevant documents being missed because of reviewer coding error.”).

⁶⁸ PACE & ZAKARAS, *supra* note 62, at xviii.

⁶⁹ See ABRAHAMS, *supra* note 65.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Moore v. Publicis Groupe*, 287 F.R.D. 182, 193 (S.D.N.Y. 2012) *adopted sub nom.* *Moore v. Publicis Groupe SA*, No. 11 Civ. 1279 (ALC) (AJP), 2012 WL 1446534 (S.D.N.Y. Apr. 26, 2012).

⁷⁴ David Snow, *Cranking up the Buzz on Info-Governance, Predictive Coding*, LAW TECH. NEWS 2 (Feb. 9, 2012), <http://www.lawtechnologynews.com/id=1202541708083/Cranking-Up-the-Buzz-on-InfoGovernance-Predictive-Coding?slreturn=20140825154650>; see Matthew Nelson, *Survey Says... Information Governance and Predictive Coding Adoption Slow, but Likely to Gain Steam as Technology Improves*, E-DISCOVERY 2.0 (Feb. 16, 2012), <http://www.clearwellsystems.com/e-discovery-blog/2012/02/15/survey-says-information-governance-and-predictive-coding-adoption-slow-but-likely-to-gain-steam-as-technology-improves/> (noting that of this 31%, only 12% have adopted predictive-coding technology).

⁷⁵ *Id.*

¶28 In *Moore*, the first action involving predictive coding, Judge Peck played an enormous role after the parties agreed to utilize predictive-coding technology to review over three million electronic documents.⁷⁶ The litigants initiated this discussion free from judicial intervention.⁷⁷ However, after agreeing to use predictive coding, the parties staunchly disagreed about how to employ it.⁷⁸ It was “easy” for Judge Peck to authorize predictive coding since each party favored it,⁷⁹ but he participated substantially in helping the parties progress towards a use agreement. In the eleven-week period between Judge Peck’s assignment and his issued opinion, the judge mediated dialogue between the two parties, played a continuing, active role in setting the coding protocol to be used, held three status conferences, and handled plaintiff’s objections that defendant’s proposed coding protocol was unreliable due to a lack of adequate transparency.⁸⁰ Judge Peck stressed that predictive coding’s reliability depends on complete transparency between the parties,⁸¹ and rejected plaintiff’s unreliability objections because the defendant agreed to produce the entire seed set—all relevant and irrelevant documents, except privileged documents—for plaintiff’s review.⁸² Judge Peck also faced disputes over nearly 3,300 documents out of more than 15,000 used in the seed set,⁸³ and four recusal motions.⁸⁴ Even when parties independently agree to use predictive coding, substantial and constant judicial mediation is required to set and manage the actual review protocol.

¶29 Judges also play a large role when parties disagree about using predictive coding. In *Global Aerospace Inc. v. Landow Aviation, L.P.*, the defendant requested to use predictive coding to review eight terabytes of data.⁸⁵ The plaintiff objected, arguing that human review is a more effective means of discovery.⁸⁶ On April 23, 2012, a Virginia state judge granted the defendant’s request,⁸⁷ and explicitly assumed the role of arbiter for any issues that the plaintiff could bring about “the completeness of the contents of the production or the ongoing use of predictive coding.”⁸⁸

¶30 Judges may also assume a significant managerial role when predictive coding is not used, but merely contemplated. In the most recent discussion of predictive coding, *Kleen Products LLC v. Packaging Corp. of America*, the plaintiff moved for the court to require

⁷⁶ See *Moore*, 287 F.R.D. at 184.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.* at 189.

⁸⁰ See *id.* at 183–89.

⁸¹ See *id.* at 189, 191–92.

⁸² *Id.*

⁸³ See Order at 4, *Moore v. Publicis Groupe*, 287 F.R.D. 182 (S.D.N.Y. June 4, 2012) (No. 11 Civ. 1279 (ALC) (AJP)).

⁸⁴ See *id.* at 6–7; Order, *Moore v. Publicis Groupe*, 287 F.R.D. 182 (S.D.N.Y. Apr. 2, 2012) (No. 11 Civ. 1279 (ALC) (AJP)); see also Opinion and Order, *Moore v. Publicis Groupe*, 287 F.R.D. 182 (June 15, 2012) (No. 11 Civ. 1279 (ALC) (AJP)).

⁸⁵ Evan Koblentz, *Judge Orders Predictive Coding over Plaintiff Objection*, LAW TECH. NEWS (Apr. 24, 2012), <http://www.lawtechnologynews.com/id=1202550119183?slreturn=20140028164531>.

⁸⁶ *Id.*

⁸⁷ *Global Aerospace Inc. v. Landow Aviation L.P.*, No. CL. 61040 (Va. Cir. Ct. Apr. 23, 2012), available at <http://www.crowell.com/files/Global-Aerospace-v-Landow.pdf>.

⁸⁸ *Predictive Coding Ordered in Global Aerospace Inc. v. Landow Aviation L.P. dba Dulles Jet Center et al.*, SCHNADER, HARRISON, SEGAL & LEWIS LLP (May 3, 2012) (quoting *Global Aerospace Inc.*, No. CL. 61040), available at <http://www.schnader.com/news/xprNewsDetail.aspx?xpST=NewsDetail&news=1129>.

the defendant to redo its document production with predictive-coding technology.⁸⁹ The plaintiff argued that it was more accurate than the Boolean-keyword-search technology the defendant employed.⁹⁰ The plaintiffs made this motion seven months after the initial discovery request,⁹¹ but by this time, defendants had already expended substantial time and money⁹² on the production of over three million pages of discovery.⁹³ The next month, Magistrate Judge Nan Nolan was assigned for discovery supervision. Judge Nolan spent two full days conducting evidentiary hearings, and held fourteen status hearings and Rule 16 conferences, many of which lasted an entire day or longer.⁹⁴ After eight contentious months, the parties stipulated that they would not use predictive coding, and would not argue for its use until October 1, 2013.⁹⁵ In *Kleen*, parties merely contemplated using predictive coding, yet the court was again thrust into a constant and active managerial role.

¶31 It is clear that predictive coding relies on judicial mediation. Without it, predictive coding would threaten privileged communication and judicial economy, and open the door for litigants to game the system. In *Moore*, the passionate debate about what data to include in the seed set persisted for many months after the litigants set the coding protocol.⁹⁶ In *Global Aerospace*, the court anticipated challenges during and following the predictive-coding process.⁹⁷ *Moore* relied on complete transparency between the two parties to effectively code and test the process.⁹⁸ But because discovery often lacks complete cooperation and transparency between opposing parties, a mediator is required to ameliorate these issues. For instance:

In addition to potentially having to reveal attorney work product by explaining why documents were coded a certain way, the mandatory meet and confer session allows the requesting party to “game” the discovery

⁸⁹ See *Kleen Prods., LLC v. Packaging Corp. of Am.*, No. 10 C 5711, 2012 WL 4498465, at *3 (N.D. Ill. Sept. 28, 2012).

⁹⁰ Jan Conlin & Andrew Pieper, *Litigation: Predictive Coding’s Grand Debut*, INSIDECOUNSEL (Sept. 13, 2012), <http://www.insidecounsel.com/2012/09/13/litigation-predictive-codings-grand-debut>.

⁹¹ See *Kleen Prods.*, 2012 WL 4498465, at *6–7.

⁹² See Karl Schieneman, *Contrasting Da Silva Moore and Kleen Predictive Coding Cases Part 2*, DOCUMENT REVIEW MD BLOG (Mar. 27, 2012), <http://docreviewmd.com/contrasting-da-silva-moore-and-kleen-predictive-coding-cases-part-2/L> (noting that defendant spent over 30,000 hours of review, and approximating a financial cost of at least \$1.5 million).

⁹³ Bob Ambrogi, *Making Sense of “Kleen Products”: Is It Really About Predictive Coding?*, CATALYST (July 11, 2012), <http://www.catalystsecure.com/blog/2012/07/making-sense-of-kleen-products-is-it-really-about-predictive-coding/>.

⁹⁴ Opinion and Order at 9, *Moore v. Publicis Groupe*, 287 F.R.D. 182 (June 15, 2012) (No. 11 Civ. 1279 (ALC) (AJP)).

⁹⁵ *Kleen Prods.*, 2012 WL 4498465, at *11.

⁹⁶ *Moore v. Publicis Groupe*, 287 F.R.D. 182, 184–86 (S.D.N.Y. 2012) *adopted sub nom.* *Moore v. Publicis Groupe SA*, No. 11 Civ. 1279 (ALC) (AJP), 2012 WL 1446534 (S.D.N.Y. Apr. 26, 2012).

⁹⁷ *Global Aerospace Inc. v. Landow Aviation L.P.*, No. CL. 61040 (Va. Cir. Ct. Apr. 23, 2012), available at <http://www.crowell.com/files/Global-Aerospace-v-Landow.pdf>.

⁹⁸ *Moore*, 287 F.R.D. at 189; see *Establishing an Adequate Search & Why “Custodians [Cannot] be Trusted to Run Effective Searches of Their Own Files,”* K&L GATES (Aug. 3, 2012), <http://www.ediscoverylaw.com/2012/08/articles/case-summaries/establishing-an-adequate-search-why-custodians-cannot-be-trusted-to-run-effective-searches-of-their-own-files/> (affirming that complete transparency is required by finding that custodians can’t be trusted to run effective searches of their own files).

process. It certainly is not beyond the realm of possibility that the nonproducing party could fabricate challenges for the sole purpose of extracting confidential information from opposing counsel.⁹⁹

Further, all three cases demonstrate the incredibly adversarial nature inherent in the decision of whether to use predictive coding. Some insist that litigants are incentivized to game the process by coding in a way that makes the most beneficial documents come to the top of the pile, or by coding in a way that purposefully prevents a computer from producing a relevant document.¹⁰⁰ These potential forms of abuse explain Judge Peck's focus on transparency and the active judicial role. Predictive coding, as affirmed by the *Kleen* court, requires cooperation and judicial determinations of proportionality. The courts above explicitly turned to proportionality, and although *Kleen* emphasized cooperation,¹⁰¹ all three pairs of litigants were far from such a spirit of cooperation. Beyond these three cases, predictive coding, as a step towards limiting e-discovery's burden, has garnered significant attention in recent years.¹⁰²

¶32 Additionally, predictive coding harms judicial economy under the current e-discovery landscape. All three judges left the coding's planning completely up to the parties, and only mediated issues they raised in the courtroom. Such a reactive approach is insufficient in this context. Predictive coding is an art, not a complete review, so litigants who already were not cooperating as the FRCP drafters intended now have an increased incentive not to cooperate. Enhanced judicial mediation is necessary for successful predictive coding—a preservation- or sanction-based amendment would not suffice.

B. Metadata

¶33 Metadata is hidden data that “describes how, when, and by whom an electronic document was created, modified, and transmitted.”¹⁰³ In other words, metadata is data about data, and is attached to every piece of ESI in existence. The FRCP do not directly address metadata or metadata discoverability.¹⁰⁴ As a result, uncertainty surrounds metadata discovery. The Advisory Committee is considering placing limitations on

⁹⁹ ABRAHAMS, *supra* note 65; *see Moore*, 287 F.R.D. at 189.

¹⁰⁰ *See Why Court Approval of Computer-Based Searches Changes Everything*, RITTERACADEMY, <http://www.ritteracademy.com/blog/why-court-approval-computer-based-searches-changes-everything> (last visited Nov. 6, 2012).

¹⁰¹ *Breaking News: Kleen Products Ruling Confirms Significance of Cooperation and Proportionality in eDiscovery*, E-DISCOVERY 2.0 (Oct. 2, 2012), <http://www.symantec.com/connect/blogs/breaking-news-kleen-products-ruling-confirms-significance-cooperation-and-proportionality-edis>.

¹⁰² *See Conlin & Pieper, supra* note 90; *see, e.g.,* Nicholas Barry, *Man Versus Machine Review: The Showdown Between Hordes of Discovery Lawyers and a Computer-Utilizing Predictive-Coding Technology*, 15 VAND. J. ENT. & TECH. L. 343, 363–73 (2013); 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 (2011); *see also* Andrew Peck, *Search, Forward: Will Manual Document Review and Keyword Searches be Replaced by Computer-Assisting Coding?*, LAW TECH. NEWS, Oct. 2011, at 25–26. Note that Judge Peck presided over *Moore v. Publicis Groupe*, and this publication formed the basis for the recusal motions he faced. *See Order, Moore v. Publicis Groupe*, 287 F.R.D. 182 (S.D.N.Y. June 4, 2012) (No. 11 Civ. 1279 (ALC) (AJP)).

¹⁰³ *Embedded Information in Electronic Documents*, LEXISNEXIS, http://www.lexisnexis.com/applieddiscovery/lawlibrary/whitePapers/ADI_MetaData.pdf (last visited Sept. 26, 2014).

¹⁰⁴ Chad Everingham, *Practical E-Discovery Issues*, 51 ADVOCATE (TEX.) 37, 37 (2010).

metadata discovery,¹⁰⁵ but any change is several years away—no definitive amendments have yet been enacted, and even upon enactment, “several years or more would be required before any rules would go into effect, even if [the Advisory Committee meets] no serious hurdles along the way.”¹⁰⁶

¶34 There is no clear standard of discoverability for metadata, and discoverability is a fact-based inquiry.¹⁰⁷ Three issues create this uncertainty. First, courts differ on whether ESI must be produced in its “native format.”¹⁰⁸ ESI in its “native format” carries its metadata,¹⁰⁹ but ESI converted into another file format usually loses its metadata.¹¹⁰ Second, states differ on what metadata is discoverable.¹¹¹ Third, there are unclear ethical standards about scrubbing (removing)¹¹² and mining (reviewing produced ESI’s metadata when not requested) metadata.¹¹³

¶35 The FRCP give courts some direction: Rule 34(b)(2)(E)(ii) requires ESI be produced in “reasonably usable forms.”¹¹⁴ Sedona Principal 12,¹¹⁵ as revised in 2007, has provided significant guidance,¹¹⁶ and maintains that:

[The choice of whether to produce ESI in its native format should] [take] into account the need to produce reasonably accessible metadata that will enable the receiving party to have the same ability to access, search, and

¹⁰⁵ Thomas Y. Allman, *E-Discovery Standards in Federal and State Courts After the 2006 Federal Amendments*, ELEC. DISCOVERY L. 11 (May 3, 2012), available at <http://www.ediscoverylaw.com/files/2013/11/2012FedStateEDiscoveryRulesMay3.pdf> (“Under this proposal, discovery of ESI would not extend to matter not ‘routinely used by the responding party’ or might list excluded sources and limit the number of custodians, search terms, time frames and metadata required to be produced.”).

¹⁰⁶ *Id.*; see COMM. ON RULES OF PRACTICE & PROCEDURE REPORT, *supra* note 2, at 192 (noting that any FRCP amendment cannot go into effect until the end of 2014).

¹⁰⁷ See generally Majorie A. Shields, Annotation, *Discoverability of Metadata*, 29 A.L.R. 6th 167 (2007).

¹⁰⁸ See Everingham, *supra* note 104, at 37–38.

¹⁰⁹ *Lorraine v. Markel Am. Ins. Co.*, 241 F.R.D. 534, 547 (D. Md. 2007).

¹¹⁰ See Everingham, *supra* note 104, at 37.

¹¹¹ See Allman, *supra* note 105, at 43.

¹¹² See Shields, *supra* note 107, § 2 (“In a litigation setting, the issue arises of whether this can be done without either the agreement of the parties or the producing party providing notice through an objection or motion for protective order.”).

¹¹³ The A.B.A. and states impose widely varying ethical standards for scrubbing and mining. See *Metadata Ethics Opinions Around the U.S.*, A.B.A., http://www.americanbar.org/groups/departments_offices/legal_technology_resources/resources/charts_fyis/metadachart.html (last visited Mar. 1, 2013).

¹¹⁴ FED. R. CIV. P. 34(b)(ii).

¹¹⁵ The Sedona Principles are publications of the Sedona Conference, a nonprofit 501(c)(3) nonpartisan research and educational institute focused on the advancement of law and policy in various areas, including complex litigation. *Frequently Asked Questions*, SEDONA CONFERENCE, <https://thesedonaconference.org/faq> (last visited Jan. 27, 2013). The Sedona Conference brings together leading legal scholars, and the Sedona Principles are frequently cited as authority by judges and legal scholars. See SEDONA CONFERENCE WORKING GRP. ON ELEC. DOCUMENT RETENTION & PROD., *THE SEDONA PRINCIPLES: SECOND EDITION BEST PRACTICES RECOMMENDATIONS & PRINCIPLES FOR ADDRESSING ELECTRONIC DOCUMENT PRODUCTION* ii (Jonathan M. Redgrave et al. eds., 2d ed. 2007) [hereinafter *THE SEDONA PRINCIPLES*], available at <https://thesedonaconference.org/download-pub/81>.

¹¹⁶ *Aguilar v. Immigration & Customs Enforcement*, 255 F.R.D. 350, 355–56 (S.D.N.Y. 2008).

display the information as the producing party where appropriate or necessary in light of the nature of the information and needs of the case.¹¹⁷

Aguilar v. Immigration and Customs Enforcement, a leading metadata case, noted that “even if native files are requested, it is sufficient to produce [ESI] in PDF or TIFF format accompanied by a load file containing searchable text and selected metadata.”¹¹⁸ The proportionality standard necessarily applies to metadata.¹¹⁹

¶36 Since *Aguilar*, clear standards of metadata discoverability have surfaced. There is a general presumption against the production of metadata, but it is rebuttable if the producing party has or should have reasonable awareness that particular metadata is relevant to litigation.¹²⁰ Courts generally require metadata requests be made during the initial discovery demands and Rule 26(f) conferences.¹²¹ Courts will frequently grant metadata-production requests when made by the requesting party in its initial document request. Courts will typically deny them when such requests are not included in the initial request, especially if the ESI was produced in a different format.¹²² “In sum . . . if a party wants metadata, it should ‘[a]sk for it. Up front. Otherwise, if the party asks too late or has already received the document in another form, it may be out of luck.’”¹²³ Like with predictive coding, proportionality, preparation, and cooperation underlie successful metadata production.

¶37 Metadata poses a host of threats, which courts have recognized by refusing to grant metadata requests made after the initial document request. First, metadata review for privileged information requires huge time and financial commitments—for example, since metadata tracks all changes made in a document’s lifetime, a large metadata request can be extremely burdensome. Second, unclear standards of cost shifting and cost recovery¹²⁴ could financially cripple a prevailing defendant. Third, a defendant’s conservative adherence to muddled ethical requirements¹²⁵ yields overbroad discovery production and threatens confidentiality. Fourth, courts vary on how much evidentiary weight to accord metadata.¹²⁶ Thus, due to the significant costs, metadata requests can unnecessarily waste judicial and litigant resources. Additionally, metadata can be inaccurate.¹²⁷ Metadata requests thus threaten to become costly fishing expeditions.

¹¹⁷ THE SEDONA PRINCIPLES, *supra* note 115, at 60.

¹¹⁸ *Aguilar*, 255 F.R.D. at 356 (quoting Sedona Principle 12 cmt. 12b, illus. i).

¹¹⁹ *See id.* at 355 (citing FED. R. CIV. P. 26(b)(2)).

¹²⁰ 126 AM. JUR. 3D *Proof of Facts* § 5 (2012).

¹²¹ *Id.* § 6.

¹²² *See, e.g.,* Everingham, *supra* note 104, at 38. For a denial, see *Autotech Techs. Ltd. v. Automationdirect.com, Inc.*, 248 F.R.D. 556, 560 (N.D. Ill. 2008).

¹²³ *Aguilar*, 255 F.R.D. at 357 (quoting Adam J. Levitt & Scott J. Ferrell, *Taming the Metadata Beast*, 239 N.Y.L.J., May 16, 2008, at 4).

¹²⁴ *See* Nicholas J. Wagoner, *Will E-Discovery Cost Recovery Catch the Supreme Court’s Eye?*, CIRCUIT SPLITS (June 29, 2012, 5:01 AM), <http://www.circuitsplits.com/2012/06/yesterdays-post-examined-the-cert-petition-recently-filed-in-hoosier-racing-tire-corp-v-race-tires-america-inc-which.html> (discussing the federal circuit split regarding the recoverability of ESI-production costs by a prevailing party).

¹²⁵ Parties are generally under a duty to preserve metadata until either the 26(f) or initial discovery conference. Allman, *supra* note 105, at 14. Ethical standards beyond this point vary widely from state to state. *See id.* at 21.

¹²⁶ Rachel K. Alexander, *E-Discovery Practice, Theory, and Precedent: Finding the Right Pond, Lure, and Lines Without Going on a Fishing Expedition*, 56 S.D. L. REV. 25, 36 (2011).

¹²⁷ *See* THE SEDONA PRINCIPLES, *supra* note 115, at 60.

Courts have generally resolved the issue of metadata discoverability, but these problematic issues still remain.

¶38 As mentioned above, confidentiality concerns underlie all metadata requests. Native-format metadata tracks all changes and comments made to a word-processing document,¹²⁸ threatening to reveal confidential information. There is a split of authority on whether inadvertently released privileged information loses its protection.¹²⁹ Each computer program's metadata is unique, and especially in light of anticipated technological advancements, it is unreasonable to expect perpetually perfect review of metadata. This uncertainty requires a defendant to tiptoe around metadata-production requests.

¶39 Metadata embodies e-discovery's threats. Its production imposes both temporal and financial burdens, threatens confidentiality, and incentivizes gamesmanship in the discovery process. Especially because of the varied standards of metadata discoverability, one thing is clear: metadata production must be carefully managed.

C. Deleted No Longer Means Deleted: Shadow Copies

¶40 Shadow copies are an unexplored threat to e-discovery. Shadow copies (or Volume Shadow Copy Service) are automatic, read-only screenshots and backup copies of all data on a computer that create restore points to safeguard against system failure.¹³⁰ This includes locked data.¹³¹ Each copy only updates itself with the changes made since the previous save.¹³² Shadow copies are an example of when technology has surpassed general knowledge in the legal community, as many remain unaware of their existence.

¶41 Windows 7, Vista Business, Enterprise, and Ultimate editions automatically make shadow copies.¹³³ Almost half of all computers use these programs worldwide.¹³⁴ Permanently deleting these shadow copies is highly technical,¹³⁵ and it may be impossible to permanently delete some shadow copies.¹³⁶

¹²⁸ See David T. Cox, *Metadata—What It Reveals Could Cost You*, MATTERS OF PRACTICE BLOG (July 25, 2012), <http://mattersofpractice.com/blog/metadata-what-it-reveals-could-cost-you/>.

¹²⁹ See ABRAHAMS, *supra* note 65, § 25:58.

¹³⁰ See Tomasz P. Szynalski, *What You Should Know About Volume Shadow Copy/System Restore in Windows 7 & Vista (FAQ)*, TRYING TO BE HELPFUL (Nov. 23, 2009), <http://blog.szynalski.com/2009/11/23/volume-shadow-copy-system-restore/> (discussing shadow copies generally); see also *How Volume Shadow Copy Service Works*, WINDOWS SERVER (Mar. 28, 2003), <http://technet.microsoft.com/en-us/library/cc785914%28WS.10%29.aspx> (discussing same).

¹³¹ See Martin Brinkmann, *Copy Locked and Open Files in Windows*, GHACKS.NET (Jan. 19, 2009), <http://www.ghacks.net/2009/01/19/copy-locked-and-open-files-in-windows/> (noting shadow copies retain locked files); see also *Backup/Copy Files that Are "In Use" or "Locked" in Windows*, HOW-TO GEEK (Mar. 9, 2008), <http://www.howtogeek.com/howto/windows-vista/backupcopy-files-that-are-in-use-or-locked-in-windows/> (noting same).

¹³² Craig Ball, *The Shadow Knows*, BALL IN YOUR COURT (Sept. 24, 2011), <http://ballinyourcourt.wordpress.com/2011/09/24/the-shadow-knows/>.

¹³³ See MICROSOFT CORP., *Selected Scenarios for Maintaining Data Integrity with Windows Vista*, TECHNET, <http://technet.microsoft.com/en-us/library/cc749185.aspx> (last visited Mar. 1, 2013) (noting that Windows Vista automatically stores complete shadow copies daily, or more frequently if manually triggered).

¹³⁴ Ball, *supra* note 132.

¹³⁵ See James Burrage, Comment to *Where's My Disk Space?*, MICROSOFT ENTERPRISE PLATFORMS SUPPORT (Apr. 13, 2011, 4:23 AM), <http://blogs.technet.com/b/askcore/archive/2011/04/13/where-s-my-disk-space.aspx> (discussing deletion process). There is very limited control over deleting shadow copies. See *How to Free up Drive Space by Removing Shadow Copies [Windows]*, MAKE TECH EASIER (Oct. 22,

- ¶42 Apple’s analogous program, Time Machine, databases shadow copies on an hourly basis.¹³⁷ Although users must manually setup Time Machine, Apple computers prompt unwitting users to install the product the first time users turn on their computers. The natural inclination to conveniently back-up one’s data has rendered Time Machine use standard operating procedure for many Apple customers.¹³⁸
- ¶43 By taking regular snapshots of personal data, these programs not only create system-restore points—they track user work product.¹³⁹ These Volume Shadow Copying Services preserve ESI that a technologically competent user thinks is deleted, wiped, or encrypted, but does not prevent a digital-forensic expert from gaining easy access.¹⁴⁰ Permanently deleting data can prove to be a sophisticated process that is unknown to the majority of consumers.
- ¶44 E-mail services illuminate this paradox between the difficulties of data deletion and the ease of data recovery. Microsoft Exchange allows very easy recovery of double-deleted e-mails, which is when a user deletes an e-mail from its inbox and then purges the e-mail from the Deleted Items folder.¹⁴¹ “Deleted” confidential documents are readily accessible to a forensics expert—in fact, deleted and purged data remain only three clicks away for such an expert.¹⁴² Still, users rely on these services, as they provide a system restore vital to cure technical problems.¹⁴³
- ¶45 No courts have confronted the issue of shadow copies, but it is only a matter of time before the judiciary must do so. Since shadow copies create a complete history of a computer’s entire life,¹⁴⁴ litigants will seek their discovery, especially when there is a

2011), <http://maketecheasier.com/free-up-drive-space-by-removing-shadow-copies/2011/10/22> (noting that there are only two ways for a user to delete shadow copies—either by purging and deleting all of them, or by deleting the oldest shadow copy).

¹³⁶ See Szynalski, *supra* note 130 (noting that there is no way to delete a file from all shadow copies, and that nontechnical deletion attempts that do not wipe clean the disk space will be unsuccessful because deleted shadow copies’ content still exist in the same space); see also Bruce Schneier, *The Security Implications of Windows Volume Shadow Copy*, SCHNEIER ON SECURITY (Dec. 22, 2009), https://www.schneier.com/blog/archives/2009/12/the_security_im.html (noting that if a shadow copy is made and a restore point created, the shadow copy cannot be deleted).

¹³⁷ Tom Nelson, *Time Machine Review: Review of Apple’s Time Machine Backup Software*, ABOUT.COM, <http://macs.about.com/od/backupsoftware/gr/time-machine-review.htm> (last visited Jan. 27, 2013).

¹³⁸ See *id.* (“Using Time Machine as your primary backup is a no-brainer.”). It is far simpler to delete shadow copies from Time Machine than from Windows programs. See *Mac Basics: Time Machine Backs up Your Mac*, APPLE, <http://support.apple.com/kb/ht1427> (last visited Mar. 1, 2013) (describing the process to manually delete backups directly on the Time Machine interface). Even for Time Machine users, though, manually reviewing and deleting unneeded shadow copies when litigation is anticipated would be enormously burdensome. Additionally, regular deletion is impractical because parties will often want to preserve confidential work-product backups.

¹³⁹ See Ball, *supra* note 132.

¹⁴⁰ See *id.*

¹⁴¹ Craig Ball, *A Changing Definition of Deletion*, BALL IN YOUR COURT (Sept. 30, 2011), <http://ballinyourcourt.wordpress.com/2011/09/30/a-changing-definition-of-deletion/>.

¹⁴² See Ball, *supra* note 132.

¹⁴³ Jeff Beard, *More on Vista Shadow Copies & the Dreaded Index.dat Files*, LAWTECH GURU BLOG (July 26, 2007), http://www.lawtechguru.com/archives/2007/07/26_more_on_vista_shadow_copies_the_dreaded_indexdat_files.html.

¹⁴⁴ Note that this is limited by storage space. See Szynalski, *supra* note 130 (further noting that and describing how shadow-copy storage is incredibly efficient); *Windows Vista and Volume Shadow Copies*, PIRIFORM, <http://www.piriform.com/docs/defragger/technical-information/windows-vista-and-volume->

question of metadata reliability. Currently, the *Aguilar* analysis of e-mail restoration and proportionality may well extend to shadow copies.¹⁴⁵ Since the final document is producible, review of all shadow copies and work product will contribute to both temporal and financial burdens. Further, it is likely that this review would be of limited probative value. But just like metadata, there are times when shadow-copy production will be necessary.

¶46 Shadow copies create predictable threats in the e-discovery context. Shadow copies trace work product more thoroughly than metadata, which can be controlled by disabling track changes on documents. Shadow copies thus threaten confidentiality to a greater extent than metadata.¹⁴⁶ Additionally, the burden of shadow-copy review eclipses that of metadata review. Shadow copies regularly freeze a computer at a point in time, and single documents cannot be reviewed or deleted, but rather a complete restore point—and all data it holds—must be deleted.

¶47 In addition, computer-forensics experts are commonly needed to simplify a computer's data for the court.¹⁴⁷ These experts often make a complete mirror image of a computer's hard drive.¹⁴⁸ On top of the increased time and cost of paying forensics experts, employing these experts in the discovery process will require a substantial time investment—the experts will need constant supervision to prevent the release of privileged ESI. Compared to metadata, shadow copies present greater room for error and a higher likelihood of unintentionally waived privilege. Just as it took years for a rough standard for metadata discoverability to surface, shadow copies will similarly harm judicial economy. In sum, shadow copies will present similar, but amplified, threats to those presented by metadata. Shadow copies also add the burden of managing a forensics expert. The production of shadow copies as e-discovery will thus require careful management.

IV. LESSONS LEARNED: A PROPOSED AMENDMENT

¶48 The three above issues surrounding ESI discoverability all demonstrate that enhanced and earlier judicial intervention is needed for a more efficient and effective discovery practice. The available and potentially discoverable ESI forms will continue to

shadow-copies (last visited Mar. 1, 2013).

¹⁴⁵ *Aguilar v. Immigration & Customs Enforcement*, 255 F.R.D. 350, 360 (S.D.N.Y. 2008) (“Moreover, the Plaintiffs have not shown that there is a likelihood of recovering important information not previously disclosed. Accordingly, because the cost of this additional discovery is unquestionably high and the likely benefit low, the Defendants will not be required to review and produce any data regarding emails in ICE's back-up tapes.”).

¹⁴⁶ For a mistake of an expert, see *Expert's Inadvertent Production Results in Waiver of Privilege Absent Sufficient Supervision by Counsel or Prompt Steps to Rectify Disclosure*, K&L GATES (May 24, 2012), <http://www.ediscoverylaw.com/2012/05/articles/case-summaries/experts-inadvertent-production-results-in-waiver-of-privilege-absent-sufficient-supervision-by-counsel-or-prompt-steps-to-rectify-disclosure/>.

¹⁴⁷ See John H. Jessen et al., *Digital Discovery*, 1001 MASS. EXPERT WITNESSES § 10.1 (2013).

¹⁴⁸ See Jenna M. Bedsole & John Mallery, *Controlling Costs in E-Discovery*, 72 ALA. LAWYER 134, 139 (2011); Sean L. Harrington, *Collaborating with a Digital Forensics Expert: Ultimate Tag-Team or Disastrous Duo?*, 38 WM. MITCHELL L. REV. 353, 373 (2011); Franz J. Vancura, *Using Computer Forensics to Enhance the Discovery of Electronically Stored Information*, 7 U. ST. THOMAS L.J. 727, 728–29 (2010).

evolve at a quicker rate than the legal community's ability to adapt with clear rules. The need for judicial mediation to manage the increasingly complex e-discovery process will continue to correspond with increasing uncertainty.

¶49 These developments reveal two very relevant truths about modern e-discovery. First, judicial intervention is required to attain discovery's goals. Technological advances will undercut predictability and continue to bring protracted, contentious litigation by constantly changing the e-discovery landscape. Second, the current reactive approach to new developments in e-discovery diverges from the fundamental cooperative purposes of discovery.

¶50 To accommodate these two realities, the Rule 26(f) discovery conference should be amended. To initiate the discovery process after complaint filing, the plaintiff should be required to submit a 26(f) conference agenda to the court for approval, and then to the defendant. This agenda will propose a complete discovery plan and schedule,¹⁴⁹ and the court will oversee the conference to ensure the parties adhere to the agenda. In turn, parties will be bound to the agenda's terms. Practically, as discovery often reveals the existence of additional, potentially relevant information, courts can circumstantially apply the proportionality and good-faith standards to specific requests.¹⁵⁰ This new managerial judicial role will help foster cooperation among the parties throughout the discovery process. Also, judges will gain the firsthand knowledge necessary to appropriately apply the proportionality standard. Judges will learn through experience what requests are overly burdensome and will be in the best position to streamline the discovery process. Ideally, judges can establish standards to promote early resolution of disputes, managing parties' expectations for precisely how the discovery process unfolds.

¶51 The current reactionary approach to curing e-discovery's problems fails because new ESI forms and data-production methods are constantly surfacing, each bringing unique challenges. It is difficult to efficiently or effectively solve each of e-discovery's problems in a vacuum. The Advisory Committee must move past this micro-approach to change and recognize modern e-discovery's large-scale failures. When the FRCP are finally amended, a more active role for judges would give attorneys much-needed peace of mind by offering clarity on how the discovery process will develop.

¶52 Bringing the court in at the Rule 26(f) conference will mitigate future threats, which are currently unforeseeable because of uncertainty in how this technology will evolve. It is practically impossible for parties to flawlessly manage ESI because technological advancements will continue to create new and unique ESI forms. There will be no guidance on the legal preservation duty for these ESI forms. Active judicial

¹⁴⁹ The current Rule 26(f) generally sets the scope for a discovery plan's content. Although the question of whether Rule 26(f) should be amended to include specific, e-discovery related requirements is a separate project, the Sedona Conference's nonexclusive recommendations for discussion topics should serve as guidance for specific issues that parties should confront at the discovery conference. Of course, the presiding judge must approve the discovery plan, so this additional amendment may be unnecessary. *See* Cowper & Rosenthal, *supra* note 13, at 264–67 (contending that parties should discuss (1) data preservation, including date range, custodians, systems, categories and types of ESI, and search terms; (2) accessibility of data; (3) production, including scope of production, production format; (4) inadvertent disclosure of privileged material; (5) database/application discovery; (6) timing of production; (7) cost shifting; and (8) any open issues).

¹⁵⁰ Because judges now play a role in the 26(f) conference, this change fosters cooperation and open communication, thus parties will be on the same page. So after a successful discovery conference, only a limited number of additional discovery motions—only when necessary—will be filed.

intervention, then, is necessary; no judicial post hoc reasonableness evaluation will limit breaches of the preservation duty or other discovery abuses. The best result that e-discovery would permit is managed party expectations, overcoming the unpredictability and inconsistency that pervades today's e-discovery practice. The amendment proposed by this Comment would accomplish precisely this.

¶53 This amendment would increase accountability, turning predictive coding into a tool rather than an obstacle. Litigants would be able to accurately anticipate the course of litigation by preparing for the 26(f) conference, which limits preservation issues. This would also mitigate today's looming threat of expansive litigation, high costs, and disputes over non-dispositive—or fruitless—issues. For example, the *Moore* plaintiff would have likely agreed to the defendant's completely transparent actions in coding the seed set during the 26(f) conference, well before it faced a non-ideal opinion. This would have prevented months of active litigation.

¶54 The upshot of this change is not limited to mitigating the issues that arise from predictive coding, metadata, and shadow-copy production. Consideration of a modern federal circuit split ripe for Supreme Court review¹⁵¹ reveals that this amendment may mitigate the gamut of e-discovery's issues. This proposal is, at the least, markedly more promising than the other contemplated changes.

V. APPLYING PROPOSED AMENDMENT TO A FEDERAL CIRCUIT SPLIT

¶55 Although the above discussion of modern e-discovery issues is far from a comprehensive review, a clear pattern of threats that technological advances pose has emerged. New e-discovery wrinkles force us to take a step back and return to discovery's roots. Discovery practice relies on cooperation, but courts cannot leave parties to independently manage the discovery process. The proposed Rule 26(f) amendment bolsters cooperation, gives judges a framework within which to apply the now-nebulous proportionality standard, and reinforces litigants' accountability to the discovery process. But this amendment is not merely forward-looking; federal circuits are currently split over what ESI-production costs are recoverable. An enhanced Rule 26(f) conference would dull this salient and pressing issue.

¶56 This split stems from how to interpret 28 U.S.C. § 1920(4), the federal taxation of costs statute (Costs Statute) against FRCP Rule 54. Rule 54(d)(1) provides that “[u]nless a federal statute, these rules, or a court order provides otherwise, costs—other than attorney's fees—should be allowed to the prevailing party.”¹⁵² The Costs Statute states that a court may tax “[f]ees for exemplification and the costs of making copies of any materials where the copies are necessarily obtained for use in the case” as costs.¹⁵³ Circuits differ as to the proper interpretation of “necessary,” and the only guidance for litigants is that consultant or vendor fees are likely not entirely taxable.¹⁵⁴

¹⁵¹ See Wagoner, *supra* note 124 (discussing circuit court split and the opportunity for Supreme Court review).

¹⁵² FED. R. CIV. P. 54(d)(1).

¹⁵³ 28 U.S.C. § 1920(4).

¹⁵⁴ Don Zupanec, *Remedies*, 27 No. 5 FED. LITIGATOR 13 (2012).

¶157 This issue has very real effects on litigants' primary actions because this uncertainty extends to large sums of money.¹⁵⁵ Parties must be able to anticipate what costs will be recoverable in order to avoid Pyrrhic victories, to set a reasonable and effective plan for the discovery process, and to promote focused e-discovery requests. If parties could anticipate these costs, this would promote early cooperation and/or a focus on proportional discovery requests, which would reduce e-discovery's scope and burden.¹⁵⁶ This Comment does not analyze how the split should be resolved; rather, it demonstrates how the enhanced 26(f) conference would mitigate the burden and threats it presents.

¶158 The Federal, Fifth, and Seventh Circuits interpreted the Costs Statute broadly, allowing a prevailing party to recover costs reasonably incurred in response to a discovery request.¹⁵⁷ Most recently, though, the Third Circuit in *Race Tires America, Inc. v. Hoosier Racing Tire Corp.* overruled the district court and took a narrow stance. This court only permitted recovery for scanning and native-file conversion costs, and denied recovery for an e-vendor's costs for data collection, metadata preservation, keyword searching, culling, and production.¹⁵⁸ In other words, the Third Circuit held that the producing party could only recover for costs directly related to "copying."¹⁵⁹ On October 1, 2012, the Supreme Court denied certiorari to the *Race Tires* appeal.¹⁶⁰

¶159 This split is dangerous because parties cannot adequately prepare for or anticipate the course of litigation. The 26(f) amendment proposed in this Comment would fix this by ensuring transparency between parties and the court. Once initial discovery requests are made and the discovery schedule is set, should parties not wish to independently agree on cost shifting, the court, in its new active role, can inform the parties what the standards for cost recoverability would be for production responses to particularized requests.

¶160 This active role would be crucially fluid—the nonstop, unpredictable technological advancements that define modern society render any efforts to predict future hiccups in ESI discoverability futile. This new judicial role would further justice for litigants, and promote both expediency and judicial economy by suppressing unnecessary litigation at the substantive end of an action on the proper standard for cost recoverability. Additionally, by bringing the court in before any discovery is produced, the enhanced proportionality requirement would keep discovery abuses in check. As a failsafe, the responding party can move for cost shifting under a protective order at discovery's outset. Even though the Supreme Court denied certiorari on this issue, this amendment would ensure that litigants would not be blindsided.

¹⁵⁵ See *Race Tires Am., Inc., v. Hoosier Racing Tire Corp.*, 674 F.3d 158, 160 (3d Cir. 2012) (awarding more than \$265,000 in costs); see also *In re Ricoh Co., Patent Litig.*, No. C 03-02289 JW, 2012 WL 1499191, at *6 (Fed. Cir. 2011) (concerning over \$675,000); *Hecker v. Deere*, 556 F.3d 575, 591 (7th Cir. 2009) (awarding parties more than \$219,000 for costs).

¹⁵⁶ Carey Busen, *Third Circuit Limits Taxable eDiscovery Costs*, DISCOVERY ADVOCATE (Mar. 23, 2012), <http://www.discoveryadvocate.com/2012/03/23/third-circuit-limits-taxable-ediscovery-costs/#more-170>.

¹⁵⁷ *In re Ricoh Co.*, 661 F.3d at 1365 (holding all reasonable "costs of producing a document electronically" are recoverable); *Rundus v. City of Dall*, 634 F.3d 309 (5th Cir. 2011) (affirming same in an appropriate response to a discovery request); *Hecker*, 556 F.3d 575 (affirming same).

¹⁵⁸ See *Race Tires*, 674 F.3d at 170.

¹⁵⁹ See *id.*

¹⁶⁰ *Id.*, cert. denied, 133 S. Ct. 233 (2012).

VI. CONCLUSION

¶61 This proposed Rule 26(f) amendment is the most effective response to e-discovery's crippling threats and uncertainties because it mitigates both the known and unknown issues in e-discovery. These threats are not overstated—over the past few years, they have spawned extensive scholarship and formal discussions to amend the FRCP. But looking forward, these efforts offer no continued fix. They are reactionary and offer only a series of temporary solutions, while ignoring the reality that the problems and difficulties with e-discovery are unique to each ESI form and production technique. This approach is antiquated. E-discovery continues to evolve, and new preservation/sanctions issues will inevitably surface almost immediately upon a reactionary fix. When considering predictive coding, metadata, and shadow copies, it is clear that e-discovery advancements require immense judicial management. The discovery process can no longer function free from judicial intervention and it is time to embrace this reality.

¶62 By making the judge an active participant in the 26(f) conference, this amendment would be both forward- and backward-looking. It acknowledges that e-discovery is here to stay, that unique issues will perpetually resurface, and that there is no universal fix to the e-discovery system. From the inception of a legal action, parties would know, e.g., precisely what their preservation duty would be, what ESI would be discoverable, how it would be produced, and what production costs would be recoverable. This solution not only mitigates the threats presented by e-discovery, but it also, finally, brings a cooperative spirit to the discovery process.